APPENDIX E

TRAFFIC AND TRANSPORTATION

WEBB-C

VEHICLE MILES TRAVELED SCREENING ASSESSMENT MEMORANDUM

Memorandum

To:	Philip Nitollama, City Traffic Engineer, City of Riverside Vital Patel, Traffic Engineering, City of Riverside
From:	Kawai Mang, Project Engineer, Albert A. Webb Associates Jacqueline Gamboa, Assistant Environmental Analyst, Albert A. Webb Associates
Date:	November 07, 2024
Subject:	Vehicle Miles Traveled (VMT) Screening Assessment for the Riverside Alive Project (PR 2024-001675) in the City of Riverside

Albert A. Webb (WEBB) has prepared this vehicle miles traveled (VMT) screening assessment for the proposed Riverside Alive Project, located at 3637 Fifth Street in the City of Riverside see **Figure 1: Project Location**. This assessment is based on the City of Riverside's *Transportation Impact Analysis Guidelines for Vehicles Miles Traveled and Level of Service Assessment* (2020) (herein after referred to as Guidelines), and the approved Project scoping form (Attachment A).

Figure 1: Project Location



A. Background and Project Description

The Project site is in Downtown Riverside on approximately 10 acres and includes the Lot 33 parking lot and Riverside Convention Center (RCC). The existing RCC is located at 3637 Fifth Street in Riverside in Riverside County. The Project entails the following Assessor Parcel Numbers (APNs) 213-111-011, 213-111-012, 213-111-014, 213-111-015, 213-111-016. Local access to the Project site is provided via Main Street, Third Street, Fifth Street, Market Street and Orange Street. There is no change proposed to the existing land use and zoning of Downtown Specific Plan.

Existing Development

The existing RCC is a 108,000 square-foot (sf) building that offers 50,000 sf of flexible indoor exhibit, ballroom, and meeting space as well as outdoor meeting space and passive park area in the Outdoor Plaza.

Lot 33 is a surface parking lot managed by the City of Riverside with 498 parking stalls, of which 18 are accessible and one is an electric vehicle charging station. Lot 33 has two existing full-access driveways, one on Market Street and one on Third Street at the existing Main Street intersection.

Project Proposal

The Project proposes a combination of residential, office, retail, and hotel uses, along with a Convention Center expansion and new parking facilities. No specific development is currently proposed; however, the following maximum size assumptions for the proposed Project land uses are used to determine a reasonable site buildout for analysis (**Table A: Proposed Project Uses**). The potential layout of these uses is shown in **Figure 2: Proposed Project Layout**.

With the demolition of Lot 33, its two existing driveways on Third Street and Market Street would be removed. Vehicle access to the Project is proposed via existing driveways on Market Street and Fifth Street serving the existing Marriott Hotel. Vehicle loading and passenger drop-off/pick-up areas will be provided on Third Street, Market Street, and Fifth Street. The existing Orange Street loading area would remain.

The Project area is served by Riverside Transit Agency (RTA) routes 12, 29 and 204 via Market Street, with bus stops at Third Street, Fourth Street, and Sixth Street. The Downtown Riverside Metrolink station is located approximately 0.5 miles southwest of the Project site along Vine Street between Fourteenth Street and University Avenue.

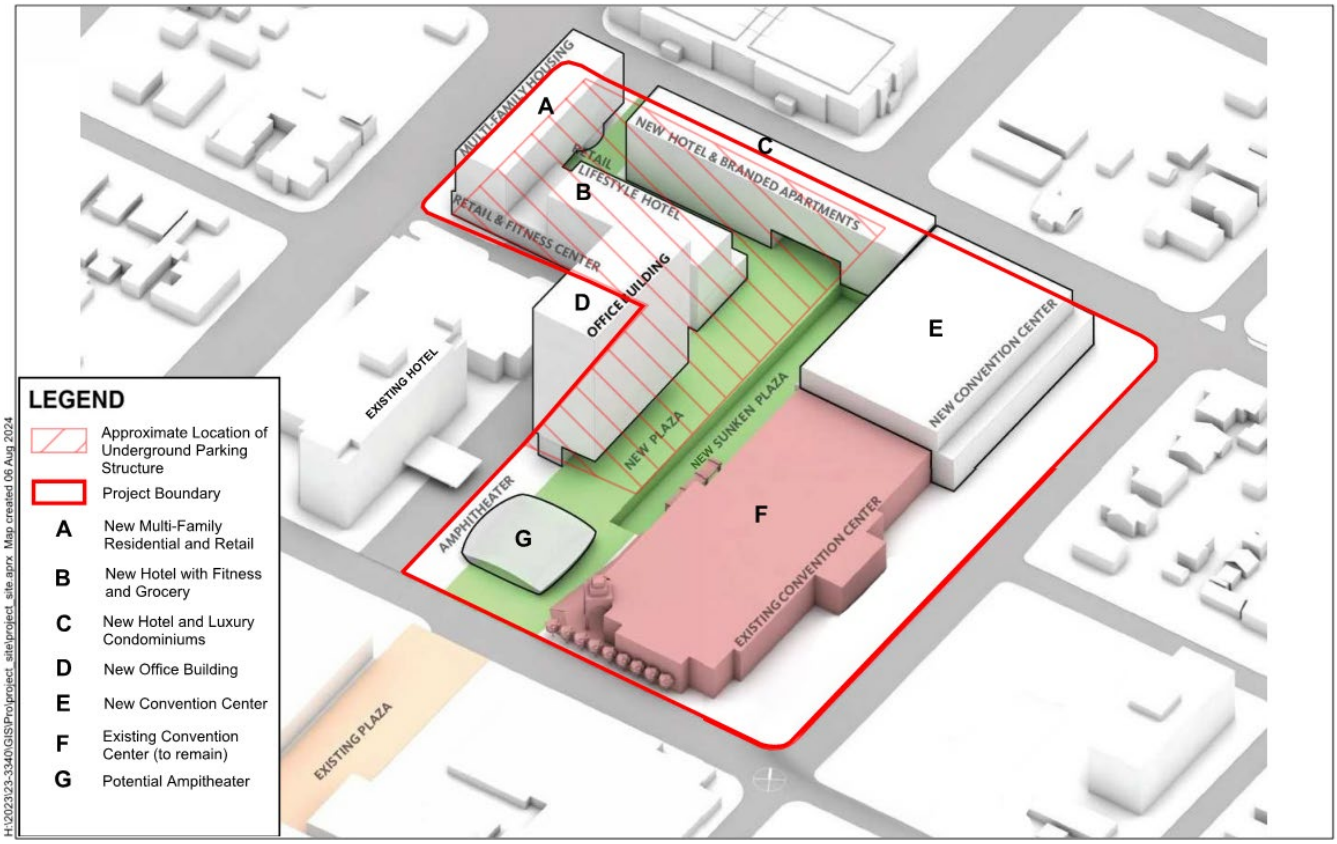
The Project will provide pathways to facilitate the movement of pedestrians within the site and provide connection to the existing sidewalks along Third Street, Fifth Street, Market Street and Orange Street.

Table A: Proposed Project Uses

Land Use Type	Maximum Size	Unit[1]
Condominiums	55	DU
Multi-Family Residential	113	DU
Hotel	376	RM
Office	220,000	SF
Commercial Retail Uses		
Restaurant-Focused Retail	12,875	SF
Grocery Store	20,690	SF
Fitness Center	28,416	SF
Parking Facilities	Up to 5	Levels
Convention Center Expansion	189,000	SF

Notes: [1] DU = dwelling unit; RM = room; SF = square feet

Figure 2: Proposed Project Layout



B. VMT Screening Criteria and Findings

Per California Senate Bill 743 (SB 743), the California Office of Planning and Research (OPR) identified VMT as the most appropriate measure of determining transportation impacts under the California Environmental Quality Act (CEQA), replacing previous level of service (LOS) analyses. Accordingly, the City of Riverside adopted their Guidelines that provide criteria to screen for projects that are presumed to have a less-than-significant effect on VMT. This assessment also uses the Western Riverside Council of Governments (WRCOG) web-based VMT screening tool to determine whether the Project meets the screening criteria based on traffic analysis zone (TAZ).

Per the City Guidelines, several screening criteria may be applied to effectively screen projects from project-level assessment. The five screening steps are summarized below:

- **Step 1: Transit Priority Area (TPA) Screening**

  Projects located within a TPA may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may NOT be appropriate if the project:

  1. Has a Floor Area Ratio (FAR) of less than 0.75;
  2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
  3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City), with input from the Metropolitan Planning Organization); or
  4. Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

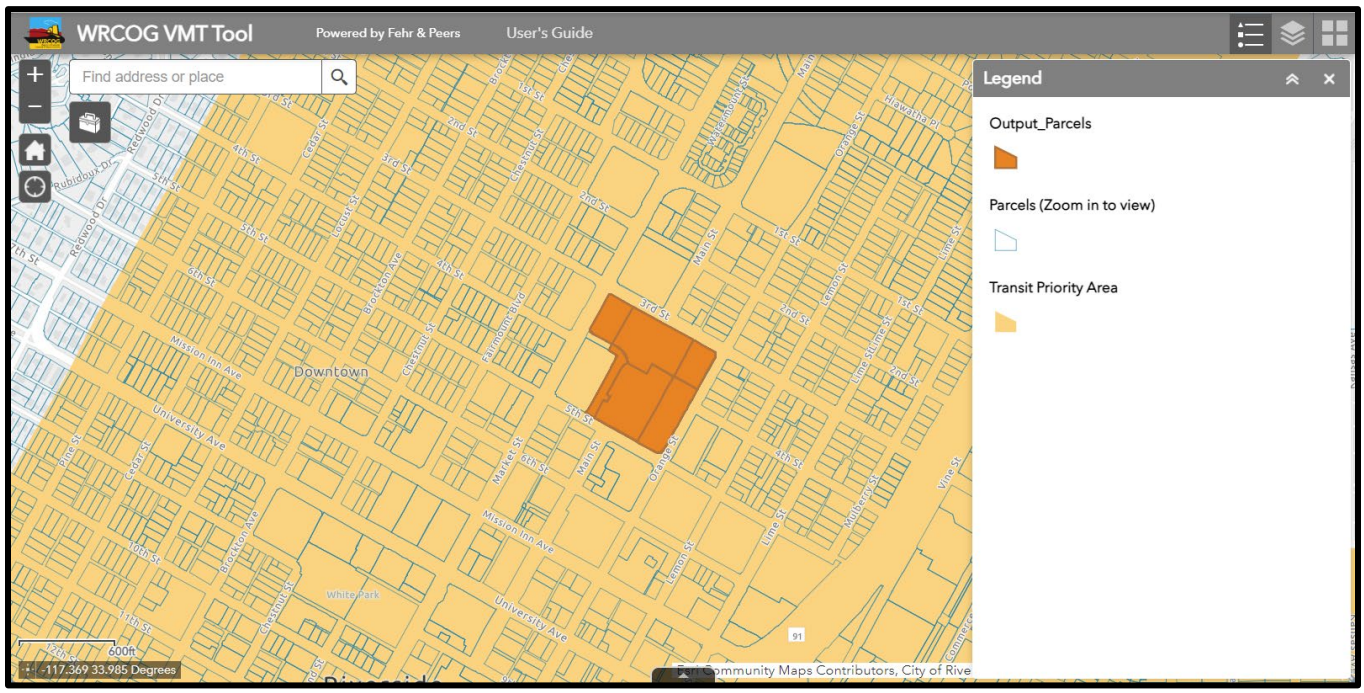
  A TPA is defined as a half mile area around an existing major transit stop or an existing stop along a high quality transit corridor per the definitions below.

  Pub. Resources Code, § 21064.3 - 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

  Pub. Resources Code, § 21155 - For purposes of this section, a 'high-quality transit corridor' means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

According to the WRCOG VMT tool, the Project is in traffic analysis zone (TAZ) 2075, which is located within a designated TPA (**Figure 3: Transit Priority Area**).

Figure 3: Transit Priority Area



The Project's eligibility under the four sub-requirements is evaluated below:

1. As indicated in Section A, above, the maximum size assumptions for the proposed Project land uses are used to determine a reasonable site buildout for analysis. **Table B: Estimated Floor Area Ratio**, calculates that the maximum development FAR would be 2.25, which is greater than 0.75. **Therefore, this sub-criterion is met**.

Table B: Estimated Floor Area Ratio

Land Use Categories[1]	*Gross Square Footage*[2]	*Floor to Area Ratio*[3]
Convention Center	297,000[4]	0.66
Hotel[5]	254,918	0.57
Commercial Retail	61,981	0.14
Office	220,000	0.49
Residential Units[6]	172,548	0.38
Total	**1,006,447**	**2.25**

Notes:

1. Residential and Non-Residential land uses were grouped together by general land use category.
2. Gross Square Footage was calculated based on the estimated development area for each Project use.
3. FAR for each use was calculated by dividing the respective Gross Square Footage by 446,925.60 SF, which is based on total Project site acreage of 10.26.
4. Convention Center Gross Square Footage is the summation of existing and proposed square footage.
5. Assumes approximately 678 square footage per hotel room.
6. Assumes approximately 933 square feet per multi-family residential unit and 1,220 square feet per condominium.

2. The Project proposes a subterranean parking structure that may be up to five levels. However, amount of parking has not been specified at this time because there is no specific development currently proposed. As part of the Development Application review process, the City will ensure adequate parking is provided per City requirements and that the site is not overparked. **Therefore, this sub-criterion is met**.

3. The Project is consistent with the General Plan land use designation and does not conflict with the permitted uses outlined in the Downtown Specific Plan. Thus, the Project does not require a General Plan Amendment or Specific Plan Amendment. Southern California Association of Government (SCAG) is the designated Metropolitan Planning Organization for Riverside and as such, establishes the applicable Sustainability Community Strategy (SCS), known as Connect SoCal 2024 Plan, the Regional Transportation Plan/Sustainable Communities Strategy. In order to develop regional development forecasts, SCAG consults with local governments and utilizes local general plans. Since the Project is consistent with the General Plan land use and the Downtown Specific Plan, then the SCS would have taken into account such uses when it was developed, and the Project would not be inconsistent with or conflict with implementation of the SCS. The environmental impact report (EIR) will provide more details on the Project's consistency with SCS goals. **Therefore, this sub-criterion is met**.

4. The Project site is currently developed with the Riverside Convention Center, surface parking lot and Outdoor Plaza, which is not residential use. Therefore, the proposed Project would not replace residential units. **Thus, this sub-criterion is met**.

In sum, the Project is located within a TPA and meets the four sub-requirements of this step because it proposes a FAR greater than 0.75, will not be overparked, will not be inconsistent with the SCS, and does not replace affordable housing. **Therefore, this criterion is met**.

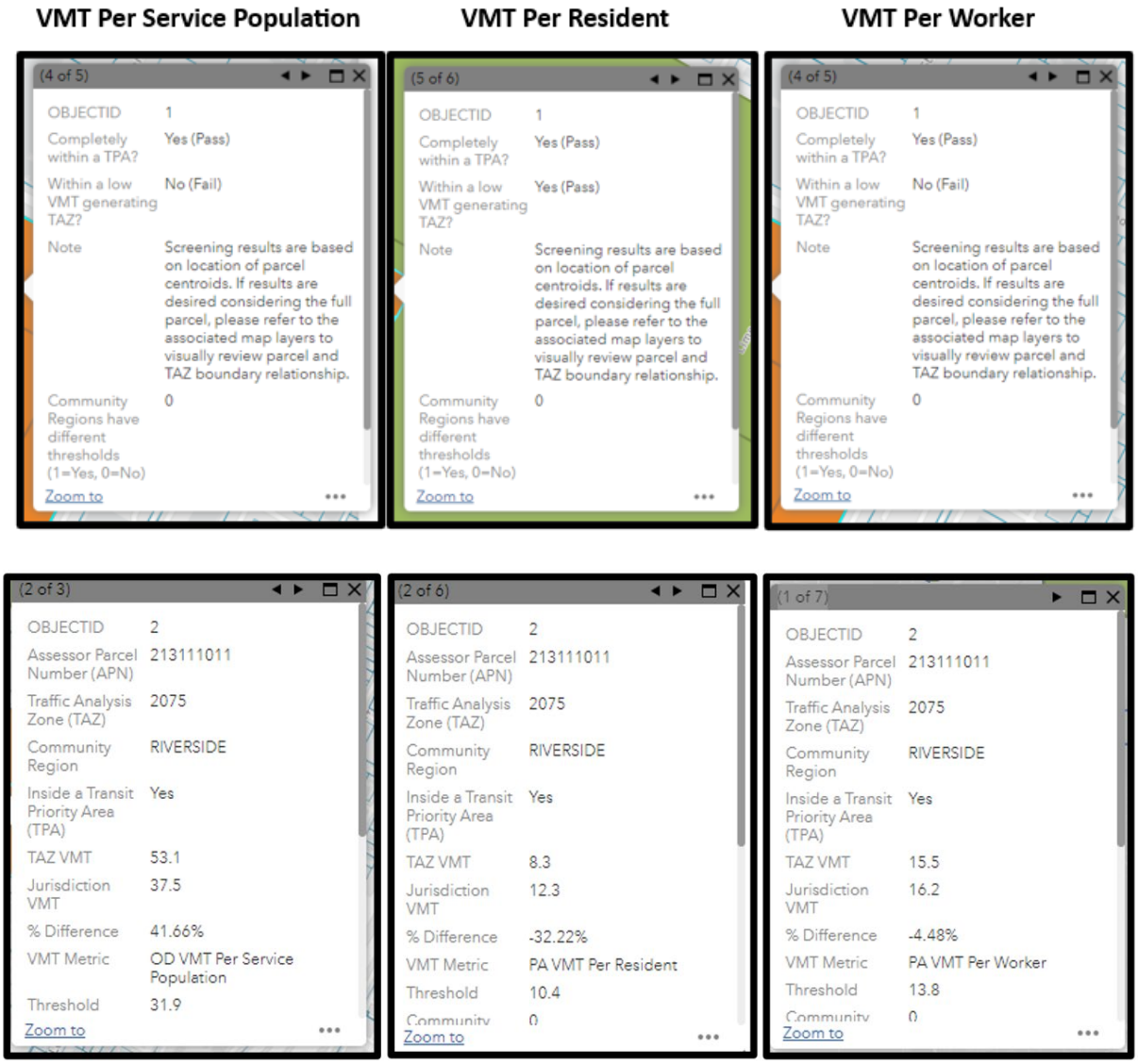
- **Step 2: Low VMT Area Screening**

  Residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident or per worker that is similar to the existing land uses in the low VMT area—provided the VMT of the area falls below thresholds.

  For this screening in the WRCOG area, the RIVTAM travel forecasting model was used to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs). TAZs are geographic polygons similar to Census block groups used to represent areas of homogenous travel behavior. Daily VMT per capita was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

The Project site is in TAZ 2075. **Figure 4: Low VMT Area** shows the results of the WRCOG VMT tool for each VMT metric; Service Population, Resident, and Worker. A Baseline Year of 2024, and a threshold of 15 percent below City baseline[1] was used. The Project TAZ has a VMT per Service Population of 53.1, a VMT per Resident of 8.3, and VMT per Worker of 15.5. Based on the results shown in **Figure 4**, the Project would not be within a low VMT-generating area under the VMT per Service Population or Worker metric but would be within a low VMT-generating area under the VMT per Resident metric. Because the Project's uses do not meet all VMT metrics, the Project site is not located within a low VMT-generating area. **Therefore, this criterion is not met**.

Figure 4: WRCOG VMT Tool Outputs



[1] The City guidelines identify a significant project generated VMT impact if the Project results exceed a 15 percent below baseline conditions.

- **Step 3: Project Type Screening**

  Local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

  In addition to local serving retail, the following uses can also be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

  - Local-serving K-12 schools
  - Local parks
  - Day care centers
  - Local-serving gas stations & car-washes
  - Local-serving banks
  - Local-serving hotels (e.g. non-destination hotels)
  - Student housing projects
  - Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
  - Projects consisting of 100% affordable housing
  - Projects generating less than 110 daily vehicle trips
    - This generally corresponds to the following "typical" development potentials:
      - 11 single family housing units
      - 16 multi-family, condominiums. or townhouse housing units
      - 10,000 sq. ft. of office
      - 15,000 sq. ft. of light industrial
      - 63,000 sq. ft. of warehousing
      - 79,000 sq. ft. of high cube transload and short-term storage warehouse

The Project proposes local-serving retail uses located adjacent to residential neighborhoods and as shown in **Table A**, the Project site does not include a single retail use over 50,000 square feet. Thus, the retail component of the Project would meet this criterion.

The Project proposes up to 376 hotel rooms; however, the use is speculative and because the operators are unknown it cannot be determined if the hotels are local-serving hotels (e.g. non-destination hotels). Thus, the hotel component of this Project would not meet this criterion.

The Project's residential uses are not proposed as affordable housing. The Project's proposed office uses and RCC expansion are not included in the list of other local serving uses and as shown in the Project's approved Scoping Agreement, each use generates more than 110 daily vehicles trips. As such, the residential, office, and RCC expansion uses would not meet this criterion. **Therefore, for these reasons, the Project overall would not meet this criterion**.

- **Step 4: Mixed-Use Projects**

  To identify if the proposed project requires a VMT analysis, the City of Riverside may evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g. residential and retail).

Per the City guidelines, each component of the Project was analyzed separately for Step 3 above.

- **Step 5: Redevelopment Projects**

  Where a project replaces existing VMT generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to less than significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.

The Project would not replace existing VMT generating land uses because the existing RCC is not being demolished. Additionally, as indicated under Step 1, above, the City will ensure adequate parking is provided per City requirements and that the site is not overparked as a part of the Development Application review process, **Therefore, this criterion is met**.

C. Summary

Per the City of Riverside Guidelines, several screening criteria may be applied to determine the need for VMT modeling and analysis. This VMT screening assessment indicates that the Project meets the criteria of Transit Priority Area (TPA) Screening in Step 1 because the Project is located within a TPA, will not be overparked, does not replace affordable housing, is consistent with the SCS, and it has a proposed FAR greater than 0.75, which is presumed to have a less than significant VMT impact. Therefore, a project-level VMT analysis is not required.

Attachments:

A. Scoping Agreement

APPROVED
Vital Patel
11/4/2024

Memorandum

To: Vital Patel
City of Riverside

From: Kawai Mang, Project Engineer
Albert A. Webb Associates

Date: September 18, 2024

Subject: Traffic study scoping agreement for Riverside Alive

Albert A. Webb has prepared this traffic scoping agreement for the Riverside Alive project, a proposed revitalization and expansion of the existing Riverside Convention Center and the surrounding city block, including the downtown pedestrian corridor. This scoping agreement is based on the City of Riverside Traffic Impact Analysis Guidelines (2020) and our current understanding of the proposed development.

A. Background and Project Description

The Project site is in Downtown Riverside on approximately 10 acres and includes the Lot 33 parking lot and Riverside Convention Center (RCC). The existing RCC, located at 3637 Fifth Street, is a 108,000 square-foot (sf) building that offers 50,000 sf of flexible indoor exhibit, ballroom, and meeting space as well as outdoor meeting space and passive park area in the Outdoor Plaza. Local access to the Project is provided via Main Street, Third Street, Fifth Street, Market Street and Orange Street.

Lot 33 is a surface parking lot managed by the City of Riverside with 498 parking stalls, of which 18 are accessible and one is an electric vehicle charging station. Lot 33 has two existing full-access driveways, one on Market Street and one on Third Street at the existing Main Street intersection.

The project site is located within the Raincross District of the Downtown Specific Plan.

The Project proposes a combination of residential, office, retail, and hotel uses, along with a Convention Center expansion and new parking facilities. No specific development is currently proposed; however, the following maximum size assumptions for the proposed Project land uses are used to determine a reasonable site buildout for analysis (**Table 1**). The potential layout of these uses is shown in **Figure 1**.

Hotel

The Project proposes two full-service hotels totaling up to 376 guest rooms. A 208-room full-service hotel would be located within Building C along Third Street. A second, 168-room extended stay hotel would be located within Building B on the interior of the Project site.

Figure 1: Proposed Project Site Plan Rendering

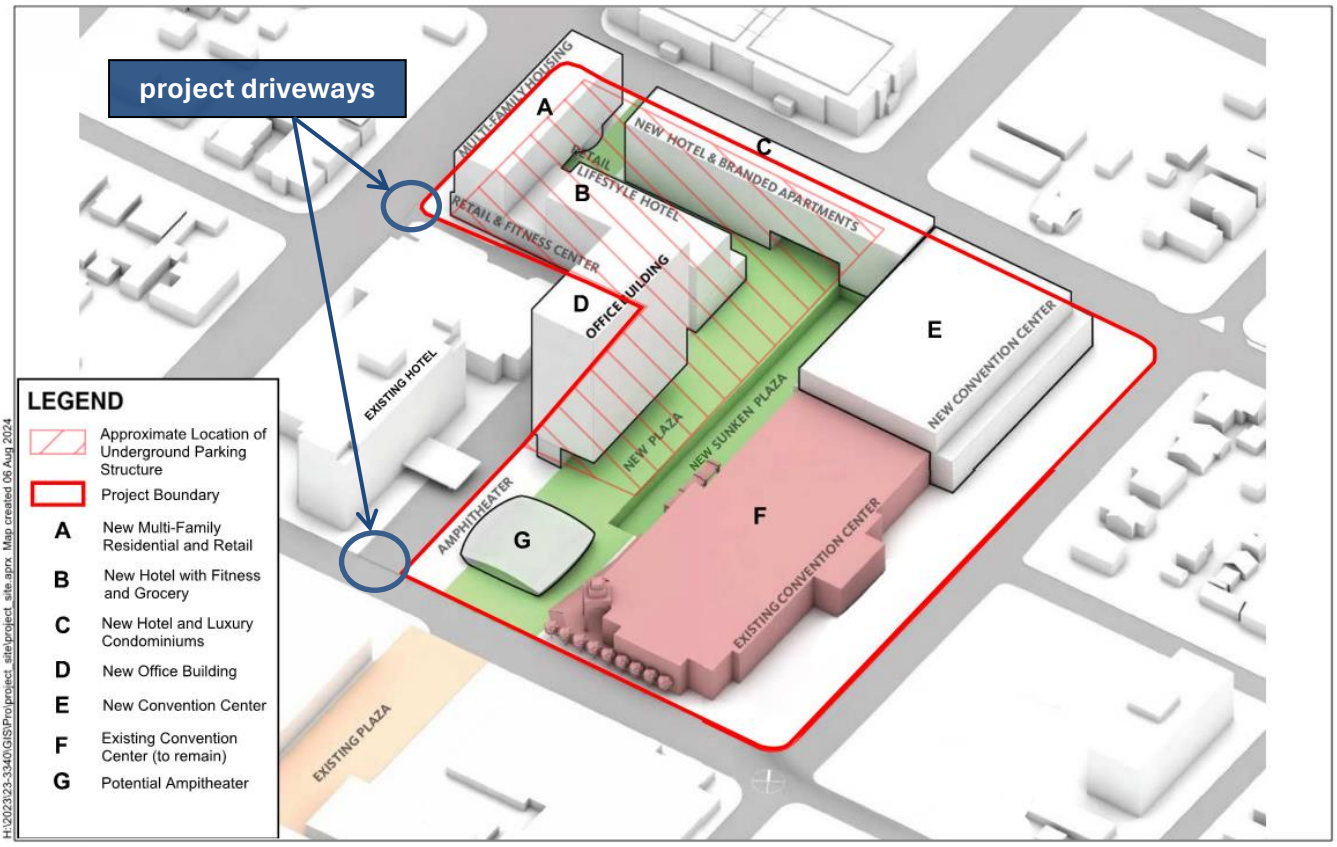


Table 1: Proposed Development Sizes

Building	Land Use Type	Size[1]
Existing Land Use		
Riverside Convention Center (Building F)	Conference & Event Center	108 KSF
Proposed Project		
Building A	Multifamily Housing	113 DU
Building B	Hotel	168 RM
	Commercial Restaurant/Retail	49.1 KSF
Building C	Hotel	208 RM
	Multifamily Housing	55 DU
Building D	General Office Building	220 KSF
Buildings A, C, D	Commercial Restaurant/Retail	12.9 KSF
RCC Expansion (Building E)	Conference & Event Center	189 KSF

[1] DU = dwelling unit, RM = rooms, KSF = 1,000 square feet

Residential

The Project proposes up to 168 residential units, consisting of 113 units of multi-family residential located within one 9-story building at the corner of Market Street and Third Street (Building A) and 55 condominiums on the top two levels of Building C.

Office

The Project proposes up to approximately 220,000 sf of Class A office space in Building D, up to 14 stories tall. The office building is located on the interior of the Project site south of the extended stay hotel building and across from the existing Riverside Convention Center building.

Commercial Retail Uses

The Project proposes up to 62,000 sf of commercial retail uses that may include retail, restaurant, entertainment and personal services. Approximately 12,875 sf of restaurant-focused retail space is assumed, accommodating several restaurant users integrated in the first floor of Buildings A, C, and D. Within Building B, an approximately 20,690 sf grocery store is anticipated on the ground floor, with an approximately 28,416 sf public fitness center on the second level.

Convention Center Expansion

The proposed Project includes a new 189,000 sf building to be joined to the existing 108,000 sf RCC building, adding 100,000 sf of space for exhibit, ballroom and meeting areas for a total Convention Center rentable function space of approximately 150,000 sf.

Vehicle Circulation, Parking, and Access

Regional access to the Project is provided via State Route 91 (SR-91) and State Route 60 (SR-60). The nearest SR-91 access is at Mission Inn Avenue, University Avenue, and Lime Street southeast of the project. The nearest SR-60 access is via Main Street north of the project. Local access to the Project is provided via Main Street, Third Street, Fifth Street, Market Street and Orange Street. A separate City project, scheduled to be completed by February 2027, is planned to reduce Main Street between Third Street and SR-60 from 4 to 2 travel lanes divided by a median with additional parking, landscaping, and pedestrian walkways.

The Project proposes a subterranean parking structure of up to 5 levels to replace Lot 33. With the demolition of Lot 33, its two existing driveways on Third Street and Market Street would be removed. Vehicle access to the Project is proposed via existing driveways on Market Street and Fifth Street serving the existing Marriott Hotel. Vehicle loading and passenger drop-off/pick-up areas will be provided on Third Street, Market Street, and Fifth Street. The existing Orange Street loading area would remain.

Public Transit and Pedestrian Access

The Project area is served by Riverside Transit Agency (RTA) routes 12, 29 and 204 via Market Street, with bus stops at Third Street, Fourth Street, and Sixth Street. The Downtown Riverside Metrolink station provides commuter rail and regional rail service to Los Angeles, Orange, and San Bernardino Counties.

The Project will provide pathways to facilitate the movement of pedestrians within the site and provide connection to the existing sidewalks along Third Street, Fifth Street, Market Street and Orange Street.

B. Traffic Study

Per the City guidelines, the project will be required to provide a traffic study with LOS analysis due to its size and uses. The City's traffic scoping form is provided in **Attachment A**.

Analysis Scenarios (weekday AM/PM peak hour)

1. Existing Conditions
2. Background Conditions: Existing + Cumulative Projects
3. Background plus Project: Existing + Cumulative + Project
4. Cumulative Conditions: RIVCOM 2045 Horizon Year
5. Cumulative plus Project: RIVCOM 2045 + Project

Study Intersections (see Attachment B):

1. Main St @ SR-60 WB / Oakley Ave
2. Main St @ SR-60 EB
3. Main St @ Spruce St
4. Main St @ First St
5. Main St @ Second St
6. Main St @ Third St
7. Market St @ First St
8. Market St @ Second St
9. Market St @ Third St
10. Market St @ Fourth St
11. Market St @ Fifth St
12. Market St @ Sixth St
13. Market St @ Mission Inn Ave
14. Market St @ University Ave
15. Market St @ Ninth St
16. Market St @ Tenth St
17. Market St @ 11th St
18. Market St @ 12th St
19. Market St @ 13th St
20. Market St @ 14th St
21. Brockton Ave @ Mission Inn Ave
22. Brockton Ave @ University Ave
23. Orange St @ Third St
24. Orange St @ Fourth St
25. Orange St @ Fifth St
26. Orange St @ Sixth St
27. Orange St @ Mission Inn Ave
28. Orange St @ University Ave
29. Orange St @ Tenth St
30. Lime St @ Third St
31. Lime St @ Fourth St
32. Lime St @ Fifth St
33. Lime St @ Mission Inn Ave
34. Lime St @ University Ave
35. Lime St @ Tenth St / SR-91 WB On-Ramp
36. Mission Inn Ave @ SR-91 WB Off-Ramp
37. Mission Inn Ave @ SR-91 EB / Mulberry St
38. University Ave @ SR-91 EB / Mulberry St

Study Roadway Segments (see Attachment B):

1. Main St n/o Third St
2. Market St n/o Third St
3. Market St b/t Third St & Fifth St
4. Market St s/o Fifth St
5. Market St s/o Sixth St

Existing Conditions

Traffic volume data date(s): June 6, 2024

Future Traffic Forecasting

Project opening year: 2028
Future buildout growth: per RIVCOM model outputs

Specific issues to be included in the study

Traffic study will include discussion of and recommendations for pedestrian connectivity, including relevant exhibits. Future analysis model will include planned Main Street improvements.

C. Project Traffic

Trip Generation Study:

The project includes a 189,000 sf expansion to the existing RCC for 100,00 sf new rentable space in addition to the existing 50,000 sf. As there is no "standard" trip generation for special event venues due to their particularities, the RCC trip generation rates were developed by a trip generation study.

Based on the June 2024 RCC calendar of events, traffic volume counts were conducted at Lot 33 and adjacent public parking lot on Orange St and 5th St on Thursday, June 6 and Saturday, June 8, 2024, both of which had two scheduled events totaling over 500 contracted attendees per day. Arrival observations were also conducted at the 5th St RCC entrance to capture drop-offs, street parking, and pedestrian arrivals.

From the traffic volume data, trip generation for the weekday daily, AM peak hour, PM peak hour, Saturday daily, and Saturday peak hour periods were derived from the existing RCC square footage and then applied to the proposed RCC expansion to estimate the project traffic to the expansion (**Table 2**). On Thursday, a total of 829 vehicle trips accessed the RCC parking areas, with the peak hour occuring at 7:15am. On Saturday, a total of 421 vehicle trips accessed the RCC parking areas, with the peak hour occuring at 8:15am. Therefore, the Thursday traffic volumes are more intensive and the traffic study will use the typical weekday operations for analysis. On a typical weekday, the RCC expansion is expected to generate approximately 1,658 daily vehicle trips, with 350 and 122 trips in the AM and peak hour, respectively.

Project Trip Generation and Distribution

The expected Project traffic volumes and patterns are based on data compiled by the Institute of Transportation Engineers (ITE), the RCC trip generation study, the Downtown Riverside roadway network, and regional freeway connections. As a mixed-use development, the various uses within the project are expected to experience internal capture, where a resident, patron, or employee may also use or visit another use within the project. The internal capture worksheets are provided in **Attachment C**. The commercial uses are also expected to have some pass-by traffic, where patrons stop at the restaurant or store on their way to another destination. **Table 3** shows the project trip generation, including internal capture and pass-by trip credits. The proposed project trip distribution is provided in **Attachment D**.

Table 2: Convention Center Trip Generation Study

Day of Week	Size[1]	Daily	AM/SAT Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Existing RCC Site Traffic Volumes [2]								
Weekday	50 KSF	**829**	30	145	**175**	33	28	**61**
Saturday		**421**	67	59	**126**			
Calculated Trip Generation Rates								
Weekday	1 KSF	**16.58**	0.60	2.90	**3.50**	0.66	0.56	**1.22**
Saturday		**8.42**	1.34	1.18	**2.52**			
Proposed RCC Expansion Traffic Volumes								
Weekday	100 KSF	**1,658**	60	290	**350**	66	56	**122**
Saturday		**842**	134	118	**252**			

[1] KSF = 1,000 sf gross rentable space
[2] Existing traffic volume data collected on June 6 and June 8, 2024.

Table 3: Project Trip Generation

Project Portion	Land Use[1]	Size[2]	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Project Trip Generation									
Convention Center[3]	N/A	100 KSF	1,658	60	290	**350**	66	56	**122**
Hotels	310	376 RM	3,004	97	76	**173**	98	94	**192**
Condos	220	55 DU	371	5	17	**22**	18	10	**28**
Multifamily Housing	221	113 DU	513	10	32	**42**	27	17	**44**
Office	710	220 KSF	2,385	294	40	**334**	54	263	**317**
Commercial	821	62.0 KSF	5,857	136	83	**219**	269	291	**560**
Total Project Trips			**13,788**	**602**	**538**	**1,140**	**532**	**731**	**1,263**
Trip Credits									
Internal Capture[4]			-1,379	-38	-38	**-76**	-79	-79	**-158**
Pass-By[5]	*34% PM peak-hour*		-1,900	-	-	**-**	-91	-99	**-190**
Net New Project Trips			**10,509**	**564**	**500**	**1,064**	**362**	**553**	**915**

[1] Land use rates per ITE Trip Generation Manual, 11th Ed (2021)
[2] DU = dwelling unit, RM = rooms, KSF = 1,000 square feet
[3] Trip generation for Convention Center expansion based on trip generation study of existing rentable space and traffic volumes.
[4] Internal trip capture per NCHRP 684 estimator. 10% lowest peak-hour capture rate applied to daily traffic volumes.
[5] Pass-by trip credit applied to commercial trips only. Pass-by rates per ITE Trip Generation Handbook, 3e. Daily trip credit estimated as 10x PM pass-by trips.

D. Vehicle Miles Traveled Assessment

Per California Senate Bill 743 (SB 743), the California Office of Planning and Research (OPR) identified vehicle miles traveled (VMT) as the most appropriate measure to determine transportation impacts under the California Environmental Quality Act (CEQA), replacing LOS analyses. **Figure 2** shows the project traffic analysis zone (TAZ) VMT data per the Western Riverside Council of Governments (WRCOG) webtool.

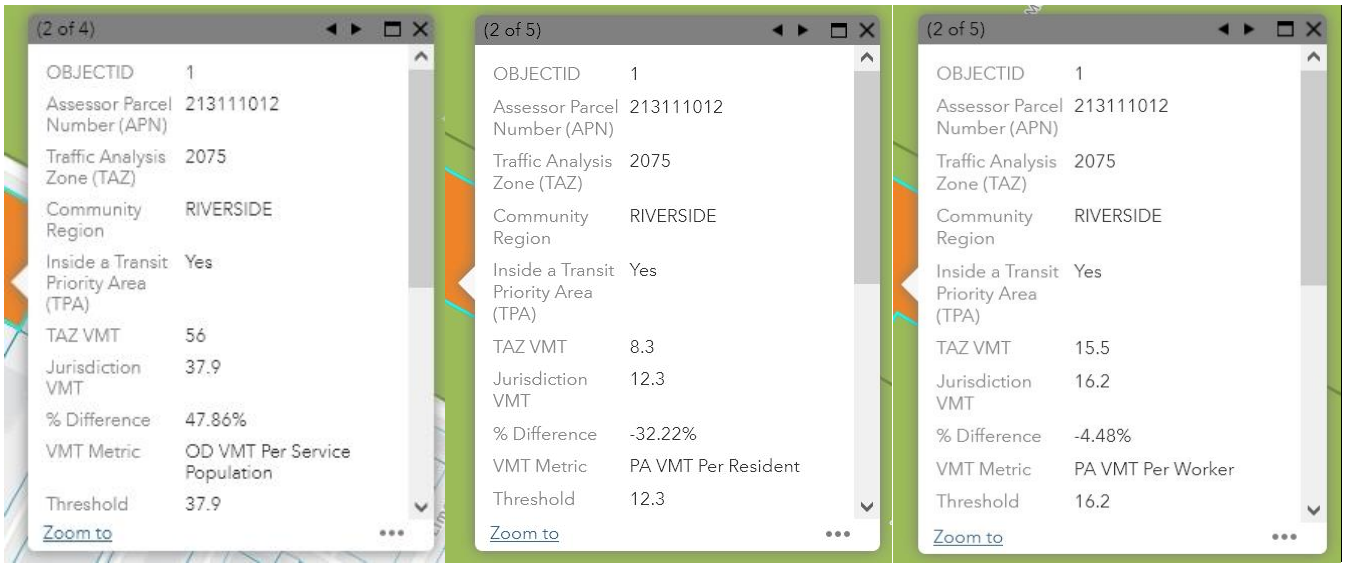
VMT Screening Criteria

Per the City Guidelines, several screening criteria may be applied to identify projects with a less-than-significant VMT impact. The project is eligible to screen out of full VMT analysis under the following criteria:

- Project is located within a transit priority area (TPA), has floor area ratio (FAR) over 0.75, will not be overparked, and is consistent with the local Sustainable Communities Strategy.
- For the residential portion of the project, VMT per resident in the project TAZ is below the City's threshold of significance.

A memo applying the screening criteria in detail will be provided separately.

Figure 2: WRCOG Screening Tool Results



Recommended by:

Kawai C. Mang, Project Engineer *Albert A. Webb Associates*	5-23-2024 *Date*	Revised:	6-7-2024 *Date*
	Revised: 6-28-2024 *Date*	8-6-2024 *Date*	9-18-2024 *Date*

Approved Scoping Agreement:

Agency Representative	*Date*

Attachments:

A. City of Riverside Scoping Form
B. Study Area
C. NCHRP Internal Trip Capture Worksheets
D. Project Trip Distribution

Attachment A

City Traffic Scoping Form

Traffic Analysis Scoping Form

This scoping form shall be submitted to the City of Riverside Traffic Engineering Division

Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Riverside Alive
Project Address:	3637 5th St, Riverside, CA 92501
Project Opening Year:	2028
Project Description:	Expansion of Riverside Convention Center + multi-use private development to include hotel, housing, office, and commercial space

	Consultant:	**Developer:**
Name:	Albert A Webb Associates	City of Riverside
Address:	3708 McCray St, Riverside, CA 92506	3900 Main Street, Riverside CA 92522
Telephone:	951-320-6081	
Fax/Email:	kawai.mang@webbassociates.com	

Scoping & Study Fees:

Fees to be made payable to "City of Riverside" and delivered to Land Development. City Hall 3rd Floor, 3900 Main Street, Riverside, CA 92522

1) Scoping Agreement Fee (For all projects not screened from analysis): **$271.00**

2) TIA Review (For projects with both LOS & VMT analysis of any scale, or standalone LOS analyses with over 100 vehicle trips per hour): **$2671.02**

3) TIA Review (For standalone VMT analysis, or standalone LOS analyses with under 100 vehicle trips per hour): **$1288.20**

Trip Generation Information:

Trip Generation Data Source: ITE, trip gen study

Current General Plan Land Use: Downtown SP

Proposed General Plan Land Use: Downtown SP

Current Zoning: Downtown SP

Proposed Zoning: Downtown SP

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	see	attached	table
PM Trips	0	0	0	see	attached	table

Trip Internalization: ◯ Yes ◯ No (attached % Trip Discount)

Pass-By Allowance: ◯ Yes ◯ No (attached % Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses in accordance with City Guidelines?

Is the project screened from LOS assessment? ◯ Yes ◯ No

LOS screening justification (see Page 6 of the guidelines): _____

Is the project screened from VMT assessment? ◯ Yes ◯ No

VMT screening justification (see Pages 23-25 of the guidelines): _____
Project is located within a TPA, is consistent with SCS, is not overparked, and has FAR over 0.75. Furthermore, VMT per resident in the project TAZ is below the City's significance threshold. Separate VMT screening memo to be provided with detailed application of screening criteria.

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):

North	South	East	West
see %	attached %	for %	details %

- Attach list of Approved and Pending Projects that need to be considered (provided by the lead agency and adjacent agencies)
- Attach list of study intersections/roadway segments
- Attach legible site plan
- Note other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other _____
- Date of Traffic Counts June 6, 2024
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model RIVCOM
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

Specific Issues to be addressed in the Study (in addition to the standard analysis described in the Guidelines) (To be filled out by the Public Works Traffic Engineering Division)

Study to include discussion of and recommendations for pedestrian connectivity, including relevant exhibits

Attachment B

Study Area

Figure 1: Study Area



Attachment C

NCHRP Internal Capture Worksheets

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Riverside Alive	**Organization:**	City of Riverside
Project Location:	Riverside Convention Center	**Performed By:**	Albert A Webb Associates
Scenario Description:	Project	**Date:**	05/23/24
Analysis Year:	Opening Year	**Checked By:**	KCM
Analysis Period:	**AM Street Peak Hour**	**Date:**	05/23/24

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				334	294	40
Retail				219	136	83
Restaurant				0		
Cinema/Entertainment				0		
Residential				55	13	42
Hotel				173	97	76
All Other Land Uses[2]				0		
Total				781	540	241

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		11	0	0	0	0
Retail	12		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	0	0		0
Hotel	9	5	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	781	540	241
Internal Capture Percentage	10%	7%	16%
External Vehicle-Trips[3]	705	502	203
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	7%	28%
Retail	12%	14%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	2%
Hotel	0%	18%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Riverside Alive
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	294	294	1.00	40	40
Retail	1.00	136	136	1.00	83	83
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	13	13	1.00	42	42
Hotel	1.00	97	97	1.00	76	76

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		11	25	0	0	0
Retail	24		11	0	12	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	8	0		0
Hotel	57	11	7	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		44	0	0	0	0
Retail	12		0	0	0	0
Restaurant	41	11		0	1	4
Cinema/Entertainment	0	0	0		0	0
Residential	9	23	0	0		0
Hotel	9	5	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	22	272	294	272	0	0
Retail	16	120	136	120	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	13	13	13	0	0
Hotel	0	97	97	97	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	11	29	40	29	0	0
Retail	12	71	83	71	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	41	42	41	0	0
Hotel	14	62	76	62	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Riverside Alive	**Organization:**	City of Riverside
Project Location:	Riverside Convention Center	**Performed By:**	Albert A Webb Associates
Scenario Description:	Project	**Date:**	05/23/24
Analysis Year:	Opening Year	**Checked By:**	KCM
Analysis Period:	**PM Street Peak Hour**	**Date:**	05/23/24

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				317	54	263
Retail				560	269	291
Restaurant				0		
Cinema/Entertainment				0		
Residential				62	38	24
Hotel				192	98	94
All Other Land Uses[2]				0		
Total				1131	459	672

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		22	0	0	2	0
Retail	6		0	0	17	15
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	10	0	0		1
Hotel	0	5	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,131	459	672
Internal Capture Percentage	14%	17%	12%
External Vehicle-Trips[3]	973	380	593
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	13%	9%
Retail	14%	13%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	50%	50%
Hotel	16%	5%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Riverside Alive
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	54	54	1.00	263	263
Retail	1.00	269	269	1.00	291	291
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	38	38	1.00	24	24
Hotel	1.00	98	98	1.00	94	94

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		53	11	0	5	0
Retail	6		84	12	76	15
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	10	5	0		1
Hotel	0	15	64	0	2	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		22	0	0	2	0
Retail	17		0	0	17	17
Restaurant	16	135		0	6	70
Cinema/Entertainment	3	11	0		2	1
Residential	31	27	0	0		12
Hotel	0	5	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	7	47	54	47	0	0
Retail	37	232	269	232	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	19	19	38	19	0	0
Hotel	16	82	98	82	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	24	239	263	239	0	0
Retail	38	253	291	253	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	12	24	12	0	0
Hotel	5	89	94	89	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Attachment D

Project Trip Distribution

Figure : Project Trip Distribution (Outbound)

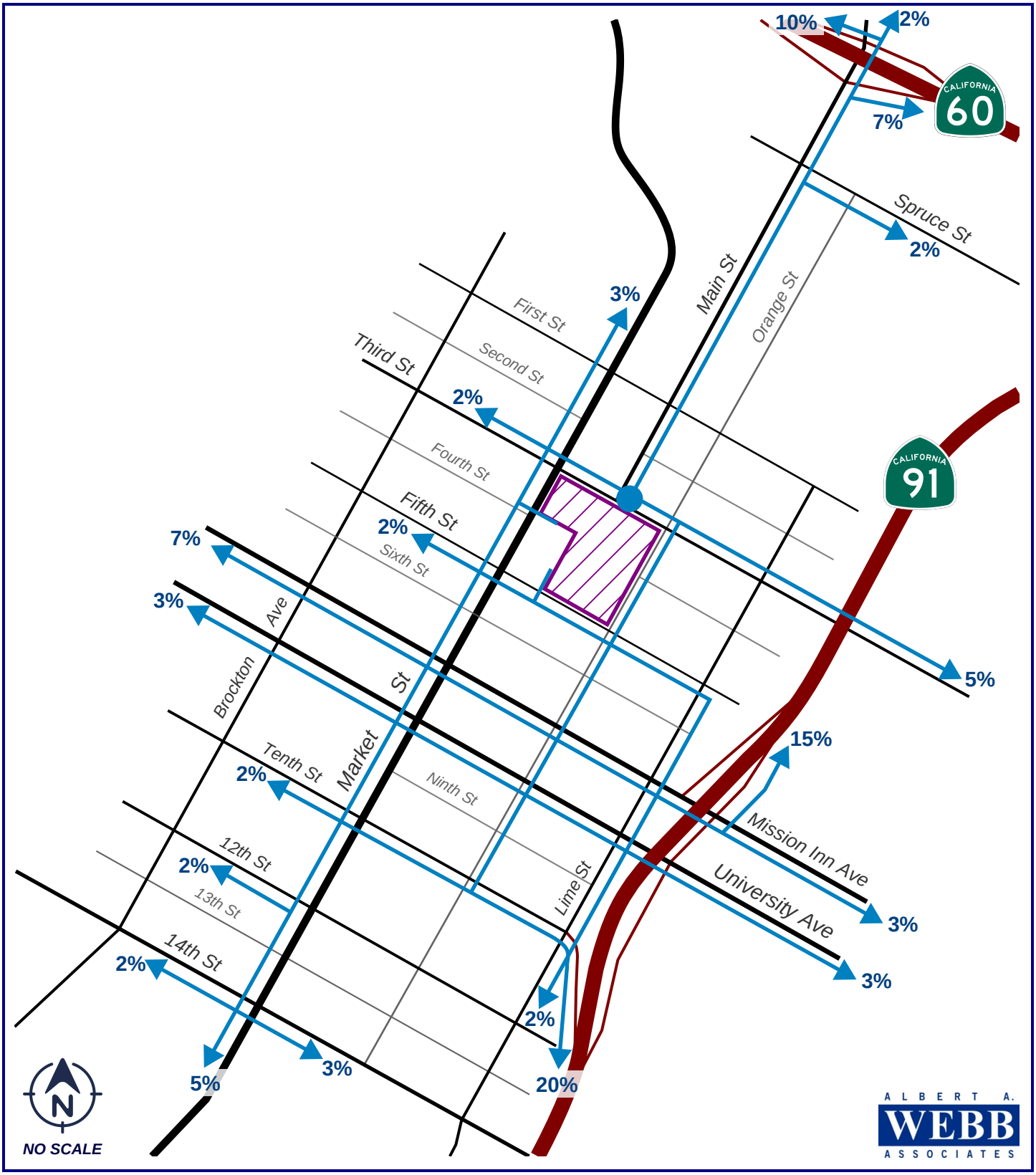
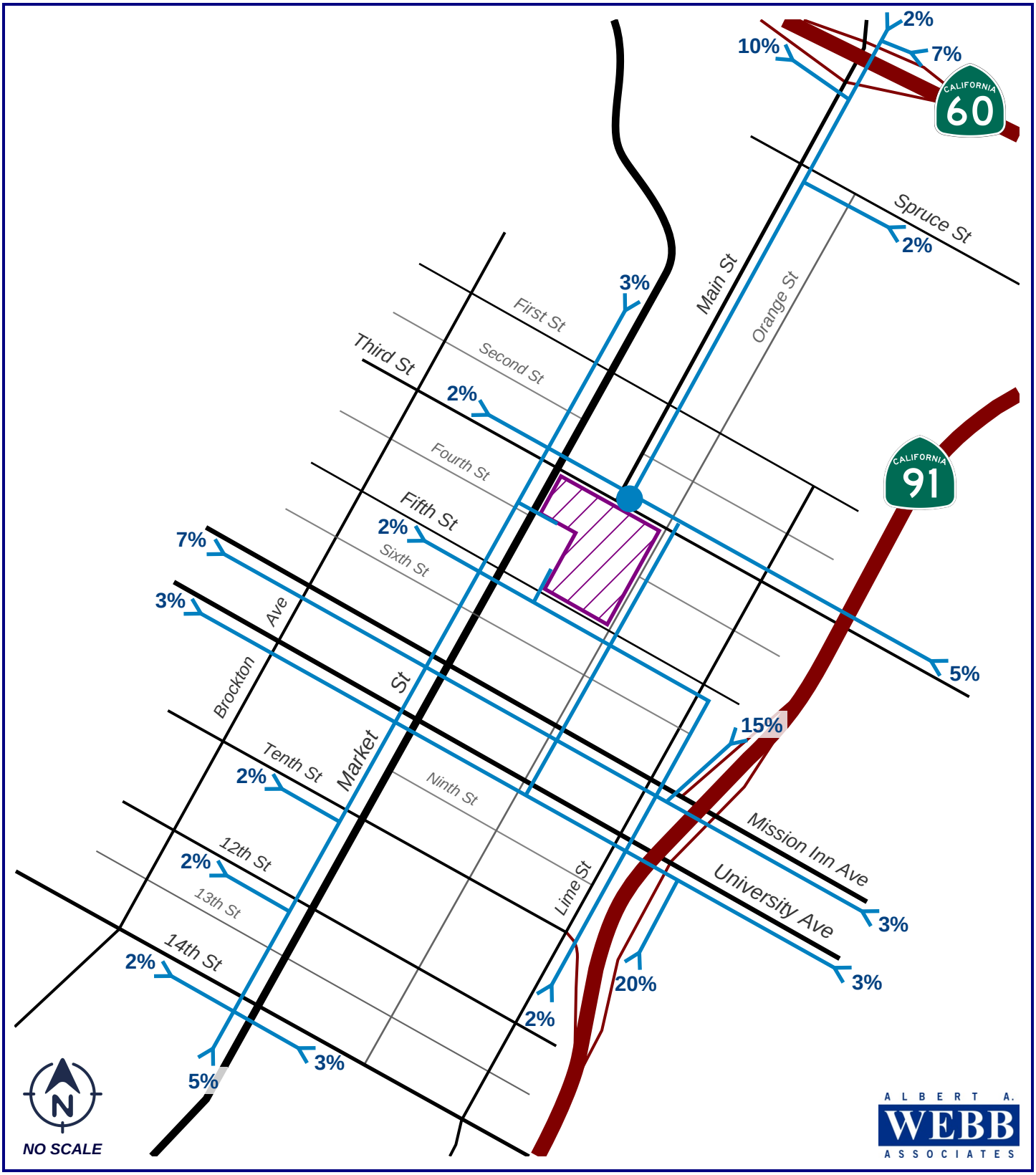


Figure : Project Trip Distribution (Inbound)



WEBB-D

TRAFFIC STUDY



Riverside Alive!

March 2025

Prepared for
City of Riverside

Traffic Study

Prepared by
Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506

webbassociates.com

ALBERT A. WEBB ASSOCIATES

Corporate Headquarters
3788 McCray Street
Riverside, CA 92506
951.686.1070

March 24, 2025

Paige Montojo
City of Riverside
3900 Main Street, Riverside, CA 92522

RE: Traffic study for Riverside Alive in the City of Riverside

We are pleased to submit this traffic study for the proposed Riverside Alive project. The analysis and report have been prepared in accordance with the City of Riverside General Plan, Downtown Specific Plan, Northside Specific Plan, and Traffic Impact Analysis Guidelines, as well as the Riverside County Congestion Management Program.

If you have any questions regarding this report, please contact the undersigned for clarification.

Sincerely,
ALBERT A. WEBB ASSOCIATES

Nicholas Lowe, PE, TE
Deputy Director, Traffic & Transportation



Kawai Mang, EIT
Project Engineer

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LIST OF ABBREVIATIONS

AWSC	All-Way Stop Control
CMP	Congestion Management Program
DU	Dwelling Unit
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
MUTCD	Manual on Uniform Traffic Control Devices
NCHRP	National Cooperative Highway Research Program
OWSC	One-Way Stop Control
PACT	City of Riverside Pedestrian Target Safeguarding Plan (PTS), Active Transportation Plan (AT Plan), Complete Streets Ordinance (CSO), and Trails Master Plan (TMP)
RCC	Riverside Convention Center
RM	Room
RIVCOM	Riverside County Model
RTA	Riverside Transit Agency
SF, KSF	Square Feet, Thousand Square Feet
TUMF	Transportation Uniform Mitigation Fund
TWSC	Two-Way Stop Control
WRCOG	Western Riverside Council of Governments

I. EXECUTIVE SUMMARY

Study Background

This study evaluates the potential effects on traffic operations from the proposed Riverside Alive project located in Downtown Riverside. The study objectives include:

- Document existing traffic conditions (2024) in the vicinity of the proposed project;
- Determine the expected project traffic;
- Evaluate opening-day background traffic scenarios, including cumulative projects;
- Evaluate cumulative buildout traffic scenarios, including regional growth;
- Determine if the level of service (LOS) required by the City will be maintained within the study area,
    - if not, determine the improvements needed to maintain the required LOS;
- Evaluate peak-hour traffic signal warrants for unsignalized study intersections; and
- Evaluate pedestrian connectivity for the project.

Prior to conducting this study, a traffic scoping form was submitted to and approved by the City (**Appendix A**).

Project Description

Located in Downtown Riverside, the project site includes Lot 33 and Riverside Convention Center (RCC). The existing RCC (3637 Fifth Street) is a 108,000 square-foot (sf) building offering 50,000 sf of flexible indoor rentable space. Project access is provided via Main Street, Third Street, Fifth Street, Market Street and Orange Street. The project site is located within the Raincross District of the Downtown Specific Plan.

The project proposes up to 168 residential units, 376 hotel rooms, 62,000 sf commercial space, 220,000 sf office space, and 189,000 sf Convention Center expansion to be developed in a single phase, completed and operational in 2028. Associated subterranean parking and pedestrian facilities are also included.

Project Trip Generation

Based on the existing site, proposed site plan, and the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, the project is expected to generate a total of approximately **10,509 trips daily, with 1,064 and 915 trips in the AM and PM peak hour hours**, respectively.

Analysis and Findings

Intersection Level of Service

Per the City of Riverside General Plan, Downtown Specific Plan, Northside Specific Plan, and Traffic Impact Analysis Guidelines, the minimum acceptable LOS for this study is **LOS D**, except within the Riverside County Congestion Management Program (CMP) network, where the minimum acceptable LOS is **LOS E**.

The intersection LOS summary is provided in **Table 1**. Based on existing traffic volumes, expected project traffic, and future growth projections, the following study intersections are expected to operate below the minimum acceptable LOS in one or more study scenarios:

- #17 Market St @ 11th St

- #19 Market St @ 13th St

Table 1: Intersection Level of Service Analysis Summary

	Intersection	Traffic Control[1]	Existing Conditions		Background Conditions		Background + Project		Cumulative Conditions		Cumulative + Project	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Main St @ SR-60 WB / Oakley Ave	Signal	C	C	C	C	C	C	C	C	C	D
2	Main St @ SR-60 EB	Signal	C	C	C	C	C	C	C	C	C	C
3	Main St @ Spruce St	Signal	B	B	A	B	A	B	A	B	B	B
4	Main St @ First St	Signal	B	B	B	B	B	C	B	B	A	B
5	Main St @ Second St	OWSC	A	B	B	C	C	D	B	C	B	C
6	Main St @ Third St	Signal	C	C	C	C	C	D	C	C	C	D
7	Market St @ First St	Signal	A	B	B	B	B	B	A	B	A	B
8	Market St @ Second St	OWSC	C	C	C	D	C	D	C	D	C	D
9	Market St @ Third St	Signal	B	C	B	C	B	C	B	D	B	D
10	Market St @ Fourth St	TWSC	C	C	D	D	D	E	D	D	D	D
11	Market St @ Fifth St	Signal	A	A	A	A	B	B	B	B	B	B
12	Market St @ Sixth St	TWSC	B	B	B	B	B	B	B	B	B	B
13	Market St @ Mission Inn Ave	Signal	C	C	C	C	C	C	C	C	C	D
14	Market St @ University Ave	Signal	C	C	C	C	C	C	C	C	C	C
15	Market St @ Ninth St	Signal	A	A	A	A	A	A	A	A	A	A
16	Market St @ Tenth St	Signal	A	A	A	A	A	A	A	A	A	A
17	Market St @ 11th St	TWSC	E	D	F	F	F	F	F	E	F	F
18	Market St @ 12th St	Signal	A	A	A	A	A	A	A	B	A	B
19	Market St @ 13th St	TWSC	D	E	F	F	F	F	E	F	F	F
20	Market St @ 14th St	Signal	C	C	C	C	C	C	C	C	C	C
21	Brockton Ave @ Mission Inn Ave	Signal	B	B	B	B	B	B	B	B	B	B
22	Brockton Ave @ University Ave	Signal	C	C	C	C	C	C	C	C	C	C
23	Orange St @ Third St	Signal	A	A	B	B	B	B	A	B	A	B
24	Orange St @ Fourth St	OWSC	A	A	B	B	B	B	A	A	B	B
25	Orange St @ Fifth St	AWSC	A	A	A	B	B	D	A	A	B	B
26	Orange St @ Sixth St	AWSC	A	A	A	A	C	C	A	A	B	B
27	Orange St @ Mission Inn Ave	Signal	A	A	A	B	C	C	A	B	B	B
28	Orange St @ University Ave	Signal	B	A	B	B	B	B	B	A	B	B
29	Orange St @ Tenth St	Signal	B	A	B	A	B	B	B	A	B	B
30	Lime St @ Third St	Signal	B	B	B	B	B	B	B	B	B	B
31	Lime St @ Fourth St	TWSC	B	B	B	B	B	B	B	B	B	B
32	Lime St @ Fifth St	TWSC	B	B	B	B	C	C	C	C	C	C
33	Lime St @ Mission Inn Ave	Signal	C	C	C	C	D	C	C	C	C	C
34	Lime St @ University Ave	Signal	C	C	C	C	C	C	C	C	C	C
35	Lime St @ Tenth St / SR-91 WB	Signal	B	C	B	C	B	C	B	C	B	C
36	Mission Inn Ave @ SR-91 WB	Signal	B	B	B	B	B	B	B	B	B	B
37	Mission Inn Ave @ SR-91 EB / Mulberry St	Signal	B	C	B	C	C	D	B	C	C	D
38	University Ave @ SR-91 EB / Mulberry St	Signal	B	B	B	B	B	B	B	B	B	B

Note: Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

[1] OWSC = one-way stop control; TWSC = two-way stop control; AWSC = all-way stop control

X = LOS falls below minimum threshold

Roadway Segment Level of Service

Per the approved scoping agreement, five roadway segments on Main Street and Market Street were selected for analysis.

Per the City of Riverside General Plan, Downtown Specific Plan, Northside Specific Plan, and Traffic Impact Analysis Guidelines, the minimum acceptable LOS for the Main Street segment is **LOS D**. As part of the Riverside County Congestion Management Program (CMP) network, the minimum acceptable LOS for the Market Street segments is **LOS E**.

All study roadway segments are expected to operate at or above the minimum acceptable LOS in all study scenarios.

Traffic Signal Warrants

The California Manual on Uniform Control Devices (MUTCD) provides nine warrant guidelines for a traffic signal installation, of which the satisfaction of any single warrant shall not require a new traffic signal installation. Accordingly, this study finds that the intersection of Market St @ Fourth St is expected to meet the peak-hour traffic signal warrant with the completion of the project.

Recommended Improvements

Intersection Improvements

Table 2 shows the recommended improvements at study intersections expected to have operational deficiencies. The City of Riverside finds that restricting side-street movements crossing Market Street is appropriate for the Downtown area to reduce vehicle delays and potential conflicts, as intersections are closely spaced in the grid network.

Table 2: Recommended Intersection Improvements

Intersection		Traffic Control[1]	Peak Hour	Scenario Needed	Recommended Improvements	Fair Share %[2]
17	**Market St @ 11th St**	TWSC	AM/PM	Existing	restrict E/W vehicles on 11th St to right turns only	**36.4%**
19	**Market St @ 13th St**	TWSC	AM/PM	Existing	restrict E/W vehicles on 13th St to right turns only	**25.0%**

[1] Existing traffic control measure. TWSC = two-way stop control

[2] Fair share percentage based on proportion of project trips to total growth in the Cumulative + Project analysis for reference only.

The City of Riverside does not currently have a fair share program; therefore, the project fair share percentages shown above simply illustrate the proportion of future traffic expect to be attributable to the project at each location for reference. As the recommended improvements are relatively inexpensive and do not require additional right-of-way or roadway pavement, it is expected that the City Traffic Division would require the project to complete these improvements at 100% responsibility.

Pedestrian Connectivity

The Downtown Specific Plan emphasizes pedestrian use and access in a "comfortable, safe, and enjoyable walking environment." Conceptual plans for the project show plans for an interior pedestrian plaza to serve as a linkage, gathering, and communal space between the project buildings. The plaza provides opportunities for pedestrian-focused amenities such as pocket park space, picnic space, public art, and water features to enhance the employee, resident, and visitor experience.

The project is also well-positioned to provide additional pedestrian connections and facilities as an extension of the Main Street Pedestrian Mall. Pedestrian facilities and amenities such as walking space, street lighting, crosswalks, accessible curb ramps, benches, and shade should be provided to connect residents, patrons, and employees of the project to nearby parking, attractions, and businesses.

The project proposes to provide on-site parking in a subterranean facility with vehicle access from Market Street and Fifth Street. On-site pedestrian facilities should be provided to clearly and quickly allow access from the project to on-site and on-street parking, with lighting and signage to assist in wayfinding.

II. INTRODUCTION

Study Background

This study evaluates the potential effects on traffic operations from the proposed Riverside Alive project located in Downtown Riverside. The study objectives include:

- Document existing traffic conditions (2024) in the vicinity of the proposed project;
- Determine the expected project traffic;
- Evaluate opening-day background traffic scenarios, including cumulative projects;
- Evaluate cumulative buildout traffic scenarios, including regional growth;
- Determine if the LOS required by the City will be maintained within the study area,
    - if not, determine the improvements needed to maintain the required LOS;
- Evaluate peak-hour traffic signal warrants for unsignalized study intersections; and
- Evaluate pedestrian connectivity for the project.

Prior to conducting this study, a traffic scoping form was submitted to and approved by the City (**Appendix A**).

Project Location and Description

The Project site is approximately 10 acres in Downtown Riverside, including Lot 33 and Riverside Convention Center (RCC). The existing RCC (3637 Fifth Street) is a 108,000 square-foot (sf) building offering 50,000 sf of flexible indoor rentable space. Lot 33 is a surface parking lot managed by the City with existing full-access driveways on Market Street and on Third Street at the existing Main Street intersection.

The project site is located within the Raincross District of the Downtown Specific Plan. It is assumed to be developed in a single phase, to be completed and operational in 2028.

The project proposes a combination of residential, office, retail, and hotel uses, along with a Convention Center expansion and new parking facilities. No specific development is currently proposed; however, maximum size assumptions for the proposed land uses are used to determine a reasonable site buildout for analysis (**Table 3**). The potential layout of these uses is shown in **Figure 1**.

Residential

The Project proposes up to 168 residential units: up to 113 units of multi-family residential located within one Building A and up to 55 condominiums on the top levels of Building C.

Hotel

The Project proposes two full-service hotels totaling up to 376 guest rooms: a 208-room full-service hotel would be located within Building C, while a 168-room extended stay hotel would be located within Building B.

Commercial Retail Uses

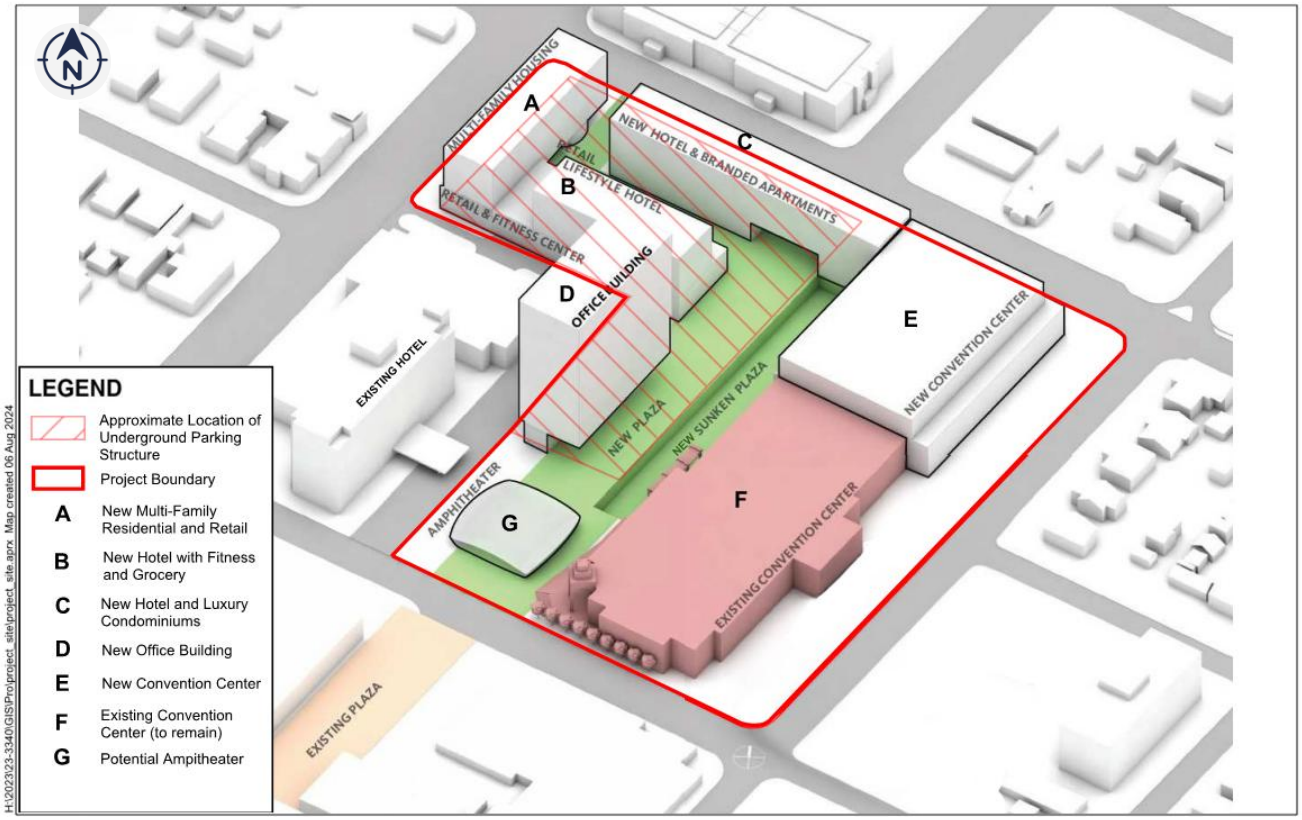
The Project proposes up to 62,000 sf of mixed commercial retail use. Approximately 12,875 sf of restaurant-focused retail space is assumed in Buildings A, C, and D. Within Building B, approximately 20,690 sf retail is anticipated on the ground floor and 28,416 sf on the second level.

Table 3: Existing and Proposed Project Development

Building	Land Use Type	Size[1]
Existing Land Use		
Riverside Convention Center (Building F)	Conference & Event Center	108 KSF
Proposed Project		
Building A	Multifamily Housing	113 DU
Building B	Hotel	168 RM
	Commercial Restaurant/Retail	49.1 KSF
Building C	Hotel	208 RM
	Multifamily Housing	55 DU
Building D	General Office Building	220 KSF
Buildings A, C, D	Commercial Restaurant/Retail	12.9 KSF
RCC Expansion (Building E)	Conference & Event Center	189 KSF

[1] DU = dwelling unit, RM = rooms, KSF = 1,000 square feet

Figure 1: Proposed Project Site Plan



Convention Center Expansion

The proposed Project includes a new 189,000 sf building (Building E) to be joined to the existing RCC, which includes 100,000 sf of space for exhibit, ballroom and meeting areas as well as 89,000 sf of auxiliary and support facilities. This 100,000 sf additional space would bring the expanded RCC to a total rentable space of approximately 150,000 sf.

Office

The Project proposes up to 220,000 sf of office space in Building D.

Vehicle Circulation, Parking, and Access

Regional access to the Project is provided via State Route 91 (SR-91) and State Route 60 (SR-60). The nearest SR-91 access is at Mission Inn Avenue, University Avenue, and Lime Street southeast of the project. The nearest SR-60 access is via Main Street to the north. Local access to the Project is provided via Main Street, Third Street, Fifth Street, Market Street and Orange Street.

The Project proposes a subterranean parking structure of up to 5 levels to replace Lot 33. With the demolition of Lot 33, its two existing driveways on Third Street and Market Street would be removed. Vehicle access to the Project is proposed via existing driveways on Market Street and Fifth Street serving the existing Marriott Hotel. Vehicle loading and passenger drop-off/pick-up areas will be provided on Third Street, Market Street, and Fifth Street. The existing Orange Street loading area would remain.

Transit and Active Transportation

The Project area is served by Riverside Transit Agency (RTA), with regional connections to Omnitrans bus service and Metrolink commuter rail. Various roadways within the study area are included in the Riverside PACT Active Transportation Plan bikeway network recommendations.

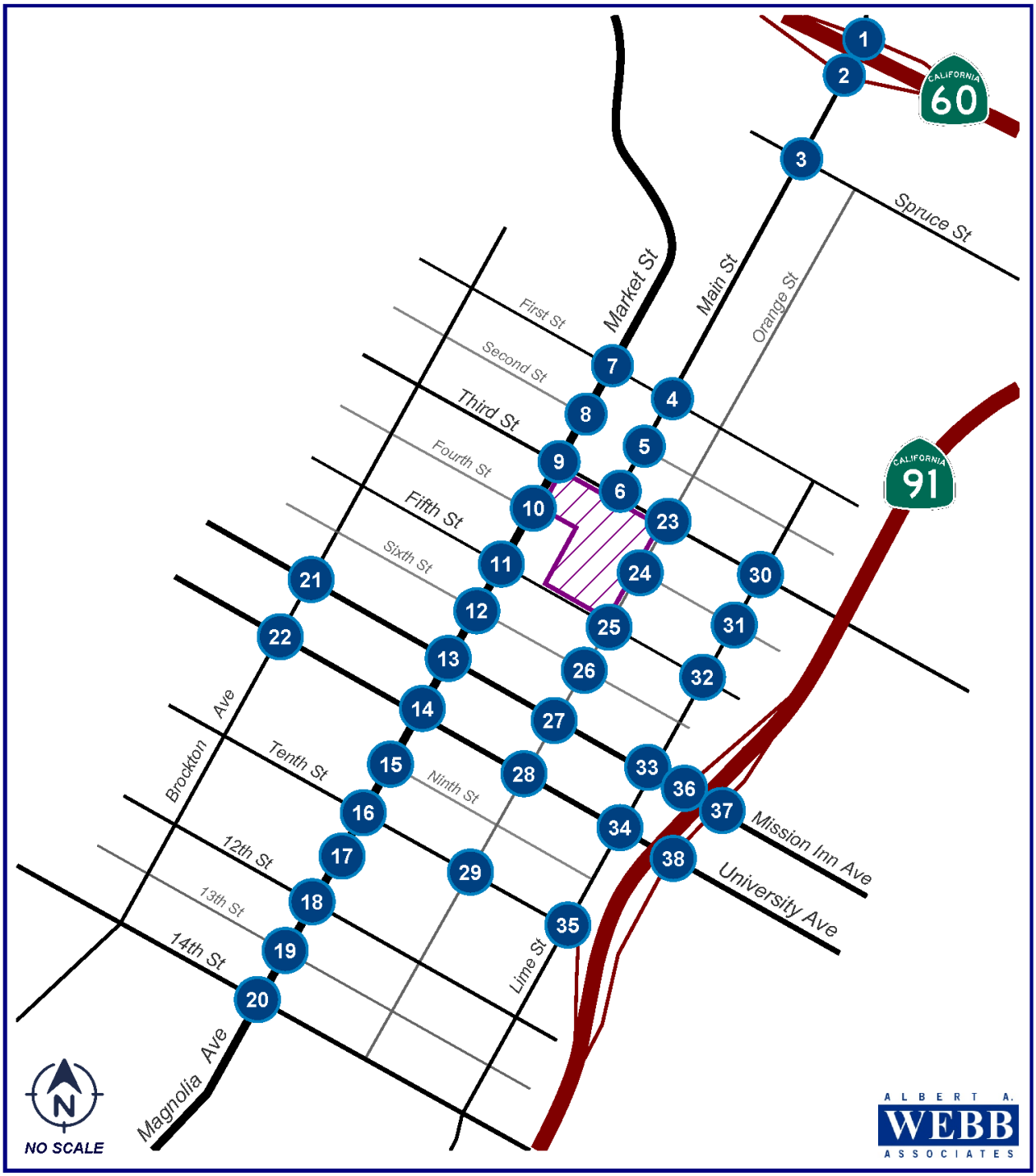
The Project will provide pathways to facilitate the movement of pedestrians within the site and provide connection to the existing sidewalks along Third Street, Fifth Street, Market Street and Orange Street.

Study Area

Per the approved scoping agreement, the following study intersections were selected for analysis (**Figure 2**):

1. Main St @ SR-60 WB / Oakley Ave
2. Main St @ SR-60 EB
3. Main St @ Spruce St
4. Main St @ First St
5. Main St @ Second St
6. Main St @ Third St
7. Market St @ First St
8. Market St @ Second St
9. Market St @ Third St
10. Market St @ Fourth St
11. Market St @ Fifth St
12. Market St @ Sixth St
13. Market St @ Mission Inn Ave
14. Market St @ University Ave
15. Market St @ Ninth St
16. Market St @ Tenth St
17. Market St @ 11th St
18. Market St @ 12th St
19. Market St @ 13th St
20. Market St @ 14th St
21. Brockton Ave @ Mission Inn Ave
22. Brockton Ave @ University Ave
23. Orange St @ Third St
24. Orange St @ Fourth St
25. Orange St @ Fifth St
26. Orange St @ Sixth St
27. Orange St @ Mission Inn Ave
28. Orange St @ University Ave
29. Orange St @ Tenth St
30. Lime St @ Third St
31. Lime St @ Fourth St
32. Lime St @ Fifth St
33. Lime St @ Mission Inn Ave
34. Lime St @ University Ave
35. Lime St @ Tenth St / SR-91 WB On-Ramp
36. Mission Inn Ave @ SR-91 WB Off-Ramp
37. Mission Inn Ave @ SR-91 EB / Mulberry St
38. University Ave @ SR-91 EB / Mulberry St

Figure 2: Study Area



Per the approved scoping agreement, the following roadway segments were selected for analysis:

1. Main St from State Route 60 (SR-60) to Third St
2. Market St from First St to Third St
3. Market St from Third St to Fifth St
4. Market St from Fifth St to Sixth St
5. Market St from Sixth St to Mission Inn Ave

Analysis Methodology

Study Scenarios

This study uses methodology from the Transportation Research Board *Highway Capacity Manual* (HCM 7th Edition, 2022) to analyze traffic operations via Level of Service (LOS) rankings for the following scenarios:

- Existing conditions (2024)
- Background Conditions (2028): Existing + Cumulative Projects
- Background plus Project (2028): Existing + Cumulative + Project
- Cumulative Conditions (2045): Horizon Year
- Cumulative plus Project (2045): Horizon Year + Project

Traffic Operational Parameters

Per the City guidelines, this study uses the following traffic signal timing parameters for analysis:

- Existing left-turn phasing as observed in the field;
- Cycle lengths between 50 and 130 seconds;
- 7 second minimum green time per movement;
- Lost time of at least 4 seconds per phase (start-up and clearance); and
- Yellow times based on the existing posted or prima facie speed limit per the California Manual on Uniform Traffic Control Devices (MUTCD) Table 4D-102 (**Appendix B**).

Level-of-Service Rankings

Per the HCM, LOS at intersections is ranked by from LOS A (optimal conditions) to LOS F (congested or overcrowded conditions) based on average control delay in seconds per vehicle, or how long vehicles typically wait to proceed through the intersection compared with free-flow conditions. This study uses Vistro traffic modeling software to evaluate intersection LOS.

For signalized intersections, LOS rankings are based on the average control delay of all vehicles passing through the intersection (**Table 4**). For two-way or side-street stop-controlled intersections, LOS rankings are based on the highest average control delay of all controlled movements (**Table 5**).

Roadway segment analysis assigns an LOS ranking from LOS A to F indicating relative vehicle density, based on roadway classifications and number of travel lanes in the City of Riverside General Plan. **Table 6** shows the LOS C-E thresholds for roadway capacity as given by the City of Riverside Traffic Impact Analysis Guidelines (2020).

Table 4: Level of Service at Signalized Intersections

Control Delay (sec/vehicle)	Level of Service	Description
0 - 10	**A**	Minimal delay and primarily free-flow operation. Most vehicles do not stop or only stop for a brief amount of time.
10 - 20	**B**	Short delay and reasonably unimpeded operation. Many vehicles do not stop or only stop for a short time. More vehicles stop than with LOS A.
20 - 35	**C**	Moderate delay and stable operation. Individual cycle failures may begin to appear. The number of vehicles stopping is significant.
35 - 55	**D**	Less stable operation; small increases in vehicles may cause substantial increases in delay. Many vehicles stop, individual cycle failures noticeable.
55 - 80	**E**	Significant delay and unstable operation. Most vehicles stop and individual cycle failures are frequent.
80 +	**F**	Considerable delay and extensive queuing. Almost all vehicles stop and most cycles fail to clear the queue.

Source: Transportation Research Board, Highway Capacity Manual 7 (2022)

Table 5: Level of Service at Unsignalized Intersections

Control Delay (sec/vehicle)	Level of Service	Description
0 - 10	**A**	Minimal delay. Usually no conflicting traffic.
10 - 15	**B**	Short delay. Occasionally some conflicting traffic.
15 - 25	**C**	Noticeable delay, but not inconveniencing. Usually some conflicting traffic.
25 - 35	**D**	Noticeable delay and irritating. A significant amount of conflicting traffic. Increased likelihood of risk taking.
35 - 50	**E**	Significant delay approaching tolerance level. Lots of conflicting traffic, with some gaps of suitable size. Risk taking behavior likely.
50 +	**F**	Considerable delay exceeding tolerance level. Lots of conflicting traffic, with not enough gaps of suitable size. High likelihood of risk taking.

Source: Transportation Research Board, Highway Capacity Manual 7 (2022)

Table 6: Roadway Capacity Standards

Roadway Classification	# Lanes	Daily Traffic Volume Capacity		
		LOS C	LOS D	LOS E
Local	2	2,500 - 2,799	2,800 - 3,099	3,100 +
66' Collector	2	9,900 - 11,199	11,200 - 12,499	12,500 +
80' Collector	2	9,900 - 11,199	11,200 - 12,499	12,500 +
Arterial	2	14,400 - 16,199	16,200 - 17,999	18,000 +
88' Arterial	4	16,800 - 19,399	19,400 - 21,999	22,000 +
100' Arterial	4	26,200 - 29,599	29,600 - 32,999	33,000 +
120' Arterial	6	38,700 - 44,099	44,100 - 49,499	49,500 +
144' Arterial	8	50,600 - 57,799	57,800 - 64,999	65,000 +

Note: LOS C, D, and E capacities per City of Riverside guidelines.

Performance Criteria

The City of Riverside General Plan Circulation Element states the following level of service standards:

> *The City will strive to maintain LOS D or better on arterial streets wherever possible. At some key locations, such as City arterial roadways which are used as a freeway bypass by regional through traffic and at heavily traveled freeway interchanges, LOS E may be acceptable as determined on a case-by-case basis. Locations that may warrant the LOS E standard include portions of Arlington Avenue/Alessandro Boulevard, Van Buren Boulevard throughout the City, portions of La Sierra Avenue and selected freeway interchanges. A higher standard, such as LOS C or better, may be adopted for Local and Collector streets in residential areas.*
>
> *The City recognizes that along key freeway-feeder segments during peak commute hours, LOS F may be expected due to regional travel patterns.*

The following roadways within the study area are included in the Riverside County Congestion Management Program (CMP) system as Principal roadways (**Appendix C**):

- The entirety of Market Street within the study area;
- Main Street between First Street and SR-60;
- First Street between Market Street and Main Street;
- University Avenue between Market Street and SR-91.

Per the Riverside County CMP (2011), the minimum acceptable LOS for segments and intersections within the CMP network is LOS E.

Accordingly, the minimum acceptable LOS for this study is **LOS D**, except for study locations included in the Riverside County CMP, where the minimum acceptable LOS is **LOS E**.

III. PROPOSED PROJECT TRAFFIC

To estimate project traffic volumes, project trip generation estimates the project traffic on a typical weekday. Then, trip distribution identifies typical travel patterns to allocate project traffic along the circulation network.

Project Trip Generation

Trip generation represents the amount of traffic accessing a site, both inbound and outbound vehicle trips.

Trip Generation Study

The project includes a 189,000 sf expansion to the existing Riverside Convention Center (RCC). As there is no "standard" trip generation for special event venues due to their particularities, the RCC trip generation rate was developed by a trip generation study.

Based on the June 2024 RCC calendar of events, traffic volume counts were conducted at Lot 33 and the adjacent public parking lot on Orange St and 5th St on a midweek weekday and a Saturday with one or more scheduled events that total at least 200 attendees on each day (**Appendix D**). Arrival observations were also conducted at the 5th St RCC entrance to capture drop-offs, street parking, and pedestrian arrivals.

Based on the traffic patterns at the existing RCC, which has 50,000 sf rentable space, trip generation rates for the weekday and Saturday daily and peak-hour periods were calculated per square foot (**Table 7**). The trip generation study finds that the typical weekday daily traffic at RCC is expected to be more intensive than the typical Saturday.

Table 7: RCC Trip Generation Study

Day of Week	Size[1]	Daily	AM/SAT Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Existing RCC Site Traffic Volumes [2]								
Weekday	50 KSF	**829**	30	145	**175**	33	28	**61**
Saturday		**421**	67	59	**126**			
Calculated Trip Generation Rates								
Weekday	1 KSF	**16.58**	0.60	2.90	**3.50**	0.66	0.56	**1.22**
Saturday		**8.42**	1.34	1.18	**2.52**			
Proposed RCC Expansion Traffic Volumes								
Weekday	100 KSF	**1,658**	60	290	**350**	66	56	**122**
Saturday		**842**	134	118	**252**			

[1] KSF = 1,000 sf gross rentable space
[2] Existing traffic volume data collected on June 6 and June 8, 2024.

Trip Generation Rates

For all other portions of the project, trip generation rates are used as aggregated by the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021) by land use (**Table 8**).

Table 8: Trip Generation Rates

Land Use[1]		Description	Units[2]	Daily	Peak Hour					
					In	Out	AM	In	Out	PM
Residential										
220	**Multifamily Housing (Low-Rise)**	Dwelling units located within the same building with common access (2-3 floors)	1 DU	6.74	0.096	0.304	0.40	0.321	0.189	0.51
221	**Multifamily Housing (Mid-Rise)**	Dwelling units located within the same building with common access (4-10 floors)	1 DU	4.54	0.085	0.285	0.37	0.238	0.152	0.39
Hotel										
310	**Hotel**	Any overnight lodging accommodations	1 RM	7.99	0.258	0.202	0.46	0.260	0.250	0.51
Mixed Commercial (retail, restaurant, entertainment, personal services, etc)										
821	**Shopping Plaza (40-150ksf)**	Group of commercial establishments (with supermarket)	1 KSF	94.49	2.19	1.34	3.53	4.33	4.70	9.03
Office										
710	**General Office Building**	Multi-tenant building where professional, business, & commercial affairs are conducted (10,000+ sf)	1 KSF	10.84	1.34	0.18	1.52	0.24	1.20	1.44

[1] ITE Trip Generation Manual 11th Ed, 2021.
[2] DU = dwelling unit; RM = room; KSF = 1,000 square feet gross floor area

Project Trip Generation

The project traffic volumes are developed by multiplying the trip generation rates by the size of the project. Accordingly, the project is expected to generate approximately **10,509 trips daily, with 1,064 trips in the AM peak hour and 915 trips in the PM peak hour** (**Table 9**).

Trip Credits

As the project includes mixed uses ranging from residential to commercial, office, hotel, and special event, it is expected that traffic volumes would be reduced by internal capture—that is, people would travel between the various uses within the project. For example, an employee at the office building may also be a resident within the development and use the gym, visit the grocery store, or eat at one of the on-site restaurants. Similarly, hotel patrons are likely to overlap with conference and special event attendees at the RCC.

Expected internal capture trips for the project were calculated by worksheets developed from aggregate studies provided by the National Cooperative Highway Research Program (NCHRP) (**Appendix E**).

Table 9: Project Trip Generation

Project Portion	Land Use[1]	Size[2]	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Project Trip Generation									
Convention Center[3]	N/A	100 KSF	1,658	60	290	**350**	66	56	**122**
Hotels	310	376 RM	3,004	97	76	**173**	98	94	**192**
Condos	220	55 DU	371	5	17	**22**	18	10	**28**
Multifamily Housing	221	113 DU	513	10	32	**42**	27	17	**44**
Office	710	220 KSF	2,385	294	40	**334**	54	263	**317**
Commercial	821	62.0 KSF	5,857	136	83	**219**	269	291	**560**
Total Project Trips			**13,788**	**602**	**538**	**1,140**	**532**	**731**	**1,263**
Trip Credits									
Internal Capture[4]			-1,379	-38	-38	**-76**	-79	-79	**-158**
Pass-By[5]	*34% PM peak-hour*		-1,900	-	-	**-**	-91	-99	**-190**
Net New Project Trips			**10,509**	**564**	**500**	**1,064**	**362**	**553**	**915**

[1] Land use rates per ITE Trip Generation Manual, 11th Ed (2021)
[2] DU = dwelling unit, RM = rooms, KSF = 1,000 square feet
[3] Trip generation for Convention Center expansion based on trip generation study of existing rentable space and traffic volumes.
[4] Internal trip capture per NCHRP 684 estimator. 10% lowest peak-hour capture rate applied to daily traffic volumes.
[5] Pass-by trip credit applied to commercial trips only. Pass-by rates per ITE Trip Generation Handbook, 3e. Daily trip credit estimated as 10x PM pass-by trips.

Project Trip Distribution and Assignment

Modal Split

To be conservative in this analysis, no project traffic reductions from public transit or active transportation (bicycling or walking) are considered in this study. It is expected that some patrons of the project may use public transit or park in other areas of Downtown Riverside before arriving at the project on foot.

Trip Distribution

Trip distribution, or the directional orientation of traffic to and from the project, is based on the project driveways, project location, nearby land uses, and proximity to the regional roadways. The proposed project trip distributions for inbound and outbound traffic are shown in **Figures 3 and 4**, respectively.

Trip Assignment

Figure 5 shows the peak-hour project trips in the study area, according to the expected project trip generation and trip distribution model.

Figure 3: Directional Distribution of Project Traffic – Inbound

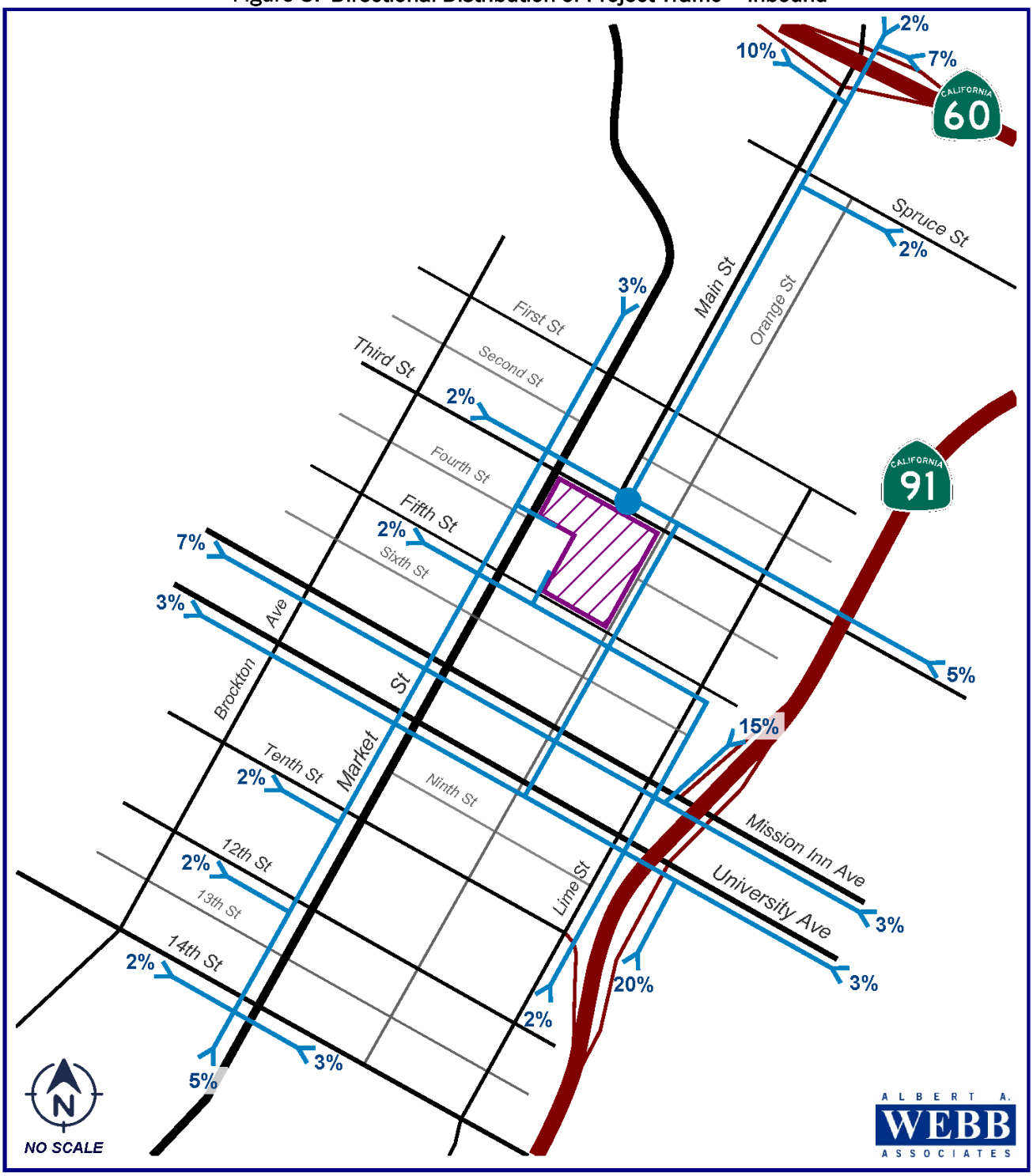
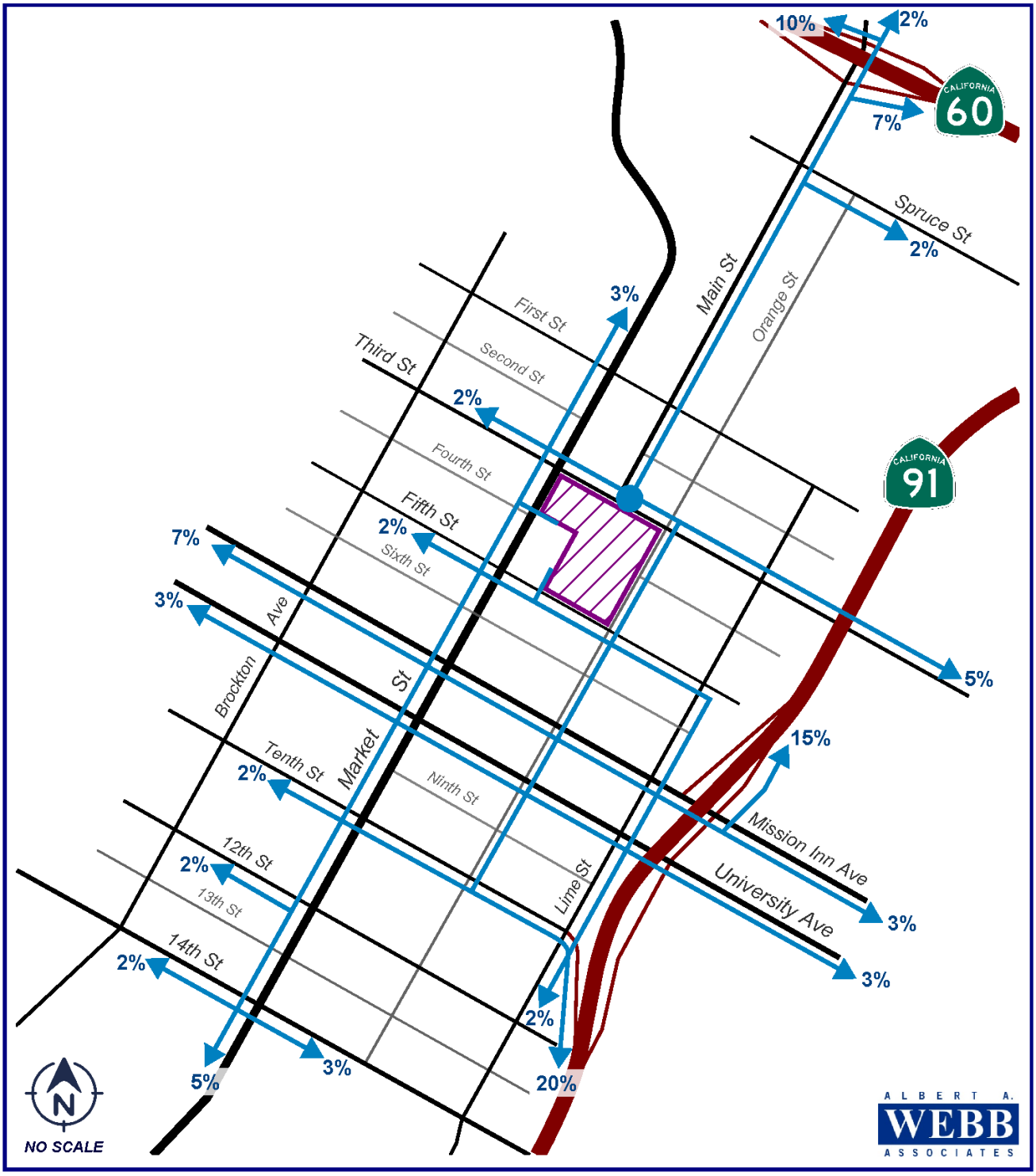


Figure 4: Directional Distribution of Project Traffic – Outbound



Reference: Study Area

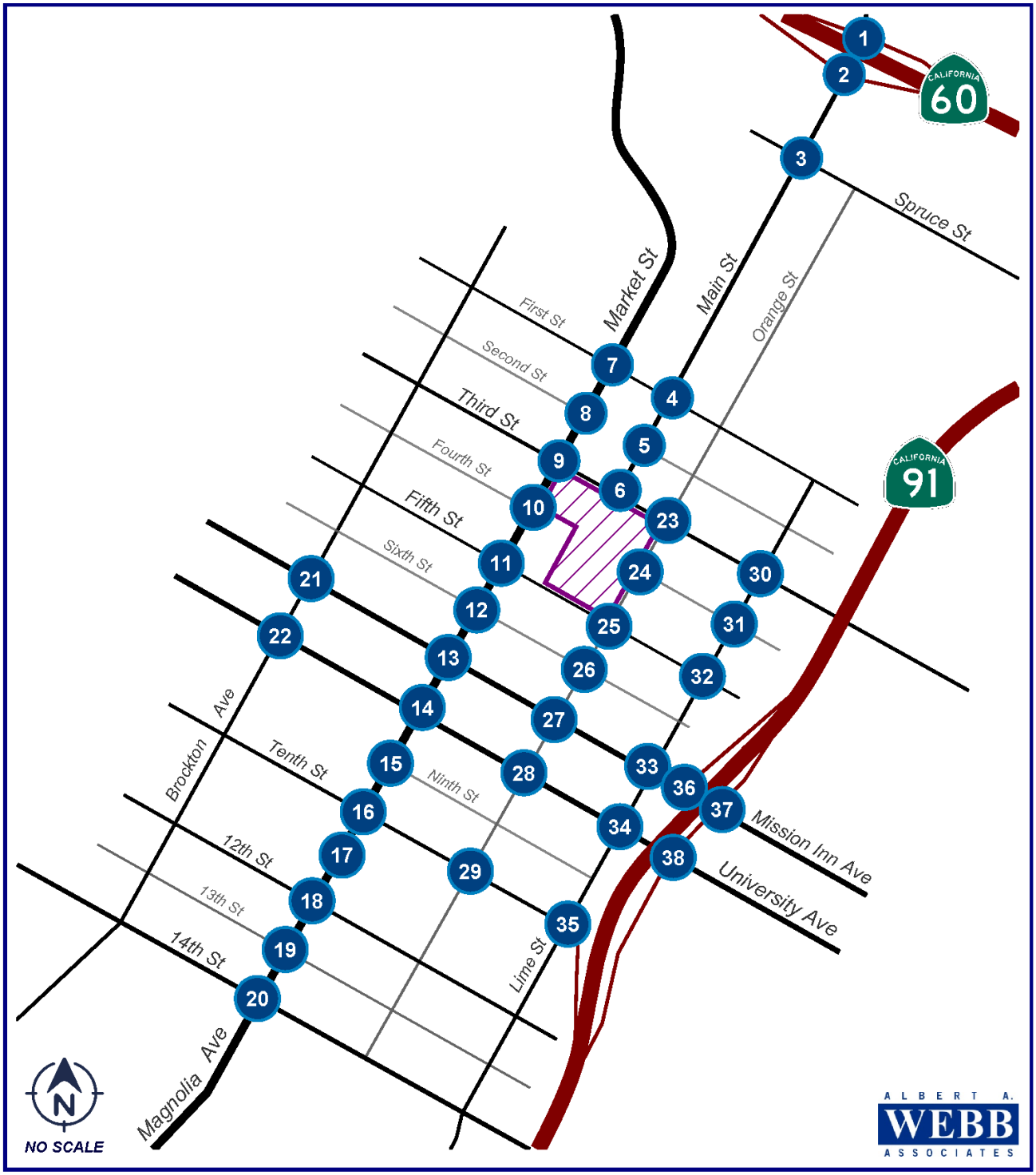


Figure 5: **Project Traffic Volumes**

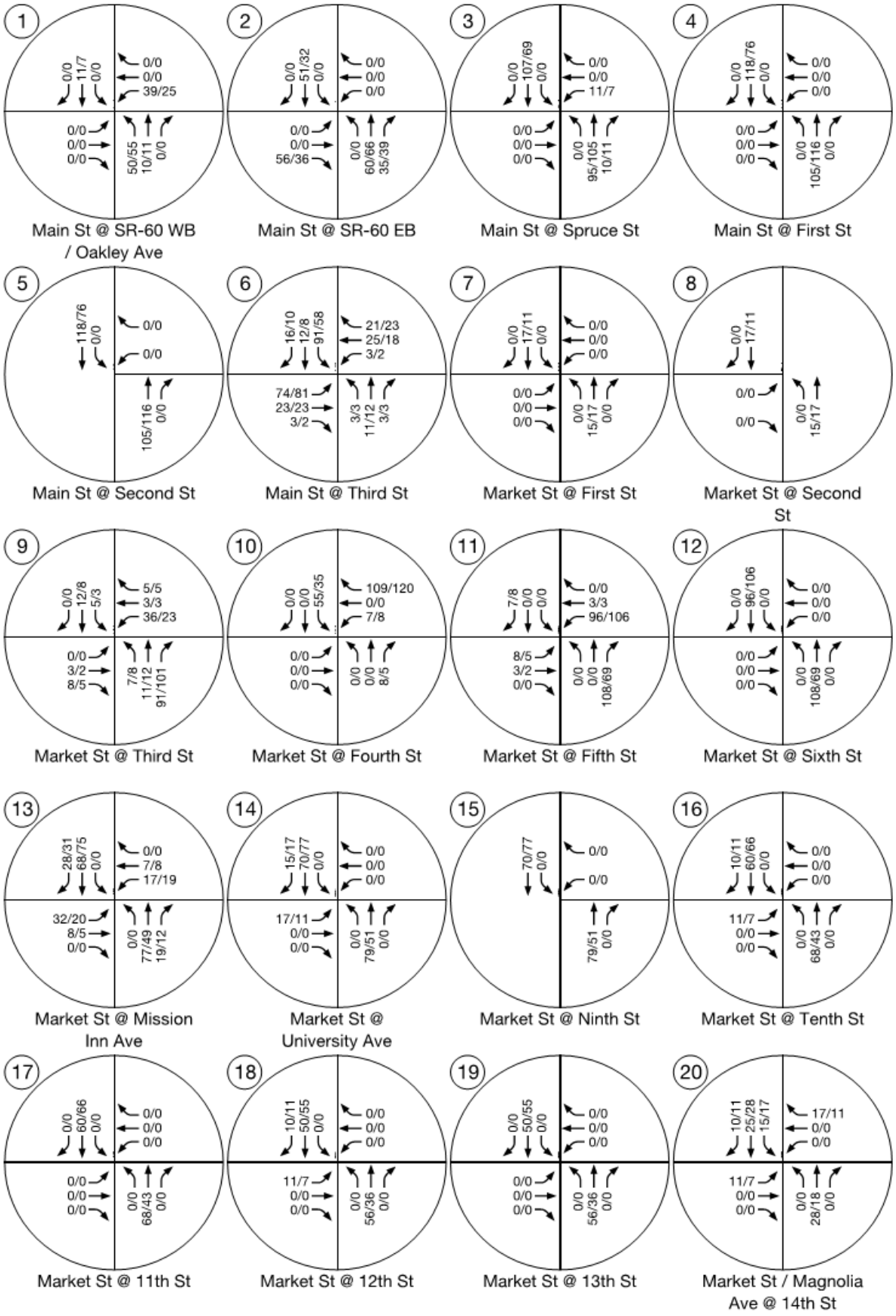
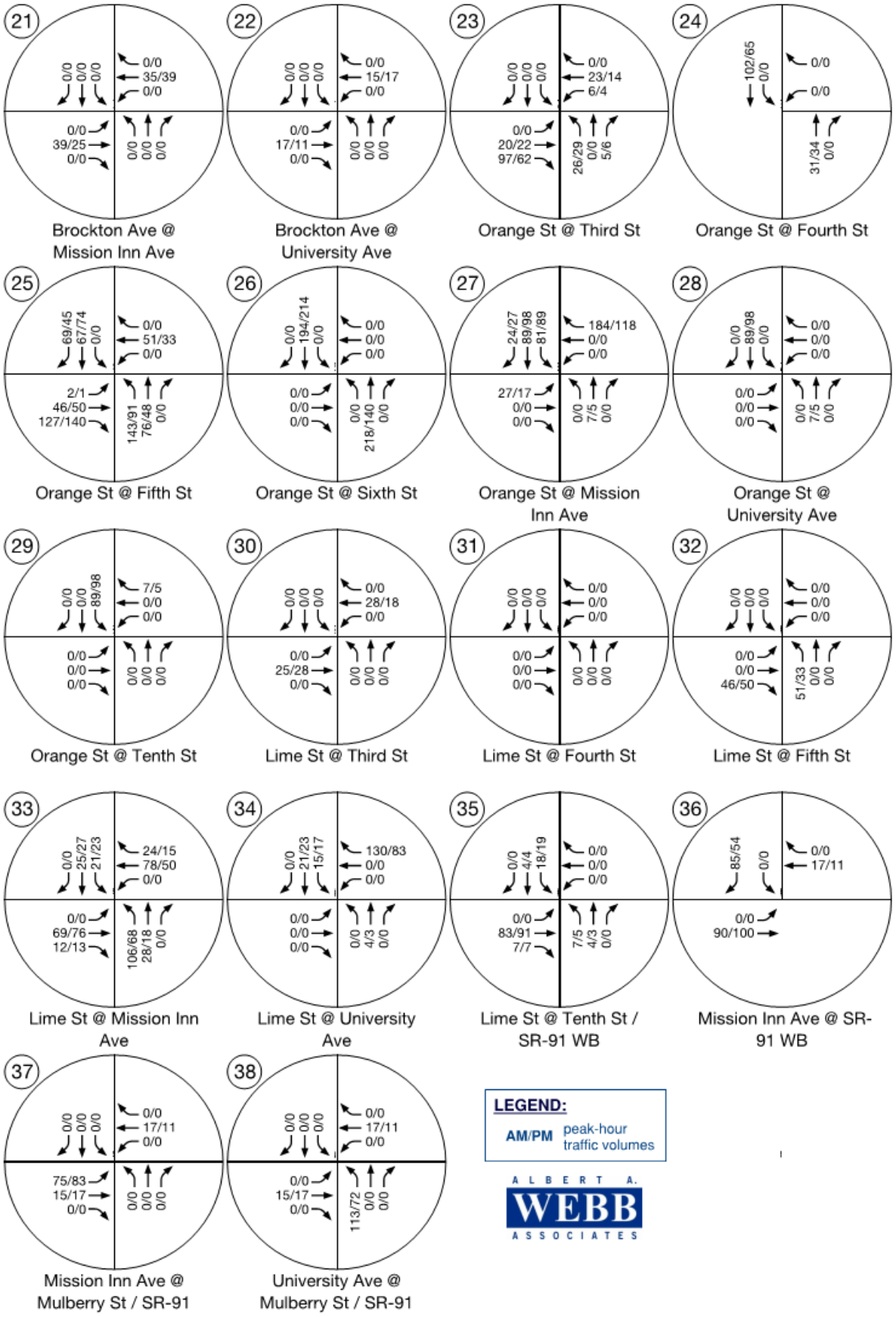


Figure 5 (cont): Project Traffic Volumes



IV. EXISTING CONDITIONS (2024)

Located in the Raincross District of Downtown Riverside, the proposed project site is bounded by Market Street, Third Street, Orange Street, and Fifth Street.

Existing Transportation Network

Major Roadways in the Study Area

Per the City of Riverside General Plan, **Market Street** is designated as an Arterial, Scenic Boulevard, and Parkway with four lanes within the Downtown area. As the northerly extension of Magnolia Avenue, Market Street is a Principal roadway in the Riverside County Congestion Management Program (CMP). Within the study area, it has four travel lanes, a two-way left-turn median lane, and on-street parking. Market Street is considered built-out in the Downtown area, with no plans to increase right-of-way or travel lanes.

Per the City of Riverside General Plan, **Main Street** is designated as an Arterial with four lanes and a 100' right-of-way. Main Street north of First Street is a Principal roadway in the County CMP. It currently has four travel lanes with on-street parking and access to the SR-60 freeway. The South Main Complete Streets Project, a separate City project planned for completion in 2027, is planned to convert Main Street between Third Street and SR-60 from four to two travel lanes divided by a median with additional parking, landscaping, and pedestrian walkways.

Per the City of Riverside General Plan, **Lime Street** is designated as an Arterial with four lanes and an 88' right-of-way. Within the study area, it currently varies from two to four travel lanes, with on-street parking and access to the SR-91 freeway.

Per the City of Riverside General Plan, **First Street** is designated as an Arterial with four lanes and an 88' right-of-way between Market Street and Main Street. This segment is also a Principal roadway in the County CMP. Within the study area, it currently has two travel lanes and on-street parking.

Per the City of Riverside General Plan, **Third Street** is designated as an Arterial with four lanes and an 88' right-of-way. Within the study area, it currently has three travel lanes and a two-way left-turn median lane.

Per the City of Riverside General Plan, **Fifth Street** is designated as an Arterial with four lanes and an 88' right-of-way. Within the study area, it currently has two travel lanes and on-street parking

Per the City of Riverside General Plan, **Mission Inn Avenue** is designated as an Arterial and Scenic Boulevard with four lanes and a 100' right-of-way. Within the study area, it currently varies from three to four travel lanes, with on-street parking and access to the SR-91 freeway.

Per the City of Riverside General Plan, **University Avenue** is designated as an Arterial, Scenic Boulevard, and Parkway with four lanes and a 100' right-of-way. University Avenue between Market Street and SR-91 is a Principal roadway in the County CMP. Within the study area, it currently has four travel lanes and on-street parking, with a two-way left-turn median lane northwest of Market Street and access from the SR-91 freeway.

Sixth Street Turn Restrictions

At the time of traffic data collection and traffic pattern observations in the study area, the City of Riverside conducted a pilot project to restrict the Sixth Street approaches at Market Street to right turns only, using

roadway striping, signage, and delineators. While the turn restrictions were a temporary pilot at the time, they are planned for implementation with future approved development. Therefore, this study considers this as both an existing and future condition at the intersection of Market Street and Sixth Street.

Figure 6 identifies the existing traffic controls and lane geometrics in the study area.

Reference: Study Area

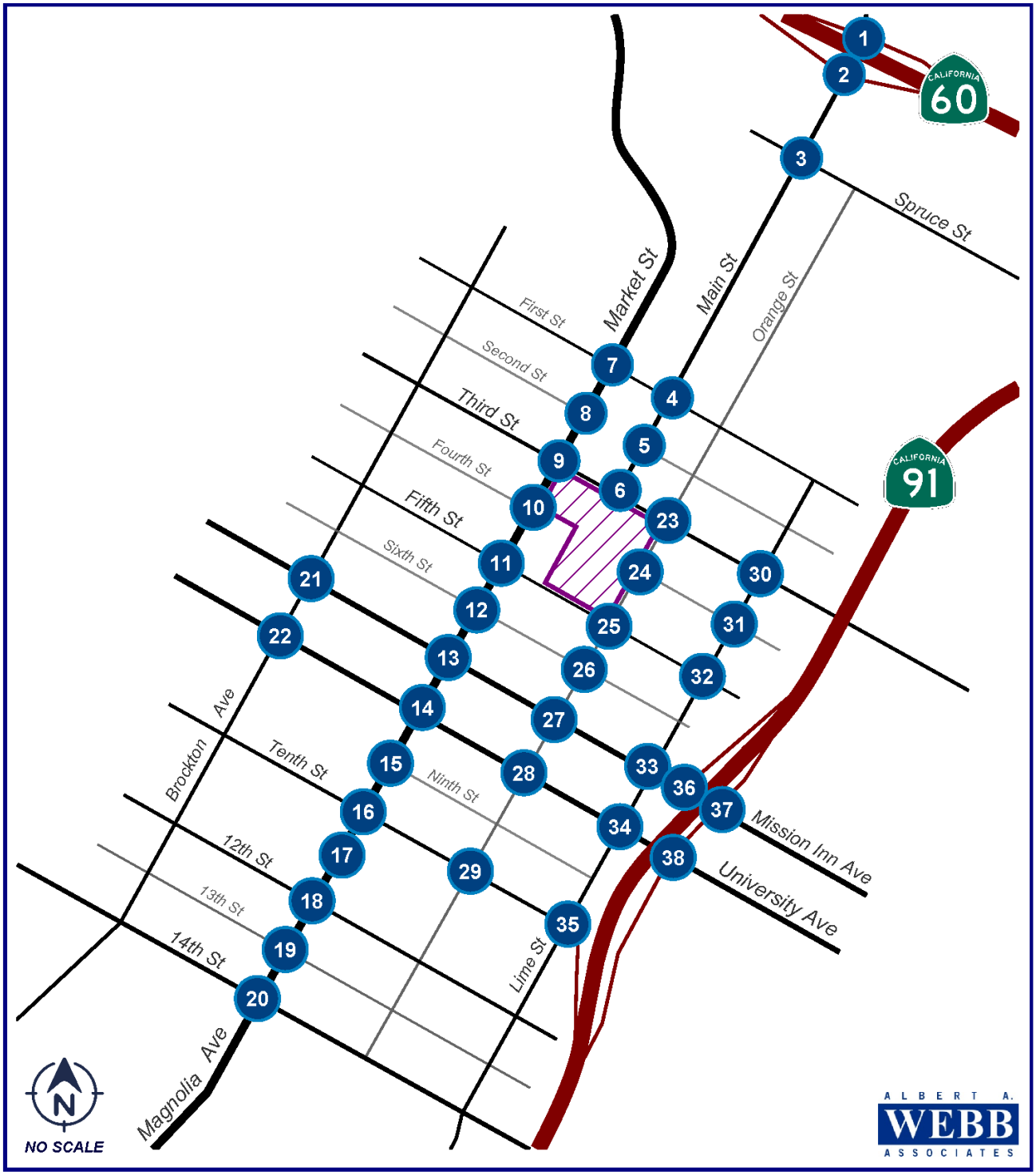


Figure 6: Existing Intersection Geometrics and Traffic Control

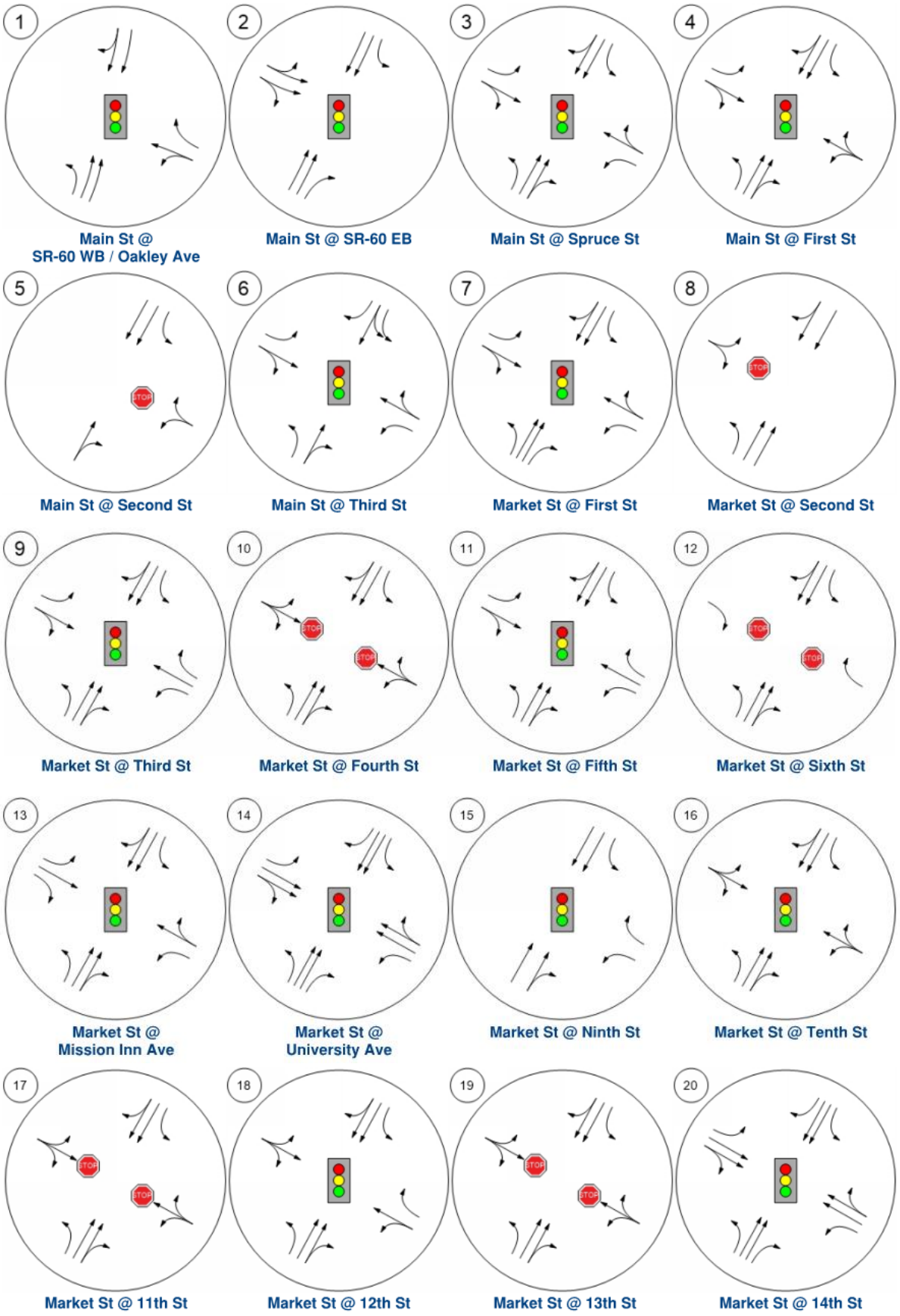
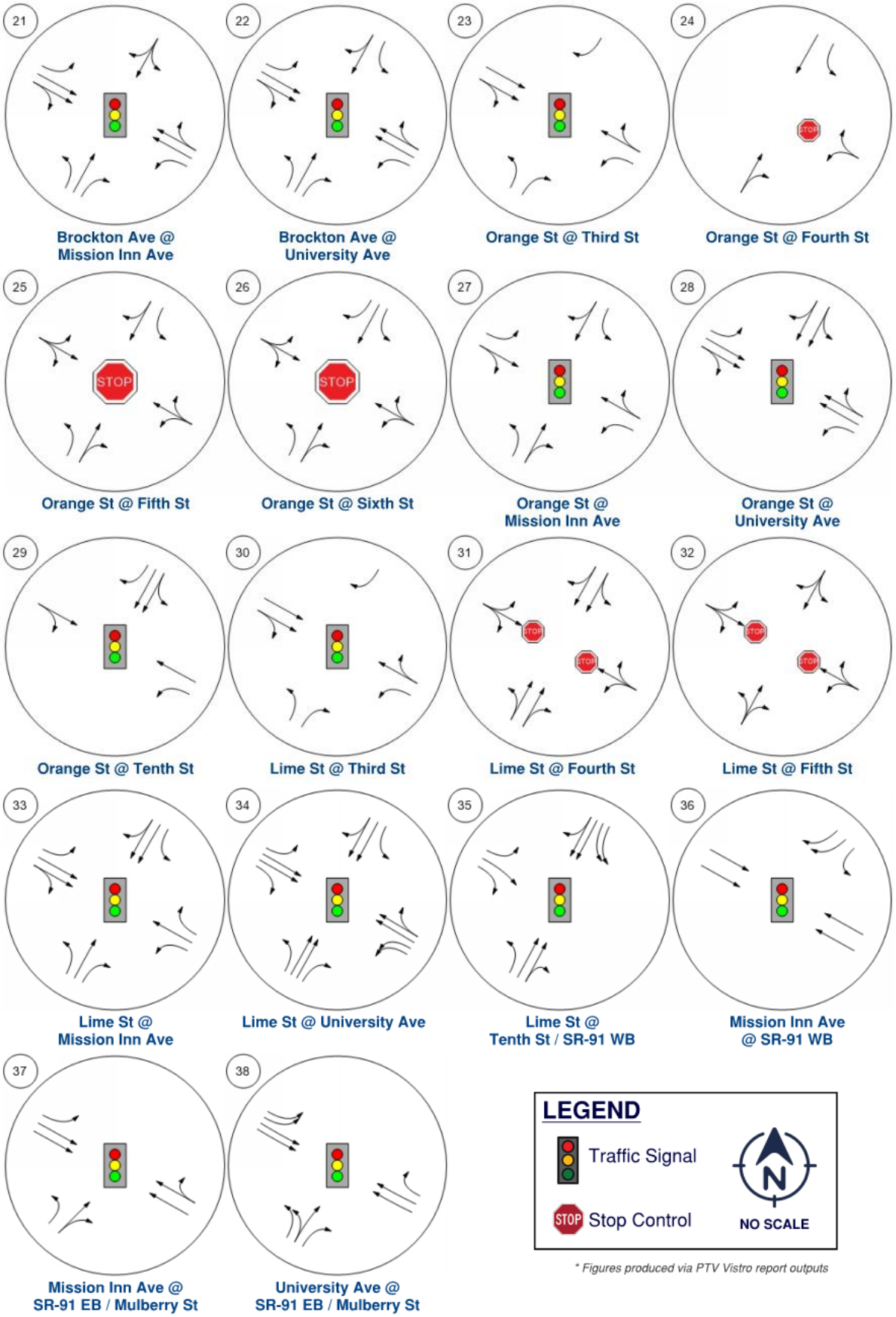


Figure 6 (cont): Existing Intersection Geometrics and Traffic Control



* Figures produced via PTV Vistro report outputs

Transit

The Downtown Riverside area is served by Metrolink regional rail and bus service operated by Omnitrans and Riverside Transit Agency (RTA). Bus route maps serving the Downtown Riverside area are included in **Appendix F**.

Metrolink runs commuter and weekend/holiday rail service to the Downtown Riverside area via the Riverside Downtown station along Vine Street between University Avenue and 14th Street on the east side of the SR-91 freeway. The 91/Perris Valley, Riverside, and Inland Empire-Orange County lines serve the Riverside Downtown station, connecting to Perris, San Bernardino, Orange County, and Los Angeles. The rail station connects to bus service at the adjoining Vine Street Mobility Hub.

Omnitrans route 215 connects the Metrolink station and Vine Street Mobility Hub with San Bernardino via

RTA operates Routes 1, 10, 12, 13, 14, 15, 22, 29, 49, 200, and 204 within and throughout Downtown Riverside, with stops along Market Street, University Avenue, Mission Inn Avenue, 14th Street, Orange Street, Lemon Street, and at the Vine Street Mobility Hub. The RTA routes connect throughout the region to destinations such as UCR, the Galleria at Tyler, Corona, Loma Linda, Perris, Fontana, and even Disneyland.

Bicycle Facilities

Adopted in 2021, the Riverside PACT is a four-part community plan of which A stands for the Active Transportation Plan. The PACT Active Transportation Plan includes an existing inventory of and recommendations for bicycle facilities throughout the City (**Appendix G**).

Within the study area, bicycle lanes currently exist along Brockton Avenue, Market Street, Mission Inn Avenue, University Avenue, and Third Street. Per Riverside PACT, additional facilities are recommended along Fifth Street, Tenth Street, 14th Street, Main Street, Orange Street, and Lemon Street. A buffered Class II bicycle lane is recommended along Market Street, Brockton Avenue, and Mission Inn Avenue.

Existing Traffic Volumes

The existing conditions analysis is based on intersection turning movement counts collected on Thursday, June 6, 2024, for the AM and PM peak periods (**Appendix H**). The existing traffic volumes in the study area are shown in **Figure 7**.

Figure 7: Existing Traffic Volumes

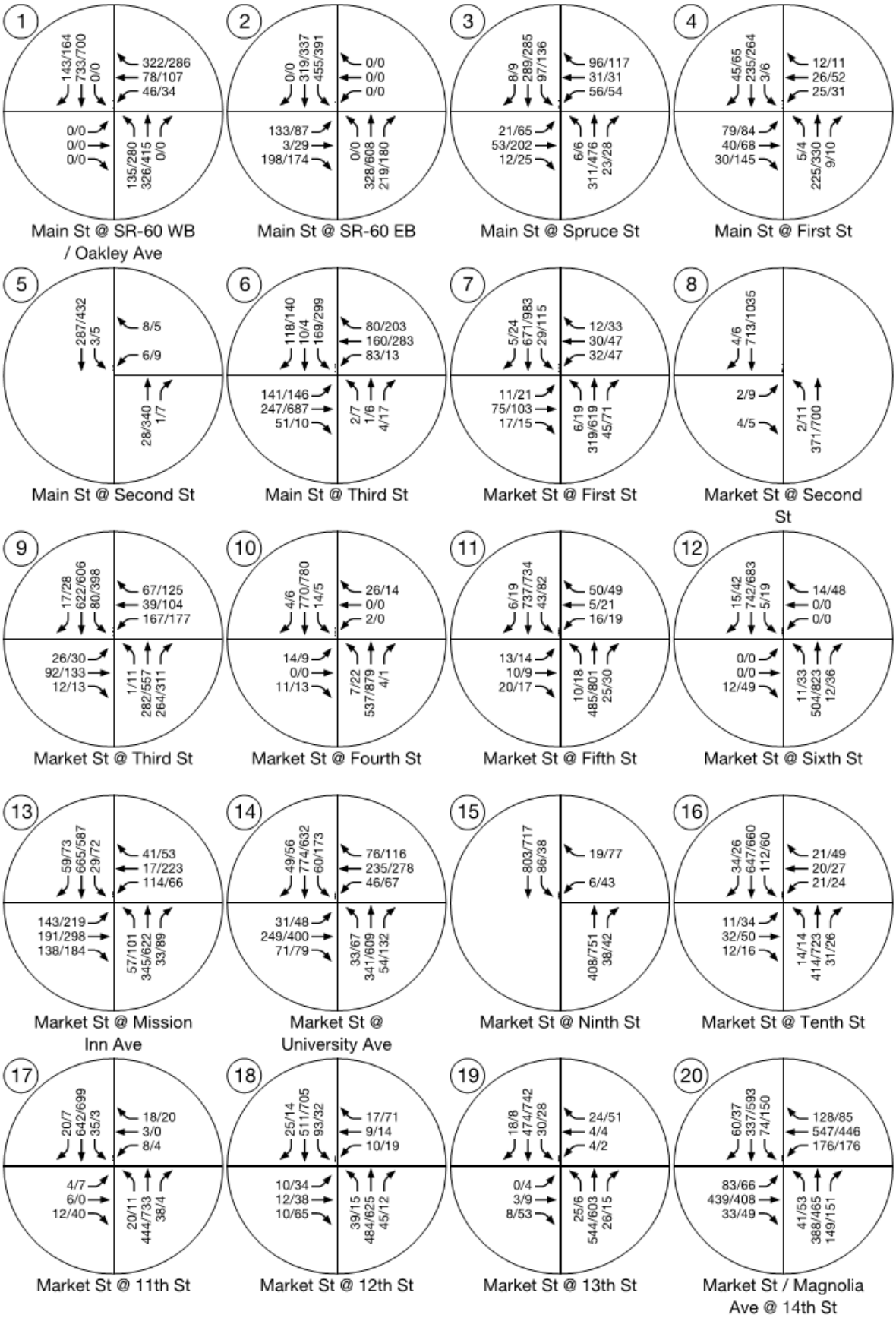
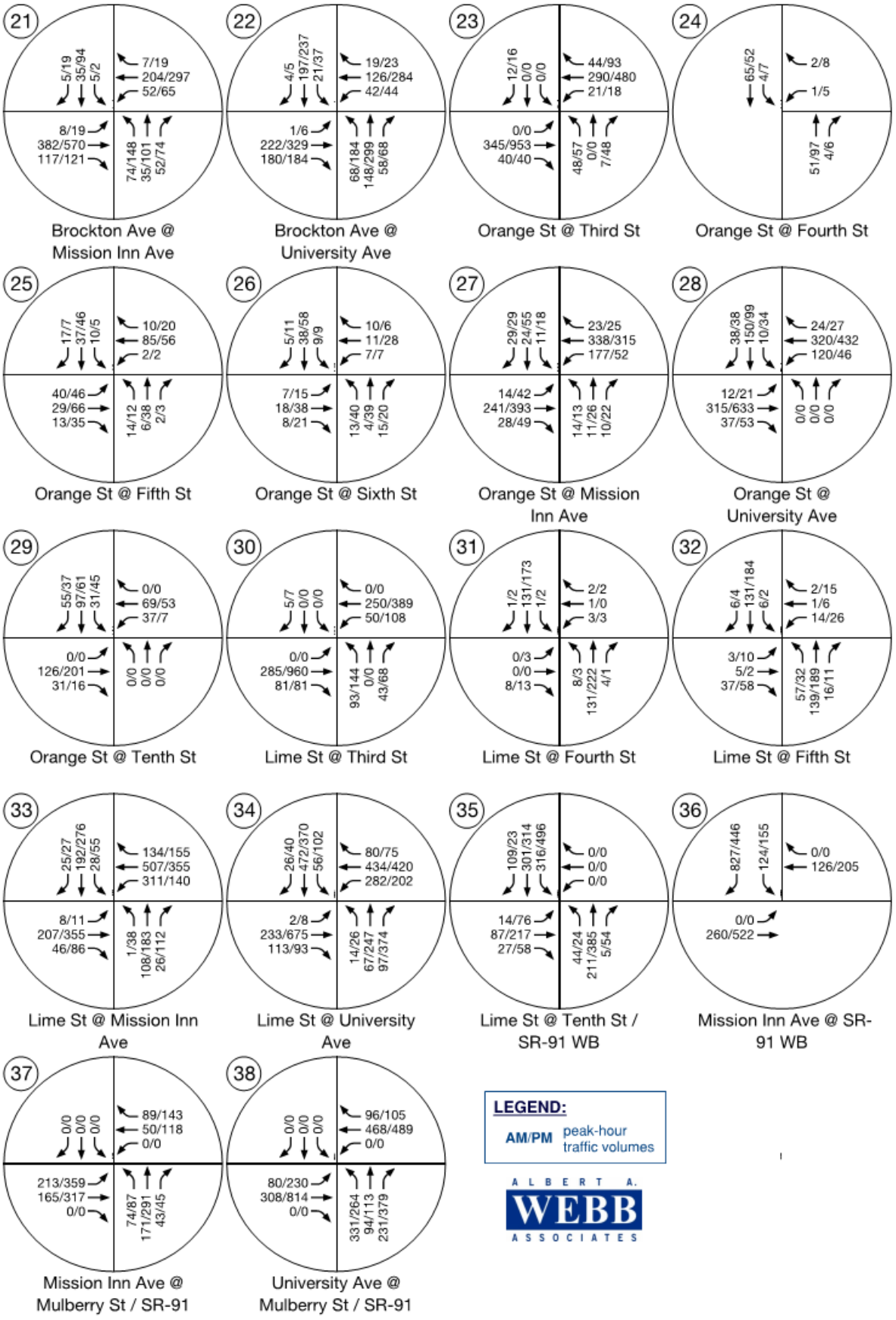


Figure 7 (cont): Existing Traffic Volumes



Levels of Service – Existing Conditions (2024)

Under existing conditions, all study intersections currently operate at or above the minimum acceptable LOS (**Table 10**, see **Appendix I** for details).

Table 10: Intersection LOS – Existing Conditions (2024)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Main St @ SR-60 WB / Oakley Ave	Signal	20.4	**C**	22.3	**C**
2	Main St @ SR-60 EB	Signal	24.5	**C**	21.3	**C**
3	Main St @ Spruce St	Signal	11	**B**	13.8	**B**
4	Main St @ First St	Signal	10.6	**B**	13.5	**B**
5	Main St @ Second St	OWSC	9.7	**A**	13.7	**B**
6	Main St @ Third St	Signal	22.4	**C**	30.1	**C**
7	Market St @ First St	Signal	8.3	**A**	11.2	**B**
8	Market St @ Second St	OWSC	15.5	**C**	22	**C**
9	Market St @ Third St	Signal	16	**B**	21.4	**C**
10	Market St @ Fourth St	TWSC	20.7	**C**	21.7	**C**
11	Market St @ Fifth St	Signal	9.2	**A**	9.7	**A**
12	Market St @ Sixth St	TWSC	11.4	**B**	12.2	**B**
13	Market St @ Mission Inn Ave	Signal	22.5	**C**	28	**C**
14	Market St @ University Ave	Signal	23.2	**C**	28.5	**C**
15	Market St @ Ninth St	Signal	3.1	**A**	6.5	**A**
16	Market St @ Tenth St	Signal	7.2	**A**	8.6	**A**
17	Market St @ 11th St	TWSC	39.5	**E**	34.6	**D**
18	Market St @ 12th St	Signal	6.1	**A**	9.5	**A**
19	Market St @ 13th St	TWSC	33.2	**D**	43	**E**
20	Market St @ 14th St	Signal	30.2	**C**	30.7	**C**
21	Brockton Ave @ Mission Inn Ave	Signal	12.7	**B**	15.7	**B**
22	Brockton Ave @ University Ave	Signal	21.5	**C**	22.3	**C**
23	Orange St @ Third St	Signal	7.6	**A**	9.6	**A**
24	Orange St @ Fourth St	OWSC	9.2	**A**	9.7	**A**
25	Orange St @ Fifth St	AWSC	7.9	**A**	8.3	**A**

[1] OWSC = one-way stop control; TWSC = two-way stop control; AWSC = all-way stop control

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

Table 10 (cont): Intersection LOS – Existing Conditions (2024)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
26	Orange St @ Sixth St	AWSC	7.7	**A**	8.3	**A**
27	Orange St @ Mission Inn Ave	Signal	7.7	**A**	10	**A**
28	Orange St @ University Ave	Signal	10.1	**B**	9	**A**
29	Orange St @ Tenth St	Signal	10.3	**B**	9.2	**A**
30	Lime St @ Third St	Signal	10.7	**B**	13.3	**B**
31	Lime St @ Fourth St	TWSC	10.9	**B**	11.4	**B**
32	Lime St @ Fifth St	TWSC	13.8	**B**	14.3	**B**
33	Lime St @ Mission Inn Ave	Signal	24.7	**C**	23.7	**C**
34	Lime St @ University Ave	Signal	28.2	**C**	28.3	**C**
35	Lime St @ Tenth St / SR-91 WB	Signal	16.6	**B**	21.3	**C**
36	Mission Inn Ave @ SR-91 WB	Signal	13.9	**B**	11.5	**B**
37	Mission Inn Ave @ SR-91 EB / Mulberry St	Signal	17.8	**B**	26.3	**C**
38	University Ave @ SR-91 EB / Mulberry St	Signal	16.6	**B**	17.9	**B**

[1] TWSC = two-way stop control; AWSC = all-way stop control
[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

V. BACKGROUND CONDITIONS (2028)

South Main Complete Streets Project

The South Main Complete Streets Project, to be completed by the City in 2027, is planned to convert Main Street between Third Street and SR-60 from four to two travel lanes with raised median, parking, and pedestrian walkways. **Figure 8** shows the future intersection geometrics with the Main Street improvements.

Reference: Study Area

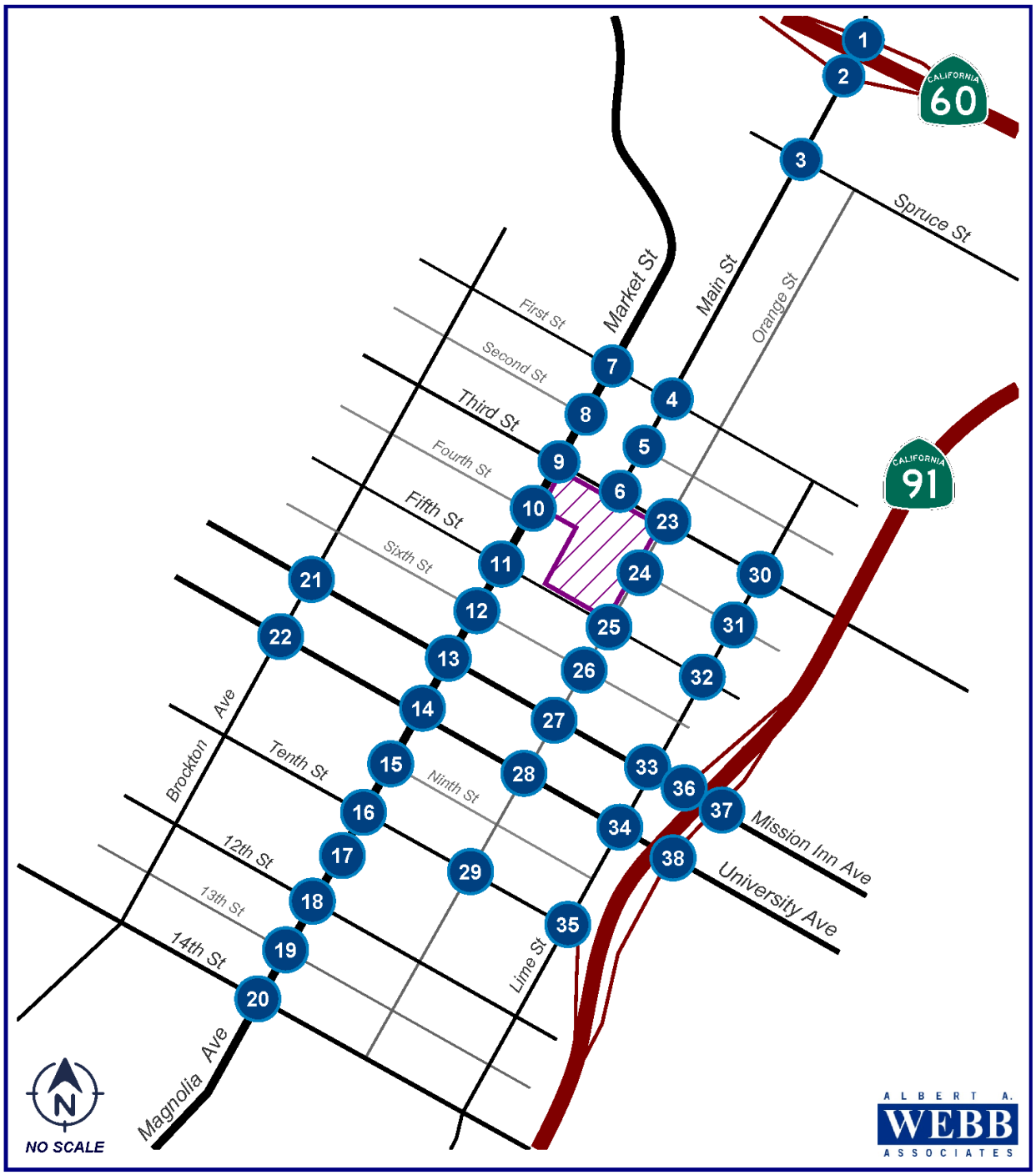
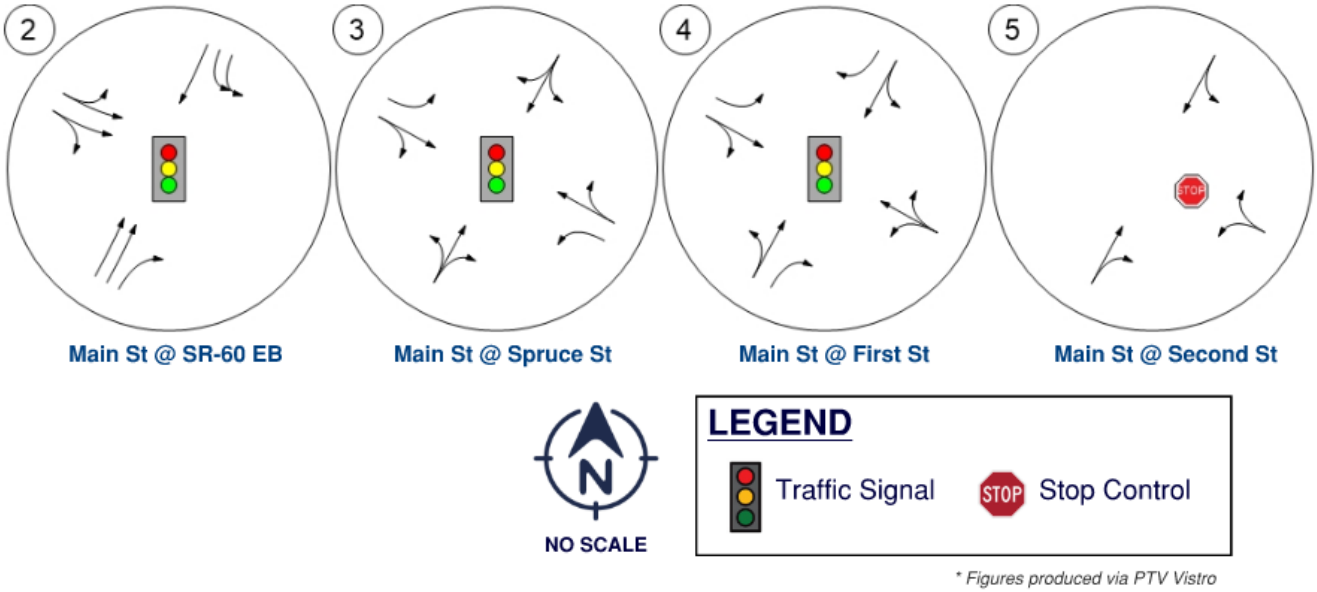


Figure 8: Main Street Future Geometrics



Cumulative Projects

Cumulative projects are developments near the study area that are expected to be completed by the project's opening year. Cumulative project information used in this study is given in **Table 11**, their locations provided in **Figure 9**, and details in **Appendix J**.

Table 11: Cumulative Projects

	Project	Location		Land Use	Size[1] Qty	Unit	Trip Generation[2] AM	PM	Daily
1	**Senior Housing Facility**	2450 Market St	***252***	*Senior Adult Housing (Multifamily)*	75	DU	15	19	243
2	**Riverside Community Hospital Expansion**	4445 Magnolia Ave	***720***	*Medical-Dental Office Building*	251.5	KSF	674	714	8,013
3	**Industrial Building**	2375 Third St	***110***	*General Light Industrial*	26.08	KSF	19	17	127
4	**Townhomes**	2941 Market St	***215***	*Single-Family Attached Housing*	17	DU	9	10	122
5	**The Aspire Affordable Housing**	3861 Third St	***220***	*Multifamily Housing (Low-Rise)*	38	DU	16	19	256
6	**Taco Station Expansion**	4088 Mission Inn Ave	***932***	*High-Turnover (Sit-Down) Restaurant*	1.006	KSF	9	10	108
7	**Ennabe Properties Commercial Retail**	3491 Market St	***822***	*Strip Retail Plaza (<40ksf)*	4.59	KSF	10	30	250
8	**Live/Work Units**	3071 Market St	***220***	*Multifamily Housing (Low-Rise)*	4	DU	1	2	27
9	**8-story Hotel**	3466 Mission Inn Ave	***310***	*Hotel*	225	RM	104	133	1,798
10	**Ennabe Properties Residential**	4135 Market St	***221***	*Multifamily Housing (Mid-Rise)*	30	DU	12	12	136
11	**City of Riverside Library**	2060 University Ave	***590***	*Library*	15	KSF	15	123	1,081
12	**Staley Point Capital Industrial Buildings**	NEC Massachusetts Ave & Kansas Ave	***150***	*Warehousing*	200	KSF	34	36	342
13	**Iron Lofts Mixed-Used Development**	3093 Mission Inn Ave	***220***	*Multifamily Housing (Low-Rise)*	363	DU	145	185	2,447
			822	*Strip Retail Plaza (<40ksf)*	2	KSF	5	14	109
14	**University Ave Retail**	2039 University Ave	***822***	*Strip Retail Plaza (<40ksf)*	5	KSF	12	32	272
15	**The Exchange**	NEC Orange St and Vista Ave	***220***	*Multifamily Housing (Low-Rise)*	482	DU	193	246	3,249
			821	*Shopping Center (40-150ksf)*	44.5	KSF	77	231	3,005
			945	*Convenience Store/Gas Station*	16	VFP	432	364	4,114
			310	*Hotel*	229	RM	105	135	1,830
16	**Affordable Housing**	1990 Patterson St	***220***	*Multifamily Housing (Low-Rise)*	57	DU	22	29	384
17	**Apartment Complex**	Patterson St and Minnesota St	***220***	*Multifamily Housing (Low-Rise)*	33	DU	13	17	222
Total Cumulative Projects Traffic Volumes							**1,922**	**2,378**	**28,135**

[1] DU = dwelling units; KSF = 1,000 square feet; RM = rooms; VFP = vehicle fueling positions

[2] Trip generation calculations per ITE Trip Generation Manual (11e, 2021).

Figure 9: Cumulative Projects



Levels of Service – Background Conditions (2028)

Expected traffic volumes from the cumulative projects are then loosely grouped by geographical location, distributed along the surrounding roadway network, and added to the existing peak-hour traffic volumes to estimate the opening day pre-project traffic conditions (**Figure 10**). The majority of the cumulative projects' traffic is estimated to travel along the major arterial roadways such as Market Street and University Avenue.

Figure 10: Background Conditions Traffic Volumes

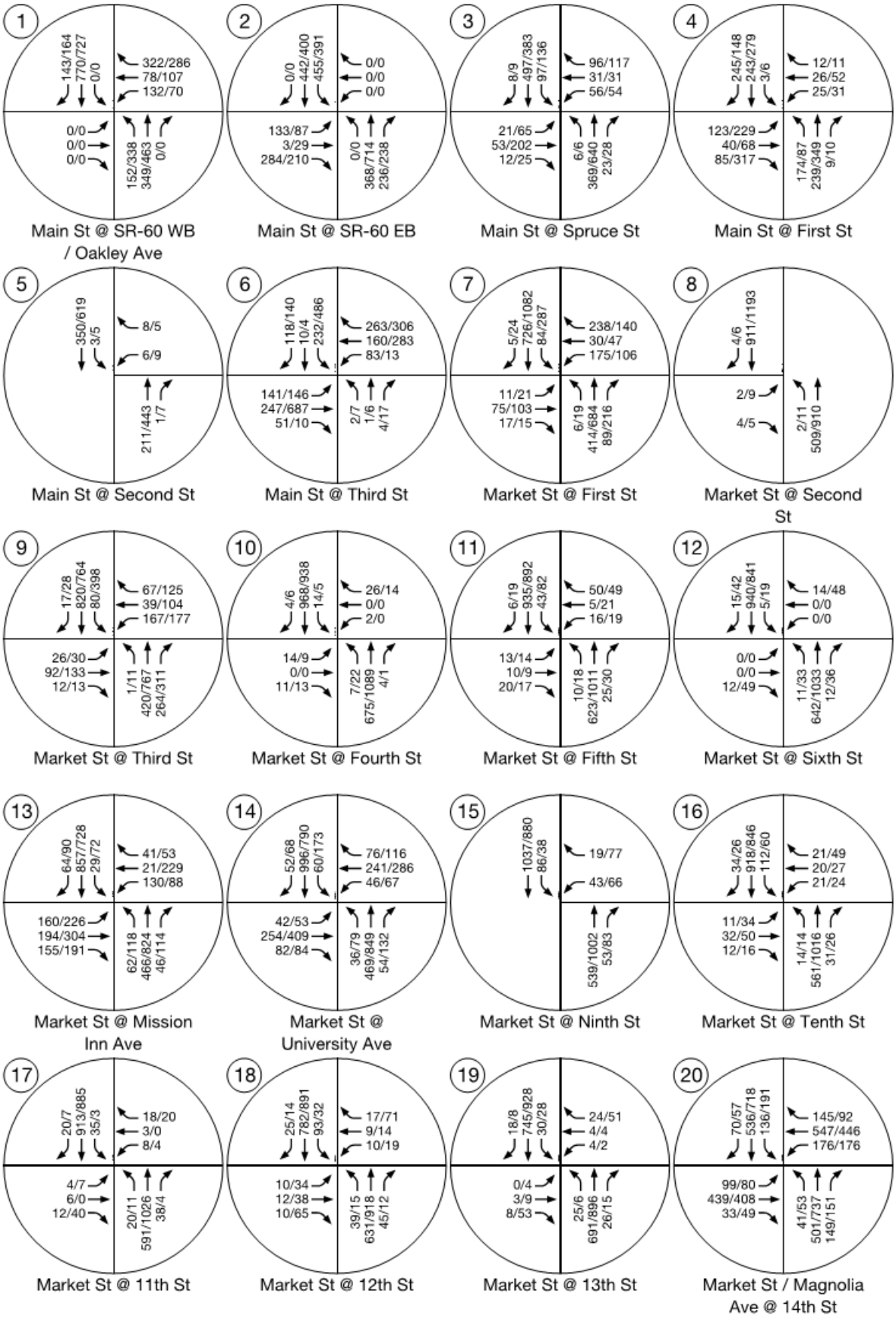


Figure 10 (cont): Background Conditions Traffic Volumes

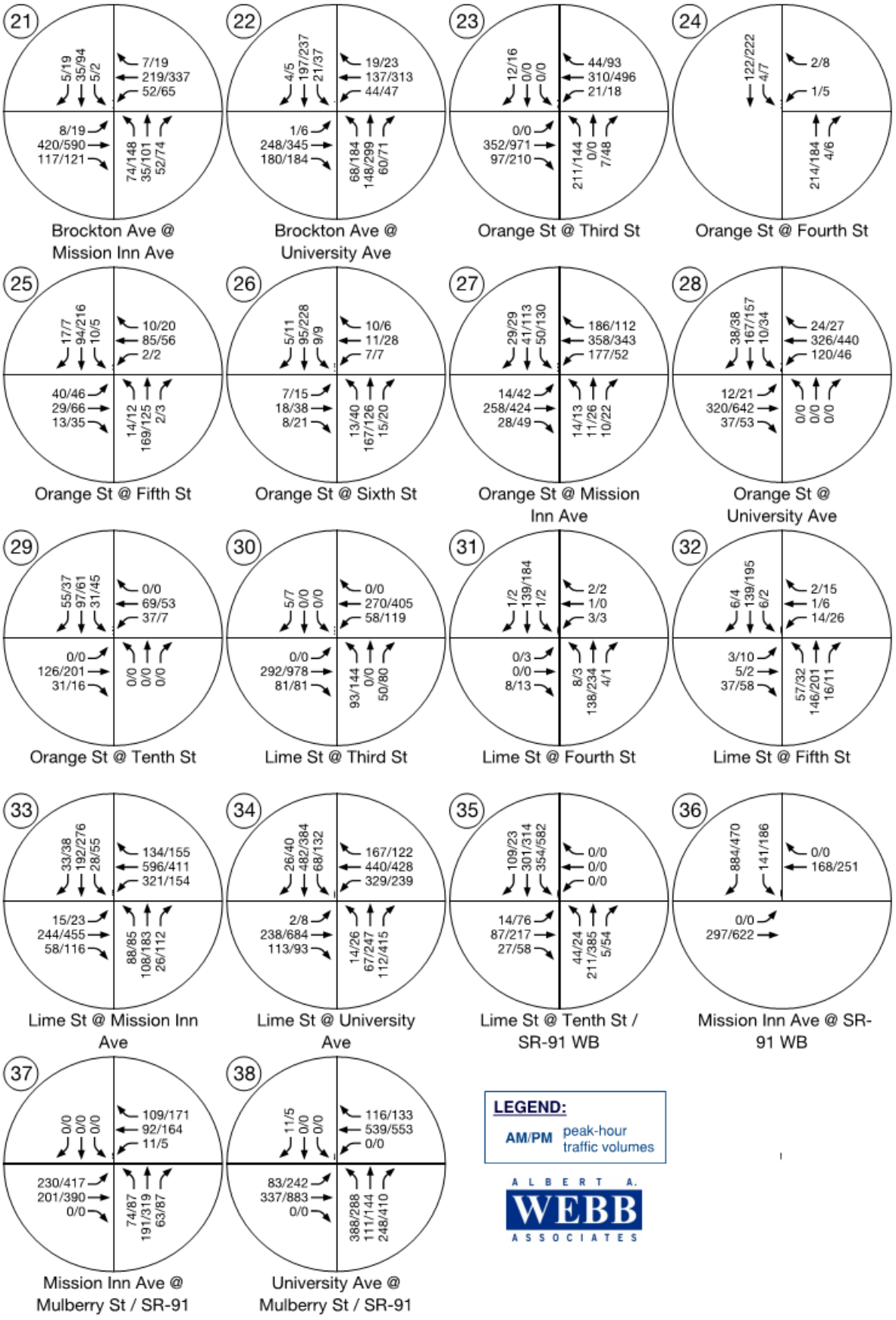


Table 12 gives the LOS analysis for the Background Conditions scenario, with details in Appendix I. With the addition of cumulative project traffic, the following study intersections are expected to operate below the minimum acceptable LOS:

- #17 Market St @ 11th St
- #19 Market St @ 13th St

Table 12: Intersection LOS – Background Conditions (2028)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Main St @ SR-60 WB / Oakley Ave	Signal	21.6	C	25.3	C
2	Main St @ SR-60 EB	Signal	24.5	C	21.6	C
3	Main St @ Spruce St	Signal	9.1	A	12.6	B
4	Main St @ First St	Signal	17.7	B	19.9	B
5	Main St @ Second St	OWSC	13.0	B	22.4	C
6	Main St @ Third St	Signal	25.4	C	33.3	C
7	Market St @ First St	Signal	14.7	B	15	B
8	Market St @ Second St	OWSC	18.8	C	26.5	D
9	Market St @ Third St	Signal	16.4	B	25.6	C
10	Market St @ Fourth St	TWSC	26.8	D	26.7	D
11	Market St @ Fifth St	Signal	9.3	A	9.9	A
12	Market St @ Sixth St	TWSC	12.5	B	13.6	B
13	Market St @ Mission Inn Ave	Signal	23.9	C	31.4	C
14	Market St @ University Ave	Signal	24.0	C	29.4	C
15	Market St @ Ninth St	Signal	4.8	A	7.2	A
16	Market St @ Tenth St	Signal	7.2	A	8.8	A
17	Market St @ 11th St	TWSC	82.8	F	67.6	F
18	Market St @ 12th St	Signal	6.0	A	9.8	A
19	Market St @ 13th St	TWSC	64.0	F	92.3	F
20	Market St @ 14th St	Signal	31.5	C	32.1	C
21	Brockton Ave @ Mission Inn Ave	Signal	12.4	B	15.6	B
22	Brockton Ave @ University Ave	Signal	21.4	C	22.2	C
23	Orange St @ Third St	Signal	14.6	B	13.5	B
24	Orange St @ Fourth St	OWSC	10.9	B	12.2	B
25	Orange St @ Fifth St	AWSC	9.2	A	10.7	B

[1] OWSC = one-way stop control; TWSC = two-way stop control; AWSC = all-way stop control

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

X = LOS falls below minimum threshold

Table 12 (cont): Intersection LOS – Background Conditions (2028)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
26	Orange St @ Sixth St	AWSC	9.0	**A**	10	**A**
27	Orange St @ Mission Inn Ave	Signal	9.9	**A**	15.1	**B**
28	Orange St @ University Ave	Signal	10.5	**B**	10.1	**B**
29	Orange St @ Tenth St	Signal	10.3	**B**	9.2	**A**
30	Lime St @ Third St	Signal	10.8	**B**	13.6	**B**
31	Lime St @ Fourth St	TWSC	11.0	**B**	11.6	**B**
32	Lime St @ Fifth St	TWSC	14.1	**B**	14.7	**B**
33	Lime St @ Mission Inn Ave	Signal	27.8	**C**	24.9	**C**
34	Lime St @ University Ave	Signal	28.9	**C**	31.1	**C**
35	Lime St @ Tenth St / SR-91 WB	Signal	16.9	**B**	22.8	**C**
36	Mission Inn Ave @ SR-91 WB	Signal	14.1	**B**	11.3	**B**
37	Mission Inn Ave @ SR-91 EB / Mulberry St	Signal	18.3	**B**	34.7	**C**
38	University Ave @ SR-91 EB / Mulberry St	Signal	16.8	**B**	18.1	**B**

[1] TWSC = two-way stop control; AWSC = all-way stop control
[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

Levels of Service – Background Conditions plus Project (2028)

The expected project traffic is then added to the Background Conditions traffic volumes to estimate the opening day traffic conditions with the completion of the project (**Figure 11**).

Figure 11: Background Conditions plus Project Traffic Volumes

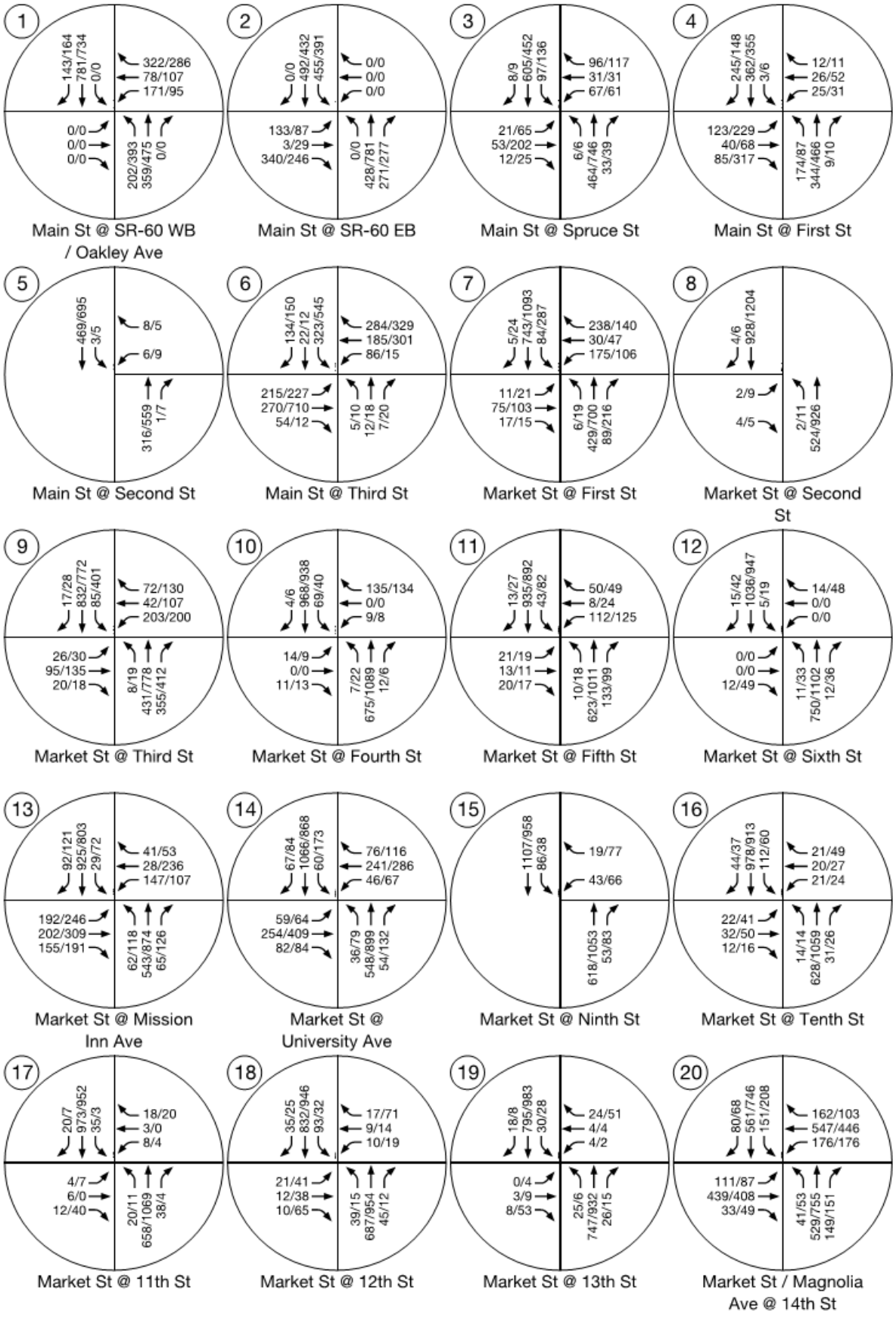


Figure 11 (cont): Background Conditions plus Project Traffic Volumes

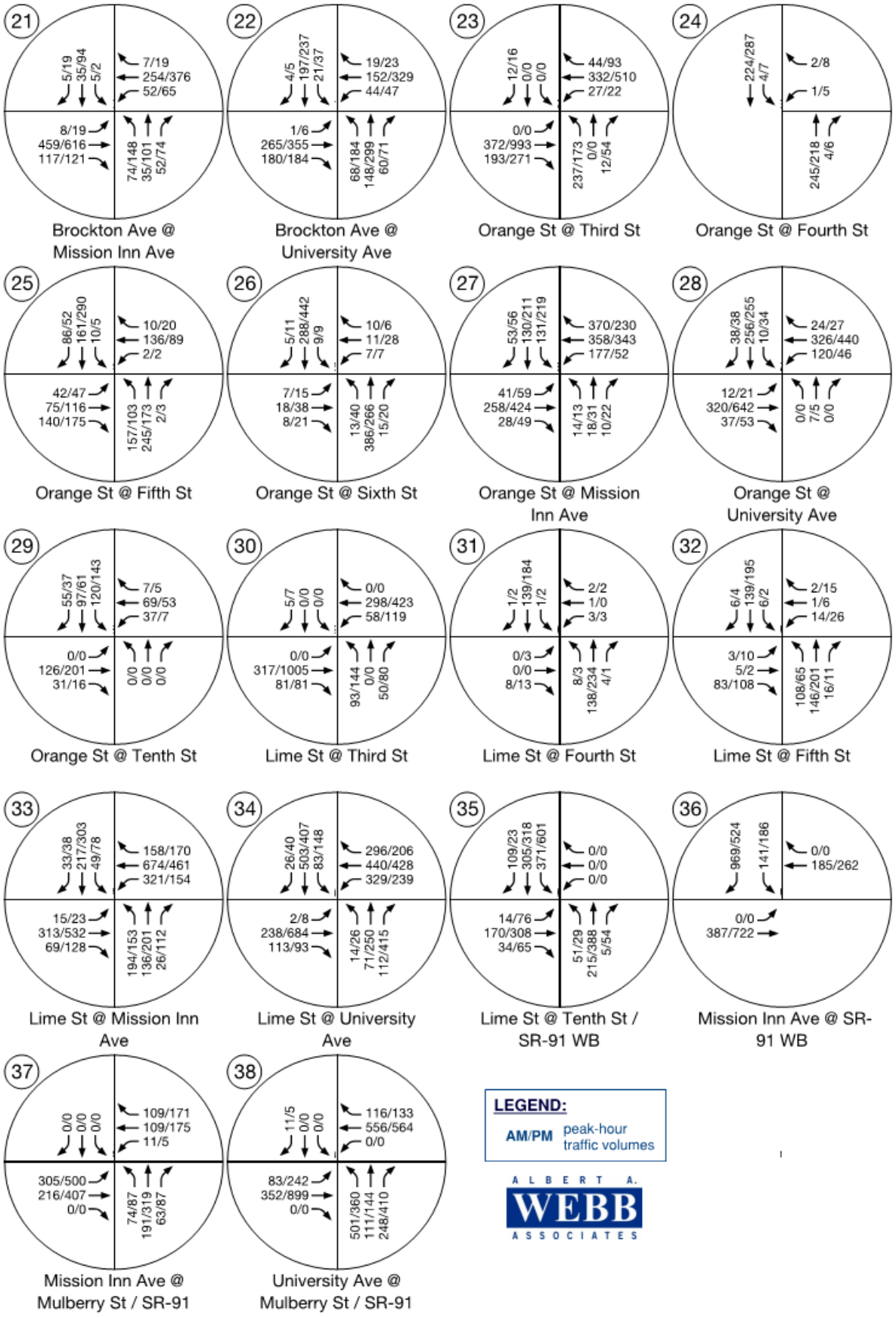


Table 13 summarizes the Background Conditions plus Project analysis, with details in **Appendix I**. With the addition of traffic from nearby cumulative projects and the proposed project, the following study intersections are expected to operate below the minimum acceptable LOS:

- #17 Market St @ 11th St
- #19 Market St @ 13th St

Table 13: Intersection LOS – Background Conditions plus Project (2028)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Main St @ SR-60 WB / Oakley Ave	Signal	24.3	**C**	28.7	**C**
2	Main St @ SR-60 EB	Signal	33.1	**C**	20.4	**C**
3	Main St @ Spruce St	Signal	9.5	**A**	12.8	**B**
4	Main St @ First St	Signal	14.6	**B**	29.9	**C**
5	Main St @ Second St	OWSC	16.1	**C**	28.5	**D**
6	Main St @ Third St	Signal	27.0	**C**	36.1	**D**
7	Market St @ First St	Signal	14.7	**B**	13.8	**B**
8	Market St @ Second St	OWSC	19.1	**C**	26.9	**D**
9	Market St @ Third St	Signal	17.1	**B**	30.6	**C**
10	Market St @ Fourth St	TWSC	34.9	**D**	35.9	**E**
11	Market St @ Fifth St	Signal	12.4	**B**	12.8	**B**
12	Market St @ Sixth St	TWSC	13.2	**B**	14.2	**B**
13	Market St @ Mission Inn Ave	Signal	26.1	**C**	34.5	**C**
14	Market St @ University Ave	Signal	24.6	**C**	29.7	**C**
15	Market St @ Ninth St	Signal	4.8	**A**	7.1	**A**
16	Market St @ Tenth St	Signal	7.5	**A**	8.9	**A**
17	Market St @ 11th St	TWSC	106.7	**F**	78.1	**F**
18	Market St @ 12th St	Signal	6.5	**A**	10	**A**
19	Market St @ 13th St	TWSC	76.8	**F**	108.6	**F**
20	Market St @ 14th St	Signal	32.6	**C**	31.8	**C**
21	Brockton Ave @ Mission Inn Ave	Signal	12.2	**B**	14.9	**B**
22	Brockton Ave @ University Ave	Signal	21.0	**C**	22.6	**C**
23	Orange St @ Third St	Signal	15.4	**B**	15.5	**B**
24	Orange St @ Fourth St	OWSC	12.2	**B**	13.6	**B**
25	Orange St @ Fifth St	AWSC	15	**B**	25.7	**D**

[1] OWSC = one-way stop control; TWSC = two-way stop control; AWSC = all-way stop control

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

X = LOS falls below minimum threshold

Table 13 (cont): Intersection LOS – Background Conditions plus Project (2028)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
26	Orange St @ Sixth St	AWSC	15.6	**C**	17.6	**C**
27	Orange St @ Mission Inn Ave	Signal	24.0	**C**	21.8	**C**
28	Orange St @ University Ave	Signal	12.4	**B**	12.1	**B**
29	Orange St @ Tenth St	Signal	12.7	**B**	12.2	**B**
30	Lime St @ Third St	Signal	10.5	**B**	13.6	**B**
31	Lime St @ Fourth St	TWSC	11.0	**B**	11.6	**B**
32	Lime St @ Fifth St	TWSC	18	**C**	17.7	**C**
33	Lime St @ Mission Inn Ave	Signal	47.5	**D**	25.7	**C**
34	Lime St @ University Ave	Signal	27.8	**C**	31.3	**C**
35	Lime St @ Tenth St / SR-91 WB	Signal	19.3	**B**	25.6	**C**
36	Mission Inn Ave @ SR-91 WB	Signal	14.9	**B**	11.5	**B**
37	Mission Inn Ave @ SR-91 EB / Mulberry St	Signal	20.5	**C**	43.5	**D**
38	University Ave @ SR-91 EB / Mulberry St	Signal	16.9	**B**	18.1	**B**

[1] TWSC = two-way stop control; AWSC = all-way stop control
[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

Levels of Service – Background Conditions plus Project with Improvements (2028)

With the recommended improvements (Section 8), all study intersections are expected to operate above the minimum acceptable LOS standard (**Table 14**, details in **Appendix I**).

Table 14: Intersection LOS – Background Conditions plus Project with Improvements

Intersection		Recommended Improvements	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
				Delay	LOS[2]	Delay	LOS[2]
17	Market St @ 11th St	restrict E/W vehicles to right turns only	TWSC	13.4	**B**	13.4	**B**
19	Market St @ 13th St	restrict E/W vehicles to right turns only	TWSC	11.9	**B**	13.5	**B**

[1] TWSC = two-way stop control
[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

VI. CUMULATIVE CONDITIONS (2045)

Traffic Forecasting

To estimate traffic growth for Cumulative Conditions in the future horizon buildout year, an average annual growth rate was calculated from daily traffic models given by the Riverside County Model (RIVCOM) as administered by the Western Riverside Council of Governments (WRCOG). Accordingly, RIVCOM predicts an average annual traffic growth rate of 0.85% in the project vicinity (**Table 15**). Over the 21-year period from existing conditions (2024) to cumulative conditions (2045), this is equal to 17.9% total growth. The traffic volume maps are provided in **Appendix K**.

Table 15: Horizon Year Growth Estimate

Location			Avg Daily Traffic		Annual Growth
			Baseline[1]	Buildout[2]	
1	**Main St**	n/o Third St	9,061	15,314	1.0%
2	**Market St**	n/o Third St	17,351	22,152	0.9%
3		Third St - Fifth St	19,806	26,059	0.5%
4		Fifth St - Sixth St	19,886	29,987	0.9%
5		s/o Sixth St	18,391	29,987	0.9%
Average					**0.85%**

[1] Daily traffic volume data from the Riverside County Model (RIVCOM), baseline year 2018.
[2] Daily traffic volume data from the Riverside County Model (RIVCOM), buildout year 2045.

Levels of Service – Cumulative Conditions (2045)

The existing peak-hour traffic volumes are increased by the expected 17.9% buildout growth factor to estimate the Cumulative Conditions traffic conditions (**Figure 12**).

Figure 12: Cumulative Conditions Traffic Volumes

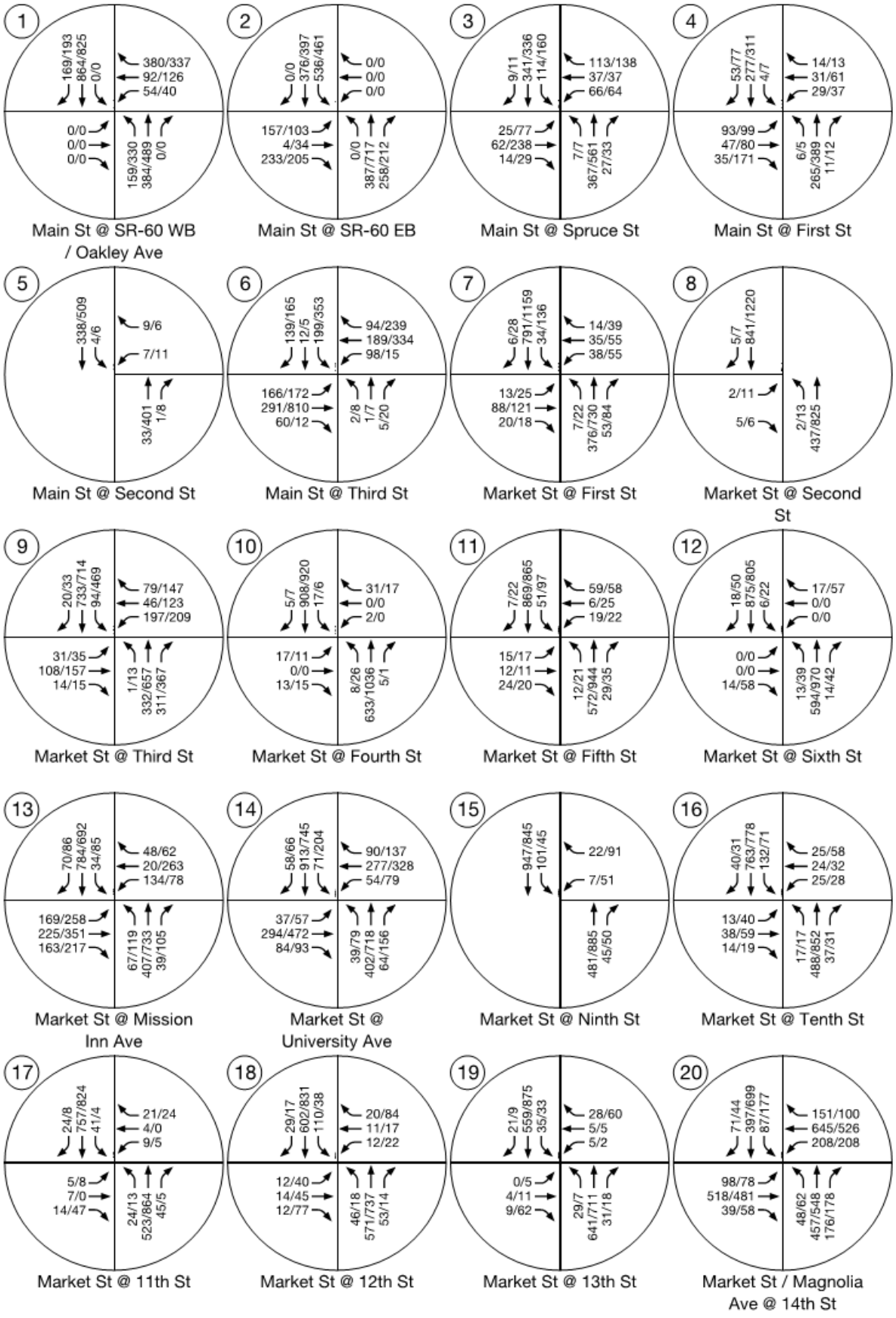


Figure 12 (cont): Cumulative Conditions Traffic Volumes

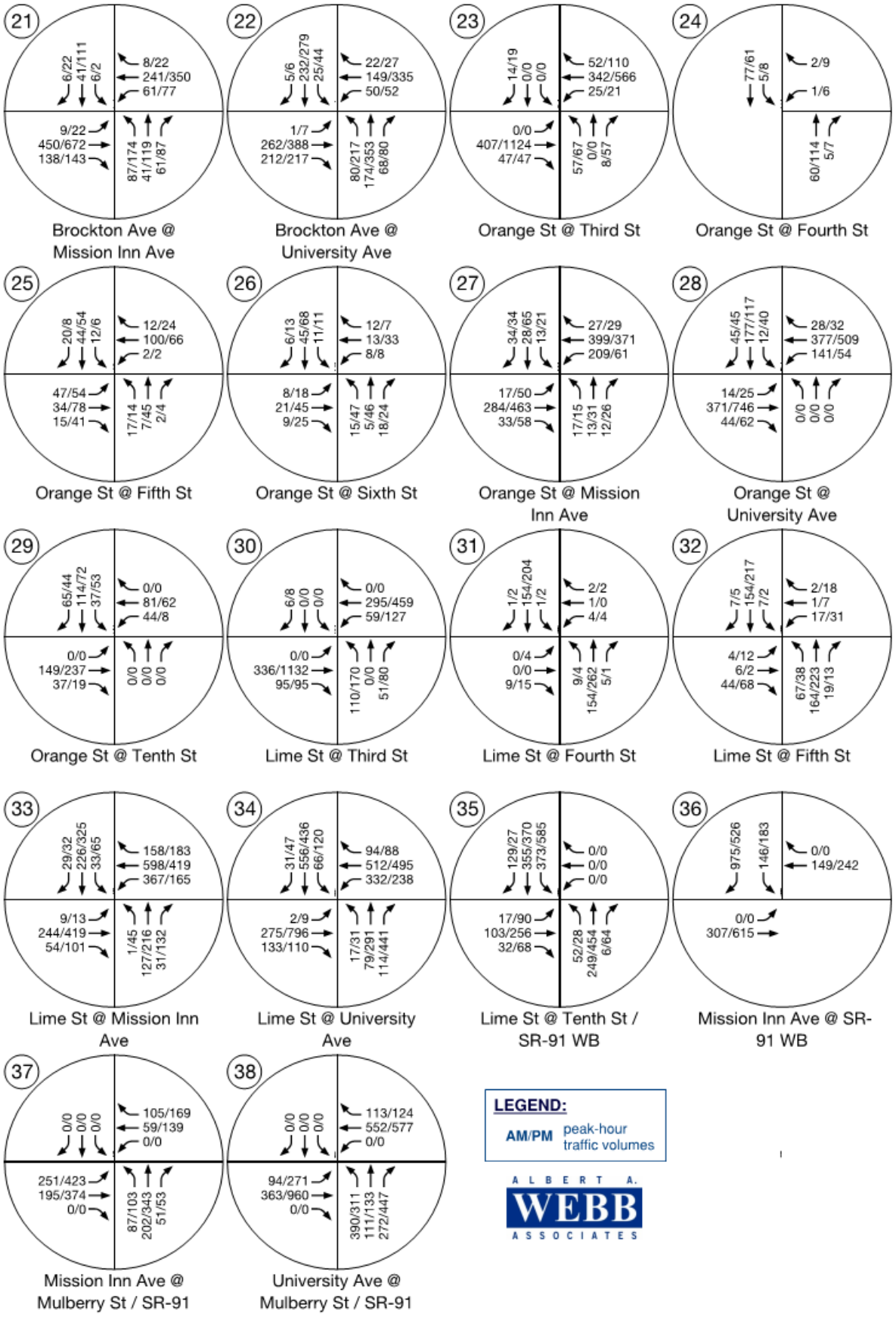


Table 16 summarizes the Cumulative Conditions analysis, with details in **Appendix I**. In the future horizon buildout year, the following study intersections are expected to operate below the minimum acceptable LOS:

- #17 Market St @ 11th St (AM peak hour only)
- #19 Market St @ 13th St (PM peak hour only)

Table 16: Intersection LOS – Cumulative Conditions (2045)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Main St @ SR-60 WB / Oakley Ave	Signal	27.9	C	31.5	C
2	Main St @ SR-60 EB	Signal	27	C	24	C
3	Main St @ Spruce St	Signal	10	A	13.3	B
4	Main St @ First St	Signal	10.3	B	13.3	B
5	Main St @ Second St	OWSC	11.1	B	18.9	C
6	Main St @ Third St	Signal	23.2	C	33	C
7	Market St @ First St	Signal	9.0	A	13.1	B
8	Market St @ Second St	OWSC	17.4	C	27.3	D
9	Market St @ Third St	Signal	17.7	B	35.7	D
10	Market St @ Fourth St	TWSC	25.4	D	26.4	D
11	Market St @ Fifth St	Signal	10.2	B	10.7	B
12	Market St @ Sixth St	TWSC	12.2	B	13.4	B
13	Market St @ Mission Inn Ave	Signal	24.6	C	33.7	C
14	Market St @ University Ave	Signal	25.1	C	31.8	C
15	Market St @ Ninth St	Signal	3.3	A	7.1	A
16	Market St @ Tenth St	Signal	7.8	A	9.3	A
17	Market St @ 11th St	TWSC	59.4	F	49.6	E
18	Market St @ 12th St	Signal	6.5	A	10.4	B
19	Market St @ 13th St	TWSC	46.2	E	67.4	F
20	Market St @ 14th St	Signal	32.1	C	33.6	C
21	Brockton Ave @ Mission Inn Ave	Signal	13.3	B	17.5	B
22	Brockton Ave @ University Ave	Signal	22.7	C	23.4	C
23	Orange St @ Third St	Signal	8.2	A	10.7	B
24	Orange St @ Fourth St	OWSC	9.4	A	10	A
25	Orange St @ Fifth St	AWSC	8.1	A	8.7	A

[1] OWSC = one-way stop control; TWSC = two-way stop control; AWSC = all-way stop control
[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.
X = LOS falls below minimum threshold

Table 16 (cont): Intersection LOS – Cumulative Conditions (2045)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
26	Orange St @ Sixth St	AWSC	7.8	**A**	8.5	**A**
27	Orange St @ Mission Inn Ave	Signal	8.4	**A**	11.1	**B**
28	Orange St @ University Ave	Signal	10.7	**B**	9.9	**A**
29	Orange St @ Tenth St	Signal	10.5	**B**	9.5	**A**
30	Lime St @ Third St	Signal	11.3	**B**	15.3	**B**
31	Lime St @ Fourth St	TWSC	11.3	**B**	12.2	**B**
32	Lime St @ Fifth St	TWSC	15.6	**C**	16.4	**C**
33	Lime St @ Mission Inn Ave	Signal	27.3	**C**	25.2	**C**
34	Lime St @ University Ave	Signal	31.1	**C**	34.5	**C**
35	Lime St @ Tenth St / SR-91 WB	Signal	17.3	**B**	24	**C**
36	Mission Inn Ave @ SR-91 WB	Signal	14.8	**B**	11.7	**B**
37	Mission Inn Ave @ SR-91 EB / Mulberry St	Signal	19.1	**B**	33.4	**C**
38	University Ave @ SR-91 EB / Mulberry St	Signal	16.9	**B**	18.7	**B**

[1] TWSC = two-way stop control; AWSC = all-way stop control
[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

Levels of Service – Cumulative Conditions plus Project (2045)

The expected project traffic is then added to the opening day traffic volumes to estimate the cumulative traffic conditions with the completion of the project (**Figure 13**).

Figure 13: Cumulative Conditions plus Project Traffic Volumes

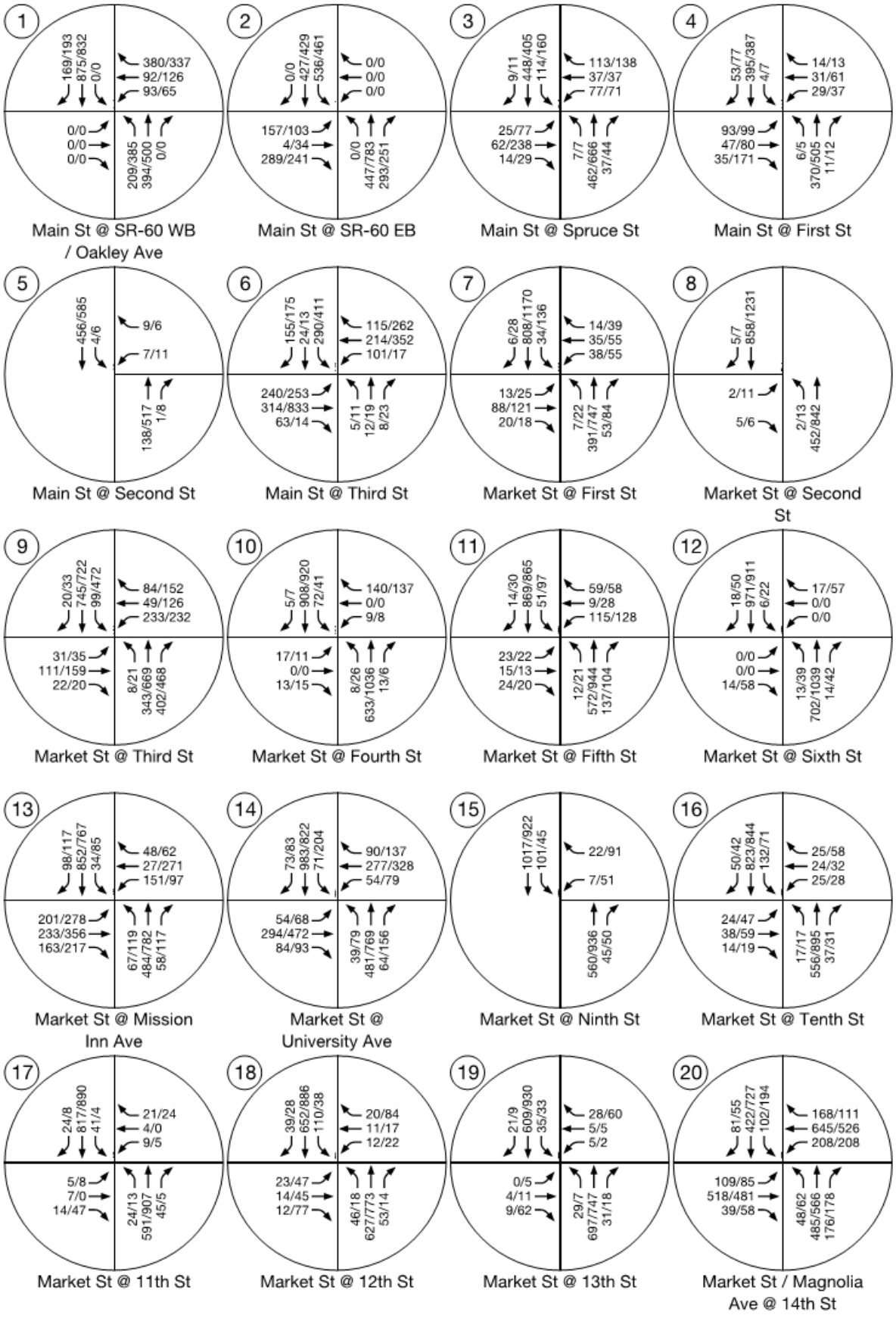


Figure 13 (cont): Cumulative Conditions plus Project Traffic Volumes

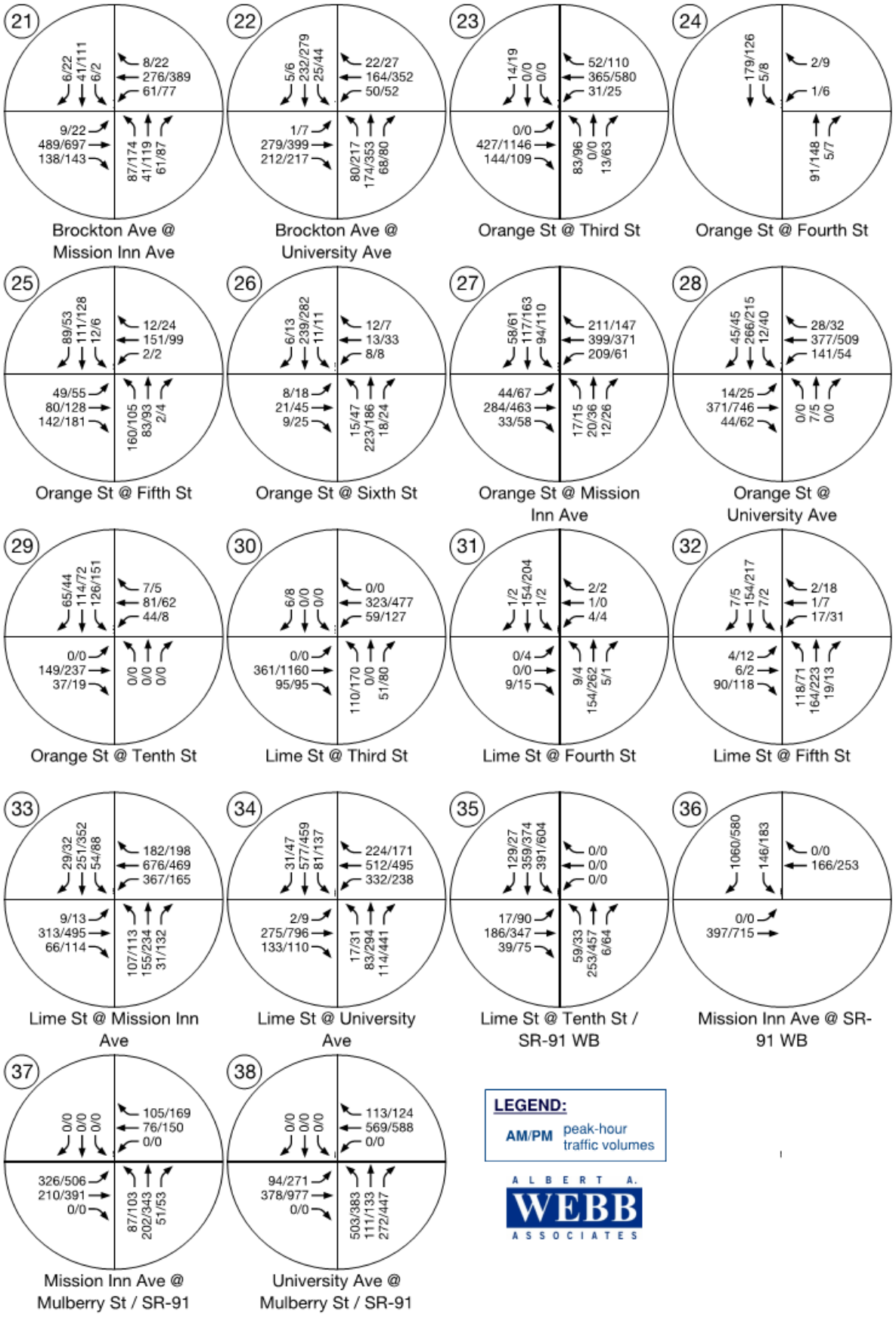


Table 17 summarizes the Cumulative Plus Project analysis, with details in Appendix I. With the addition of project traffic in the future horizon buildout year, the following study intersections are expected to operate below the minimum acceptable LOS:

- #17 Market St @ 11th St
- #19 Market St @ 13th St

Table 17: Intersection LOS – Cumulative Conditions plus Project (2045)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Main St @ SR-60 WB / Oakley Ave	Signal	31.6	C	36.7	D
2	Main St @ SR-60 EB	Signal	33.8	C	22.7	C
3	Main St @ Spruce St	Signal	10.2	B	14.3	B
4	Main St @ First St	Signal	9.2	A	13.0	B
5	Main St @ Second St	OWSC	13.5	B	23.8	C
6	Main St @ Third St	Signal	24.6	C	38.5	D
7	Market St @ First St	Signal	8.9	A	13.2	B
8	Market St @ Second St	OWSC	17.8	C	27.7	D
9	Market St @ Third St	Signal	18.2	B	39.6	D
10	Market St @ Fourth St	TWSC	33.2	D	34.4	D
11	Market St @ Fifth St	Signal	13.1	B	13.3	B
12	Market St @ Sixth St	TWSC	12.8	B	13.9	B
13	Market St @ Mission Inn Ave	Signal	26.7	C	36.6	D
14	Market St @ University Ave	Signal	25.7	C	32.1	C
15	Market St @ Ninth St	Signal	3.4	A	7.1	A
16	Market St @ Tenth St	Signal	8.0	A	9.5	A
17	Market St @ 11th St	TWSC	75.6	F	57	F
18	Market St @ 12th St	Signal	6.9	A	11	B
19	Market St @ 13th St	TWSC	55.1	F	79.1	F
20	Market St @ 14th St	Signal	34.2	C	33.5	C
21	Brockton Ave @ Mission Inn Ave	Signal	13.0	B	16.3	B
22	Brockton Ave @ University Ave	Signal	22.5	C	25.2	C
23	Orange St @ Third St	Signal	9.5	A	12.4	B
24	Orange St @ Fourth St	OWSC	10.4	B	10.9	B
25	Orange St @ Fifth St	AWSC	12.6	B	15.0	B

[1] OWSC = one-way stop control; TWSC = two-way stop control; AWSC = all-way stop control

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

X = LOS falls below minimum threshold

Table 17 (cont): Intersection LOS – Cumulative Conditions plus Project (2045)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
26	Orange St @ Sixth St	AWSC	10.8	**B**	11.5	**B**
27	Orange St @ Mission Inn Ave	Signal	15.6	**B**	16.7	**B**
28	Orange St @ University Ave	Signal	12.5	**B**	11.8	**B**
29	Orange St @ Tenth St	Signal	12.7	**B**	12	**B**
30	Lime St @ Third St	Signal	11.1	**B**	15.3	**B**
31	Lime St @ Fourth St	TWSC	11.3	**B**	12.2	**B**
32	Lime St @ Fifth St	TWSC	20.4	**C**	20.1	**C**
33	Lime St @ Mission Inn Ave	Signal	32.4	**C**	25.9	**C**
34	Lime St @ University Ave	Signal	31.5	**C**	34.8	**C**
35	Lime St @ Tenth St / SR-91 WB	Signal	19.1	**B**	28.9	**C**
36	Mission Inn Ave @ SR-91 WB	Signal	15.8	**B**	11.9	**B**
37	Mission Inn Ave @ SR-91 EB / Mulberry St	Signal	21.3	**C**	41.3	**D**
38	University Ave @ SR-91 EB / Mulberry St	Signal	17.1	**B**	18.7	**B**

[1] TWSC = two-way stop control; AWSC = all-way stop control
[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

Some intersections may show less delay in the Cumulative condition scenarios due to minor differences in traffic patterns resulting from the growth estimation methodologies:

- For the Background conditions, traffic growth is anticipated from the specific geographical locations of the cumulative projects. The majority of the traffic growth is estimated to travel along the major arterial roadways such as Market Street and University Avenue.
- For the Cumulative conditions, an ambient growth rate is applied to all existing traffic in the study area based on regional traffic models.

Levels of Service – Cumulative Conditions plus Project with Improvements (2045)

With the recommended improvements (Section 8), all study intersections are expected to operate above the minimum acceptable LOS standard (**Table 18**, details in **Appendix I**).

Table 18: Intersection LOS – Cumulative Conditions plus Project with Improvements

Intersection		Recommended Improvements	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
				Delay	LOS[2]	Delay	LOS[2]
17	Market St @ 11th St	restrict E/W vehicles to right turns only	TWSC	12.3	**B**	12.6	**B**
19	Market St @ 13th St	restrict E/W vehicles to right turns only	TWSC	11.7	**B**	13.3	**B**

[1] TWSC = two-way stop control
[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

VII. ROADWAY SEGMENT ANALYSIS

Per the approved scoping agreement, the following roadway segments were selected for analysis:

1. Main St from State Route 60 (SR-60) to Third St
2. Market St from First St to Third St
3. Market St from Third St to Fifth St
4. Market St from Fifth St to Sixth St
5. Market St from Sixth St to Mission Inn Ave

Methodology

Roadway segment analysis assigns an LOS ranking from LOS A to F indicating relative vehicle density, based on roadway classifications and number of travel lanes in the City of Riverside General Plan. Per the General Plan, the minimum acceptable LOS for roadway segments is LOS D. As the northerly extension of Magnolia Avenue, Market Street within the study area is a Principal roadway in the Riverside County Congestion Management Program. As such, the minimum acceptable LOS for the Market Street segments is LOS E.

Table 19 shows the LOS C-E thresholds for roadway capacity as given by the City of Riverside Traffic Impact Analysis Guidelines (2020).

Table 19: Roadway Capacity Standards

Roadway Classification	# Lanes	Daily Traffic Volume Capacity		
		LOS C	LOS D	LOS E
Local	2	2,500 - 2,799	2,800 - 3,099	3,100 +
66' Collector	2	9,900 - 11,199	11,200 - 12,499	12,500 +
80' Collector	2	9,900 - 11,199	11,200 - 12,499	12,500 +
Arterial	2	14,400 - 16,199	16,200 - 17,999	18,000 +
88' Arterial	4	16,800 - 19,399	19,400 - 21,999	22,000 +
100' Arterial	4	26,200 - 29,599	29,600 - 32,999	33,000 +
120' Arterial	6	38,700 - 44,099	44,100 - 49,499	49,500 +
144' Arterial	8	50,600 - 57,799	57,800 - 64,999	65,000 +

Note: Roadway capacities in average daily vehicle traffic per City of Riverside guidelines.

Per the City of Riverside General Plan, Northside Specific Plan, South Main Complete Streets Project, Riverside County CMP, and discussions with City staff, vehicle capacity on Main Street is analyzed as a generic Arterial roadway and on Market Street as an 88' Arterial.

Existing Conditions (2024)

Based on the existing traffic volume counts collected on June 6 (Thursday) and June 11 (Tuesday), 2024, all study roadway segments currently operate above the minimum acceptable LOS (**Table 20**).

Table 20: Roadway Segment LOS – Existing Conditions (2024)

	Roadway Segment	Roadway Classification	# Lanes	Capacity	ADT	LOS
Main Street						
1	SR-60 - Third St	Arterial	4	18,000	9,061	**A**
Market Street						
2	First St - Third St	88' Arterial	4	22,000	17,351	**C**
3	Third St - Fifth St	88' Arterial	4	22,000	19,806	**D**
4	Fifth St - Sixth St	88' Arterial	4	22,000	19,886	**D**
5	Sixth St - Mission Inn Ave	88' Arterial	4	22,000	18,391	**C**

Background Conditions (2028)

With the addition of expected daily traffic from cumulative projects and the proposed project, all study roadway segments are expected to operate at or above the minimum acceptable LOS (**Table 21**).

Table 21: Roadway Segment LOS – Background Conditions (2028)

	Roadway Segment	# Lanes	Capacity	Background		Background + Project		
				ADT	LOS	Project ADT	Total ADT	LOS
Main Street*								
1	SR-60 - Third St	2	18,000	9,765	**A**	2,207	11,972	**A**
Market Street								
2	First St - Third St	4	22,000	18,758	**C**	315	19,073	**C**
3	Third St - Fifth St	4	22,000	21,213	**D**	3,678	24,891	**E**
4	Fifth St - Sixth St	4	22,000	21,293	**D**	2,522	23,815	**E**
5	Sixth St - Mission Inn Ave	4	22,000	19,798	**D**	2,522	22,320	**E**

** Per discussion with City staff, the South Main Complete Streets Project will convert Main Street between SR-60 and Third Street from 4 to 2 travel lanes.*

Cumulative Conditions (2045)

As with the intersection analysis, roadway segment volumes for the Cumulative condition use a growth factor derived from RIVCOM. With the addition of traffic from expected growth in the future buildout year and the proposed project, all study roadway segments are expected to operate at or above the minimum acceptable LOS (Table 22).

Table 22: Roadway Segment LOS – Cumulative Conditions (2045)

	Roadway Segment	# Lanes	Capacity	Cumulative		Cumulative + Project		
				ADT	LOS	Project ADT	Total ADT	LOS
Main Street*								
1	SR-60 - Third St	2	18,000	10,683	**A**	2,207	12,890	**A**
Market Street								
2	First St - Third St	4	22,000	20,457	**D**	315	20,772	**D**
3	Third St - Fifth St	4	22,000	23,351	**E**	3,678	27,029	**E**
4	Fifth St - Sixth St	4	22,000	23,446	**E**	2,522	25,968	**E**
5	Sixth St - Mission Inn Ave	4	22,000	21,683	**D**	2,522	24,205	**E**

** Per discussion with City staff, the South Main Complete Streets Project will convert Main Street between SR-60 and Third Street from 4 to 2 travel lanes.*

Roadway Capacity Improvements

In accordance with the City of Riverside General Plan, Downtown Specific Plan, Northside Specific Plan, and discussions with City staff, both Main Street and Market Street are currently considered built-out within the study area. No future lane additions are planned or recommended, as the roadway is considered built-out to General Plan standards and right-of-way expansion has low feasibility.

Notably, per discussion with City staff, the South Main Complete Streets Project is expected to convert Main Street between Third Street and SR-60 from four to two travel lanes divided by a median with additional parking, landscaping, and pedestrian walkways. This is a separate City project planned to be completed in 2027, prior to the proposed project.

VIII. RECOMMENDATIONS

Intersection Improvements

Several study intersections are expected to operate below the minimum acceptable LOS in one or more study scenarios and therefore are recommended for improvements as shown in **Table 23** and **Figure 14**.

Reference: Study Area

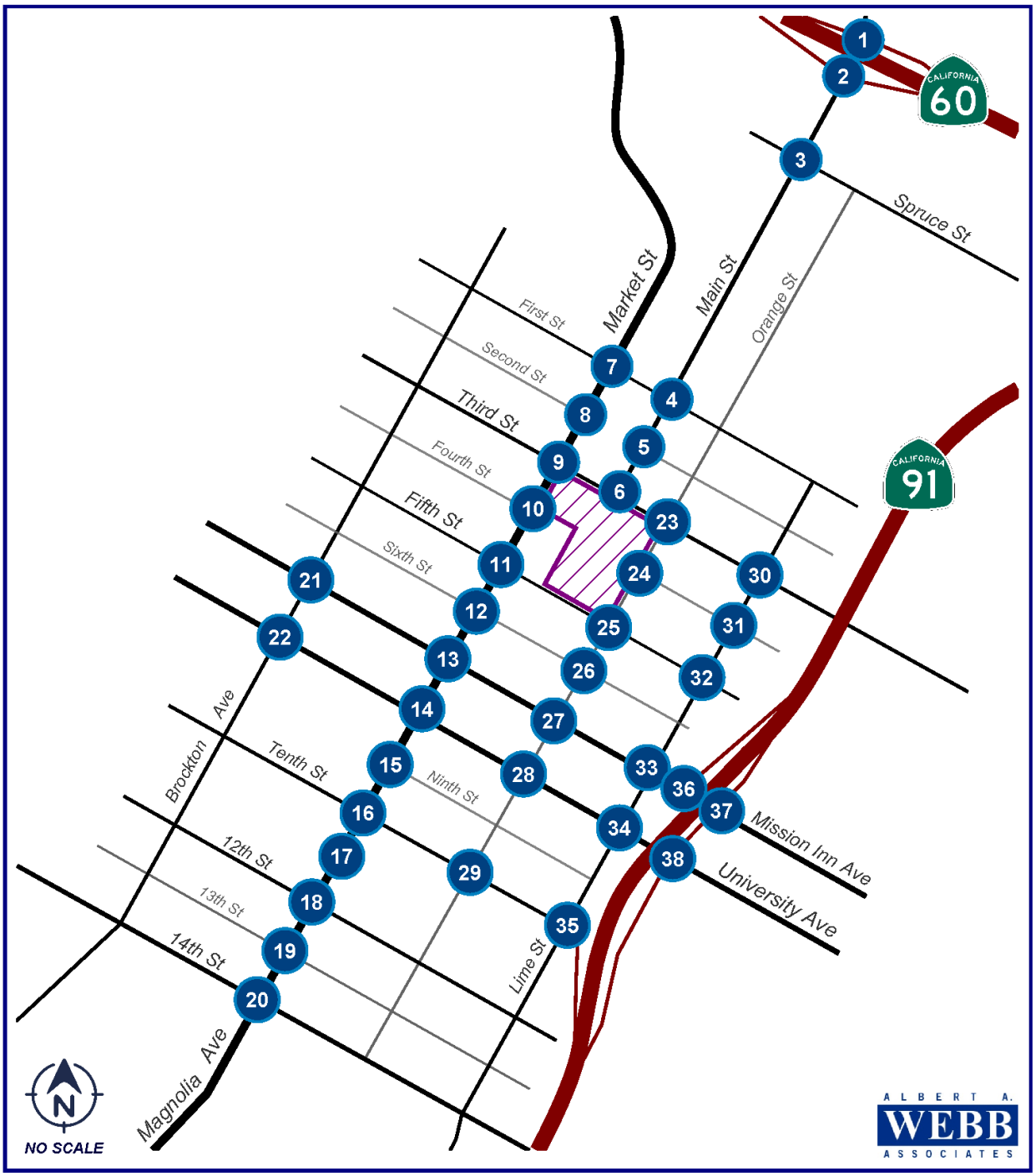


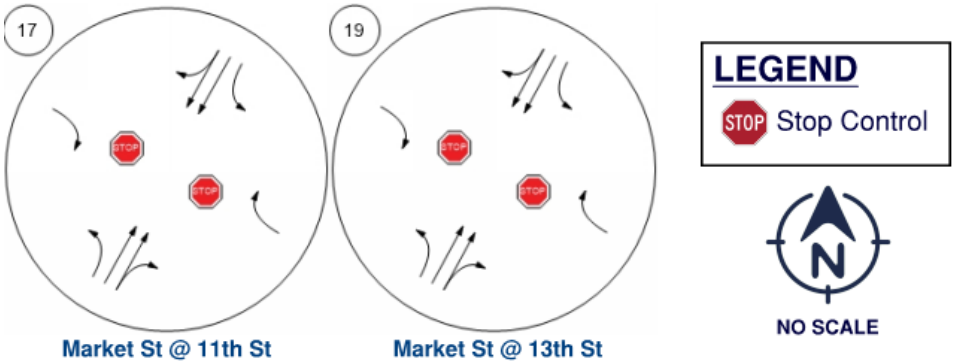
Table 23: Recommended Intersection Improvements

Intersection		Traffic Control[1]	Peak Hour	Scenario Needed	Recommended Improvements	Fair Share %[2]
17	**Market St @ 11th St**	TWSC	AM/PM	Existing	restrict E/W vehicles on 11th St to right turns only	**36.4%**
19	**Market St @ 13th St**	TWSC	AM/PM	Existing	restrict E/W vehicles on 13th St to right turns only	**25.0%**

[1] Existing traffic control measure. TWSC = two-way stop control

[2] Fair share percentage based on proportion of project trips to total growth in the Cumulative + Project analysis for reference only.

Figure 14: Recommended Intersection Geometrics



Intersection #17: Market St @ 11th St

The intersection of Market Street and 11th Street is expected to operate at LOS F in both the AM and PM peak hours with the completion of the project in the opening year and buildout year. This is primarily due to the higher traffic volumes on Market Street, the major roadway, causing delays in left turns and through movements from 11th Street.

Per discussions with City staff, a traffic signal is not desirable at this location due to its proximity to the adjacent existing traffic signals at 10th Street and 12th Street. At this location, it is recommended to implement a right-turn-only restriction on 11th Street to reduce vehicle delays and potential points of conflict. This restriction should encompass the AM and PM peak hours at a minimum and should be clearly indicated with pavement markings and signage. As with the Sixth Street implementation, the City finds these turn restrictions appropriate for Downtown applications in the grid network.

Intersection #19: Market St @ 13th St

The intersection of Market Street and 13th Street to operate at LOS F in both the AM and PM peak hours with the completion of the project in the opening year and buildout year. This is primarily due to the higher traffic volumes on Market Street, the major roadway, causing delays in left turns and through movements from 13th Street.

Per discussions with City staff, a traffic signal is not desirable at this location due to its proximity to the adjacent existing traffic signals at 12th Street and 14th Street. At this location, it is recommended to implement a right-turn-only restriction on 13th Street to reduce vehicle delays and potential points of conflict. This restriction should encompass the AM and PM peak hours at a minimum and should be clearly indicated with pavement markings and signage. As with the Sixth Street implementation, the City finds these turn restrictions appropriate for Downtown applications in the grid network.

Funding Sources

TUMF

The Western Riverside Council of Governments (WRCOG) administers the Transportation Uniform Mitigation Fund (TUMF), a regional program to fund transportation infrastructure improvements. Although Market Street, Mission Inn Avenue, University Avenue, and portions of Main Street and 14th Street are included in the TUMF network, all TUMF projects within the study area are completed and no TUMF funding is currently earmarked for future improvements in the study area.

Project Traffic Fair Share

For all other improvements, fair share contribution rate is calculated as the proportion of total traffic growth which is expected to be generated by the total project. **Table 24** shows the proportional project traffic under cumulative conditions at each location with operational deficiencies.

Table 24: Project Fair Share Percentages

Intersection		AM Peak Hour			PM Peak Hour			Max Project %
		Traffic Growth	Project Traffic	Project %	Traffic Growth	Project Traffic	Project %	
17	Market St @ 11th St	352	128	36.4%	383	109	28.5%	**36.4%**
19	Market St @ 13th St	740	106	14.3%	364	91	25.0%	**25.0%**

Note: traffic growth calculated as the difference between Existing and Cumulative plus Project conditions.

The City of Riverside does not currently have a fair share program; therefore, the project fair share percentages shown above simply illustrate the proportion of future traffic expect to be attributable to the project at each location for reference. As the recommended improvements are relatively inexpensive and do not require additional right-of-way or roadway pavement, it is expected that the City Traffic Division would require the project to complete these improvements at 100% responsibility.

Pedestrian Connectivity

The Downtown Specific Plan emphasizes pedestrian use and access in a "comfortable, safe, and enjoyable walking environment." Per the Downtown Specific Plan, primary pedestrian access to buildings should be from the street or pedestrian walkways, not parking areas, and walkways should be provided to link parking areas with the street wherever feasible. Additionally, the following roadways adjacent to the project are designated as pedestrian-oriented streets:

- Market Street south of Fifth Street
- Main Street south of Fifth Street
- Orange Street south of Third Street
- Fifth Street from Market Street to Orange Street

Conceptual plans for the project show plans for an interior pedestrian plaza to serve as a linkage, gathering, and communal space between the project buildings. The plaza provides opportunities for pedestrian-focused amenities such as pocket park space, picnic space, public art, and water features to enhance the employee, resident, and visitor experience.

The project is also well-positioned to provide additional pedestrian connections and facilities as an extension of the Main Street Pedestrian Mall from Sixth Street to 10th Street. Pedestrian facilities and amenities such as walking space, street lighting, crosswalks, accessible curb ramps, benches, and shade are recommended to connect residents, patrons, and employees of the project to nearby parking, attractions, and businesses.

The project proposes to provide on-site parking in a subterranean facility with vehicle access from Market Street and Fifth Street. On-site pedestrian facilities should clearly and quickly allow access from the various project buildings to the on-site and on-street parking, with lighting and signage to assist in wayfinding.

Traffic Signal Warrants

The California Manual on Uniform Control Devices (MUTCD) provides nine warrant guidelines for a traffic signal installation, of which the satisfaction of any single warrant shall not require a new traffic signal installation. Warrant 3, the peak-hour traffic signal warrant, indicates that an unsignalized intersection is likely to meet one or more volume-based signal warrant. Per the MUTCD, an engineering study should be conducted prior to installing a new traffic signal to assess traffic conditions and safety. Accordingly, this study finds that the intersection of Market St @ Fourth St is expected to meet the peak-hour traffic signal warrant with the completion of the project (**Table 25**, see **Appendix L** for details).

Table 25: Peak-Hour Signal Warrant

Intersection		Peak Hour	Existing Conditions	Background Conditions	Background + Project	Cumulative Conditons	Cumulative + Project
5	Main St @ Second St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO
8	Market St @ Second St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO
10	Market St @ Fourth St	AM	NO	NO	**YES**	NO	**YES**
		PM	NO	NO	**YES**	NO	**YES**
12	Market St @ Sixth St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO
17	Market St @ 11th St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO
19	Market St @ 13th St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO
24	Orange St @ Fourth St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO
25	Orange St @ Fifth St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO
26	Orange St @ Sixth St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO
31	Lime St @ Fourth St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO
32	Lime St @ Fifth St	AM	NO	NO	NO	NO	NO
		PM	NO	NO	NO	NO	NO

X = meets the peak-hour volume warrant per MUTCD

ALBERT A.
WEBB
ASSOCIATES

Corporate Headquarters
3788 McCray Street
Riverside, CA 92506
T: 951.686.1070

Appendix A

Approved Traffic Scoping Agreement

APPROVED
Vital Patel
11/4/2024

Memorandum

To: Vital Patel
City of Riverside

From: Kawai Mang, Project Engineer
Albert A. Webb Associates

Date: September 18, 2024

Subject: Traffic study scoping agreement for Riverside Alive

Albert A. Webb has prepared this traffic scoping agreement for the Riverside Alive project, a proposed revitalization and expansion of the existing Riverside Convention Center and the surrounding city block, including the downtown pedestrian corridor. This scoping agreement is based on the City of Riverside Traffic Impact Analysis Guidelines (2020) and our current understanding of the proposed development.

A. Background and Project Description

The Project site is in Downtown Riverside on approximately 10 acres and includes the Lot 33 parking lot and Riverside Convention Center (RCC). The existing RCC, located at 3637 Fifth Street, is a 108,000 square-foot (sf) building that offers 50,000 sf of flexible indoor exhibit, ballroom, and meeting space as well as outdoor meeting space and passive park area in the Outdoor Plaza. Local access to the Project is provided via Main Street, Third Street, Fifth Street, Market Street and Orange Street.

Lot 33 is a surface parking lot managed by the City of Riverside with 498 parking stalls, of which 18 are accessible and one is an electric vehicle charging station. Lot 33 has two existing full-access driveways, one on Market Street and one on Third Street at the existing Main Street intersection.

The project site is located within the Raincross District of the Downtown Specific Plan.

The Project proposes a combination of residential, office, retail, and hotel uses, along with a Convention Center expansion and new parking facilities. No specific development is currently proposed; however, the following maximum size assumptions for the proposed Project land uses are used to determine a reasonable site buildout for analysis (**Table 1**). The potential layout of these uses is shown in **Figure 1**.

Hotel

The Project proposes two full-service hotels totaling up to 376 guest rooms. A 208-room full-service hotel would be located within Building C along Third Street. A second, 168-room extended stay hotel would be located within Building B on the interior of the Project site.

Figure 1: Proposed Project Site Plan Rendering

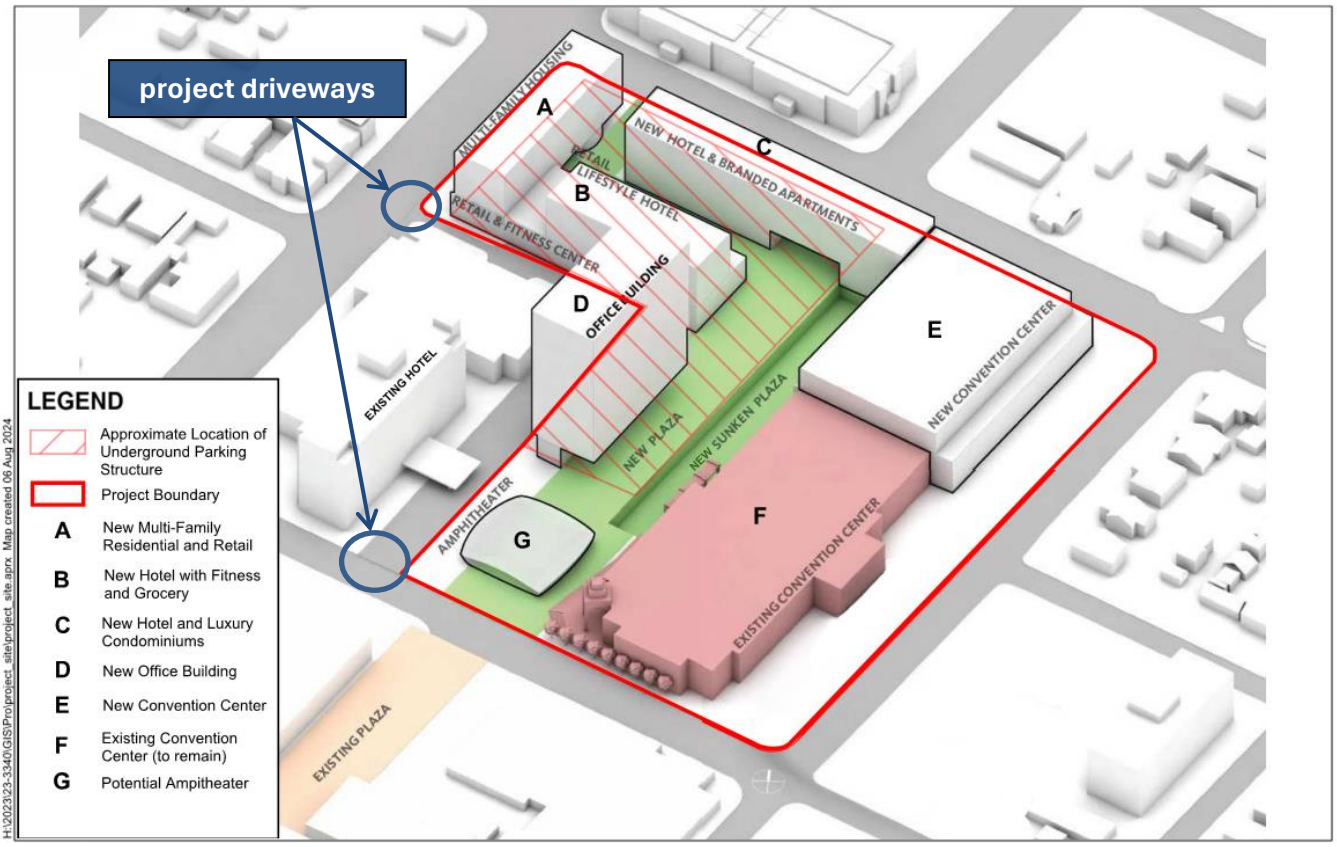


Table 1: Proposed Development Sizes

Building	Land Use Type	Size[1]
Existing Land Use		
Riverside Convention Center (Building F)	Conference & Event Center	108 KSF
Proposed Project		
Building A	Multifamily Housing	113 DU
Building B	Hotel	168 RM
	Commercial Restaurant/Retail	49.1 KSF
Building C	Hotel	208 RM
	Multifamily Housing	55 DU
Building D	General Office Building	220 KSF
Buildings A, C, D	Commercial Restaurant/Retail	12.9 KSF
RCC Expansion (Building E)	Conference & Event Center	189 KSF

[1] DU = dwelling unit, RM = rooms, KSF = 1,000 square feet

Residential

The Project proposes up to 168 residential units, consisting of 113 units of multi-family residential located within one 9-story building at the corner of Market Street and Third Street (Building A) and 55 condominiums on the top two levels of Building C.

Office

The Project proposes up to approximately 220,000 sf of Class A office space in Building D, up to 14 stories tall. The office building is located on the interior of the Project site south of the extended stay hotel building and across from the existing Riverside Convention Center building.

Commercial Retail Uses

The Project proposes up to 62,000 sf of commercial retail uses that may include retail, restaurant, entertainment and personal services. Approximately 12,875 sf of restaurant-focused retail space is assumed, accommodating several restaurant users integrated in the first floor of Buildings A, C, and D. Within Building B, an approximately 20,690 sf grocery store is anticipated on the ground floor, with an approximately 28,416 sf public fitness center on the second level.

Convention Center Expansion

The proposed Project includes a new 189,000 sf building to be joined to the existing 108,000 sf RCC building, adding 100,000 sf of space for exhibit, ballroom and meeting areas for a total Convention Center rentable function space of approximately 150,000 sf.

Vehicle Circulation, Parking, and Access

Regional access to the Project is provided via State Route 91 (SR-91) and State Route 60 (SR-60). The nearest SR-91 access is at Mission Inn Avenue, University Avenue, and Lime Street southeast of the project. The nearest SR-60 access is via Main Street north of the project. Local access to the Project is provided via Main Street, Third Street, Fifth Street, Market Street and Orange Street. A separate City project, scheduled to be completed by February 2027, is planned to reduce Main Street between Third Street and SR-60 from 4 to 2 travel lanes divided by a median with additional parking, landscaping, and pedestrian walkways.

The Project proposes a subterranean parking structure of up to 5 levels to replace Lot 33. With the demolition of Lot 33, its two existing driveways on Third Street and Market Street would be removed. Vehicle access to the Project is proposed via existing driveways on Market Street and Fifth Street serving the existing Marriott Hotel. Vehicle loading and passenger drop-off/pick-up areas will be provided on Third Street, Market Street, and Fifth Street. The existing Orange Street loading area would remain.

Public Transit and Pedestrian Access

The Project area is served by Riverside Transit Agency (RTA) routes 12, 29 and 204 via Market Street, with bus stops at Third Street, Fourth Street, and Sixth Street. The Downtown Riverside Metrolink station provides commuter rail and regional rail service to Los Angeles, Orange, and San Bernardino Counties.

The Project will provide pathways to facilitate the movement of pedestrians within the site and provide connection to the existing sidewalks along Third Street, Fifth Street, Market Street and Orange Street.

B. Traffic Study

Per the City guidelines, the project will be required to provide a traffic study with LOS analysis due to its size and uses. The City's traffic scoping form is provided in **Attachment A**.

Analysis Scenarios (weekday AM/PM peak hour)

1. Existing Conditions
2. Background Conditions: Existing + Cumulative Projects
3. Background plus Project: Existing + Cumulative + Project
4. Cumulative Conditions: RIVCOM 2045 Horizon Year
5. Cumulative plus Project: RIVCOM 2045 + Project

Study Intersections (see Attachment B):

1. Main St @ SR-60 WB / Oakley Ave
2. Main St @ SR-60 EB
3. Main St @ Spruce St
4. Main St @ First St
5. Main St @ Second St
6. Main St @ Third St
7. Market St @ First St
8. Market St @ Second St
9. Market St @ Third St
10. Market St @ Fourth St
11. Market St @ Fifth St
12. Market St @ Sixth St
13. Market St @ Mission Inn Ave
14. Market St @ University Ave
15. Market St @ Ninth St
16. Market St @ Tenth St
17. Market St @ 11th St
18. Market St @ 12th St
19. Market St @ 13th St
20. Market St @ 14th St
21. Brockton Ave @ Mission Inn Ave
22. Brockton Ave @ University Ave
23. Orange St @ Third St
24. Orange St @ Fourth St
25. Orange St @ Fifth St
26. Orange St @ Sixth St
27. Orange St @ Mission Inn Ave
28. Orange St @ University Ave
29. Orange St @ Tenth St
30. Lime St @ Third St
31. Lime St @ Fourth St
32. Lime St @ Fifth St
33. Lime St @ Mission Inn Ave
34. Lime St @ University Ave
35. Lime St @ Tenth St / SR-91 WB On-Ramp
36. Mission Inn Ave @ SR-91 WB Off-Ramp
37. Mission Inn Ave @ SR-91 EB / Mulberry St
38. University Ave @ SR-91 EB / Mulberry St

Study Roadway Segments (see Attachment B):

1. Main St n/o Third St
2. Market St n/o Third St
3. Market St b/t Third St & Fifth St
4. Market St s/o Fifth St
5. Market St s/o Sixth St

Existing Conditions

Traffic volume data date(s): June 6, 2024

Future Traffic Forecasting

Project opening year: 2028
Future buildout growth: per RIVCOM model outputs

Specific issues to be included in the study

Traffic study will include discussion of and recommendations for pedestrian connectivity, including relevant exhibits. Future analysis model will include planned Main Street improvements.

C. Project Traffic

Trip Generation Study:

The project includes a 189,000 sf expansion to the existing RCC for 100,00 sf new rentable space in addition to the existing 50,000 sf. As there is no "standard" trip generation for special event venues due to their particularities, the RCC trip generation rates were developed by a trip generation study.

Based on the June 2024 RCC calendar of events, traffic volume counts were conducted at Lot 33 and adjacent public parking lot on Orange St and 5th St on Thursday, June 6 and Saturday, June 8, 2024, both of which had two scheduled events totaling over 500 contracted attendees per day. Arrival observations were also conducted at the 5th St RCC entrance to capture drop-offs, street parking, and pedestrian arrivals.

From the traffic volume data, trip generation for the weekday daily, AM peak hour, PM peak hour, Saturday daily, and Saturday peak hour periods were derived from the existing RCC square footage and then applied to the proposed RCC expansion to estimate the project traffic to the expansion (**Table 2**). On Thursday, a total of 829 vehicle trips accessed the RCC parking areas, with the peak hour occuring at 7:15am. On Saturday, a total of 421 vehicle trips accessed the RCC parking areas, with the peak hour occuring at 8:15am. Therefore, the Thursday traffic volumes are more intensive and the traffic study will use the typical weekday operations for analysis. On a typical weekday, the RCC expansion is expected to generate approximately 1,658 daily vehicle trips, with 350 and 122 trips in the AM and peak hour, respectively.

Project Trip Generation and Distribution

The expected Project traffic volumes and patterns are based on data compiled by the Institute of Transportation Engineers (ITE), the RCC trip generation study, the Downtown Riverside roadway network, and regional freeway connections. As a mixed-use development, the various uses within the project are expected to experience internal capture, where a resident, patron, or employee may also use or visit another use within the project. The internal capture worksheets are provided in **Attachment C**. The commercial uses are also expected to have some pass-by traffic, where patrons stop at the restaurant or store on their way to another destination. **Table 3** shows the project trip generation, including internal capture and pass-by trip credits. The proposed project trip distribution is provided in **Attachment D**.

Table 2: Convention Center Trip Generation Study

Day of Week	Size[1]	Daily	AM/SAT Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Existing RCC Site Traffic Volumes [2]								
Weekday	50 KSF	**829**	30	145	**175**	33	28	**61**
Saturday		**421**	67	59	**126**			
Calculated Trip Generation Rates								
Weekday	1 KSF	**16.58**	0.60	2.90	**3.50**	0.66	0.56	**1.22**
Saturday		**8.42**	1.34	1.18	**2.52**			
Proposed RCC Expansion Traffic Volumes								
Weekday	100 KSF	**1,658**	60	290	**350**	66	56	**122**
Saturday		**842**	134	118	**252**			

[1] KSF = 1,000 sf gross rentable space
[2] Existing traffic volume data collected on June 6 and June 8, 2024.

Table 3: Project Trip Generation

Project Portion	Land Use[1]	Size[2]	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Project Trip Generation									
Convention Center[3]	N/A	100 KSF	1,658	60	290	**350**	66	56	**122**
Hotels	310	376 RM	3,004	97	76	**173**	98	94	**192**
Condos	220	55 DU	371	5	17	**22**	18	10	**28**
Multifamily Housing	221	113 DU	513	10	32	**42**	27	17	**44**
Office	710	220 KSF	2,385	294	40	**334**	54	263	**317**
Commercial	821	62.0 KSF	5,857	136	83	**219**	269	291	**560**
Total Project Trips			**13,788**	**602**	**538**	**1,140**	**532**	**731**	**1,263**
Trip Credits									
Internal Capture[4]			-1,379	-38	-38	**-76**	-79	-79	**-158**
Pass-By[5]	*34% PM peak-hour*		-1,900	-	-	**-**	-91	-99	**-190**
Net New Project Trips			**10,509**	**564**	**500**	**1,064**	**362**	**553**	**915**

[1] Land use rates per ITE Trip Generation Manual, 11th Ed (2021)
[2] DU = dwelling unit, RM = rooms, KSF = 1,000 square feet
[3] Trip generation for Convention Center expansion based on trip generation study of existing rentable space and traffic volumes.
[4] Internal trip capture per NCHRP 684 estimator. 10% lowest peak-hour capture rate applied to daily traffic volumes.
[5] Pass-by trip credit applied to commercial trips only. Pass-by rates per ITE Trip Generation Handbook, 3e. Daily trip credit estimated as 10x PM pass-by trips.

D. Vehicle Miles Traveled Assessment

Per California Senate Bill 743 (SB 743), the California Office of Planning and Research (OPR) identified vehicle miles traveled (VMT) as the most appropriate measure to determine transportation impacts under the California Environmental Quality Act (CEQA), replacing LOS analyses. **Figure 2** shows the project traffic analysis zone (TAZ) VMT data per the Western Riverside Council of Governments (WRCOG) webtool.

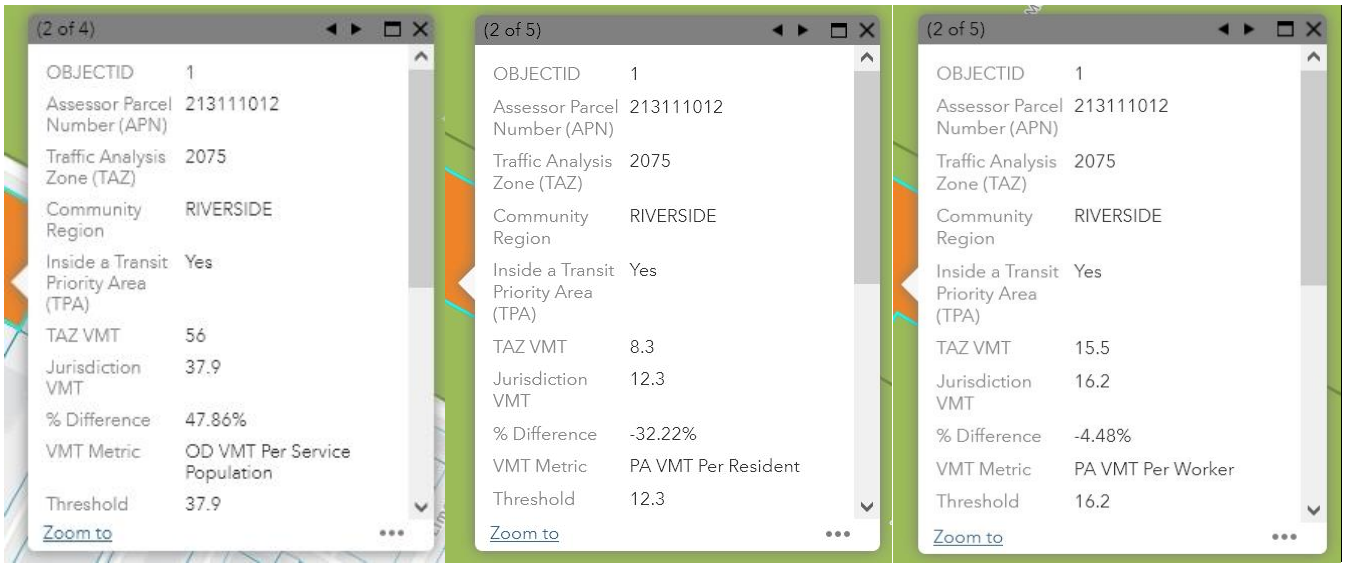
VMT Screening Criteria

Per the City Guidelines, several screening criteria may be applied to identify projects with a less-than-significant VMT impact. The project is eligible to screen out of full VMT analysis under the following criteria:

- Project is located within a transit priority area (TPA), has floor area ratio (FAR) over 0.75, will not be overparked, and is consistent with the local Sustainable Communities Strategy.
- For the residential portion of the project, VMT per resident in the project TAZ is below the City's threshold of significance.

A memo applying the screening criteria in detail will be provided separately.

Figure 2: WRCOG Screening Tool Results



Recommended by:

Kawai C. Mang, Project Engineer *Albert A. Webb Associates*	5-23-2024 *Date*	Revised:	6-7-2024 *Date*
	Revised: 6-28-2024 *Date*	8-6-2024 *Date*	9-18-2024 *Date*

Approved Scoping Agreement:

Agency Representative	*Date*

Attachments:

A. City of Riverside Scoping Form
B. Study Area
C. NCHRP Internal Trip Capture Worksheets
D. Project Trip Distribution

Attachment A

City Traffic Scoping Form

Traffic Analysis Scoping Form

This scoping form shall be submitted to the City of Riverside Traffic Engineering Division

Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Riverside Alive
Project Address:	3637 5th St, Riverside, CA 92501
Project Opening Year:	2028
Project Description:	Expansion of Riverside Convention Center + multi-use private development to include hotel, housing, office, and commercial space

	Consultant:	**Developer:**
Name:	Albert A Webb Associates	City of Riverside
Address:	3708 McCray St, Riverside, CA 92506	3900 Main Street, Riverside CA 92522
Telephone:	951-320-6081	
Fax/Email:	kawai.mang@webbassociates.com	

Scoping & Study Fees:

Fees to be made payable to "City of Riverside" and delivered to Land Development. City Hall 3rd Floor, 3900 Main Street, Riverside, CA 92522

1) Scoping Agreement Fee (For all projects not screened from analysis): **$271.00**

2) TIA Review (For projects with both LOS & VMT analysis of any scale, or standalone LOS analyses with over 100 vehicle trips per hour): **$2671.02**

3) TIA Review (For standalone VMT analysis, or standalone LOS analyses with under 100 vehicle trips per hour): **$1288.20**

Trip Generation Information:

Trip Generation Data Source: ITE, trip gen study

Current General Plan Land Use: Downtown SP

Proposed General Plan Land Use: Downtown SP

Current Zoning: Downtown SP

Proposed Zoning: Downtown SP

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	see	attached	table
PM Trips	0	0	0	see	attached	table

Trip Internalization: ◯ Yes ◯ No (attached % Trip Discount)

Pass-By Allowance: ◯ Yes ◯ No (attached % Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses in accordance with City Guidelines?

Is the project screened from LOS assessment? ◯ Yes ◯ No

LOS screening justification (see Page 6 of the guidelines): _____

Is the project screened from VMT assessment? ◯ Yes ◯ No

VMT screening justification (see Pages 23-25 of the guidelines): _____

Project is located within a TPA, is consistent with SCS, is not overparked, and has FAR over 0.75. Furthermore, VMT per resident in the project TAZ is below the City's significance threshold. Separate VMT screening memo to be provided with detailed application of screening criteria.

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):

North	South	East	West
see %	attached %	for %	details %

- Attach list of Approved and Pending Projects that need to be considered (provided by the lead agency and adjacent agencies)
- Attach list of study intersections/roadway segments
- Attach legible site plan
- Note other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other _____
- Date of Traffic Counts June 6, 2024
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model RIVCOM
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

Specific Issues to be addressed in the Study (in addition to the standard analysis described in the Guidelines) (To be filled out by the Public Works Traffic Engineering Division)

Study to include discussion of and recommendations for pedestrian connectivity, including relevant exhibits

Attachment B

Study Area

Figure 1: Study Area



Attachment C

NCHRP Internal Capture Worksheets

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Riverside Alive	**Organization:**	City of Riverside
Project Location:	Riverside Convention Center	**Performed By:**	Albert A Webb Associates
Scenario Description:	Project	**Date:**	05/23/24
Analysis Year:	Opening Year	**Checked By:**	KCM
Analysis Period:	**AM Street Peak Hour**	**Date:**	05/23/24

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				334	294	40
Retail				219	136	83
Restaurant				0		
Cinema/Entertainment				0		
Residential				55	13	42
Hotel				173	97	76
All Other Land Uses[2]				0		
Total				781	540	241

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		11	0	0	0	0
Retail	12		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	0	0		0
Hotel	9	5	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	781	540	241
Internal Capture Percentage	10%	7%	16%
External Vehicle-Trips[3]	705	502	203
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	7%	28%
Retail	12%	14%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	2%
Hotel	0%	18%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Riverside Alive
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	294	294	1.00	40	40
Retail	1.00	136	136	1.00	83	83
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	13	13	1.00	42	42
Hotel	1.00	97	97	1.00	76	76

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		11	25	0	0	0
Retail	24		11	0	12	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	8	0		0
Hotel	57	11	7	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		44	0	0	0	0
Retail	12		0	0	0	0
Restaurant	41	11		0	1	4
Cinema/Entertainment	0	0	0		0	0
Residential	9	23	0	0		0
Hotel	9	5	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	22	272	294	272	0	0
Retail	16	120	136	120	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	13	13	13	0	0
Hotel	0	97	97	97	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	11	29	40	29	0	0
Retail	12	71	83	71	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	41	42	41	0	0
Hotel	14	62	76	62	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Riverside Alive	**Organization:**	City of Riverside
Project Location:	Riverside Convention Center	**Performed By:**	Albert A Webb Associates
Scenario Description:	Project	**Date:**	05/23/24
Analysis Year:	Opening Year	**Checked By:**	KCM
Analysis Period:	**PM Street Peak Hour**	**Date:**	05/23/24

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				317	54	263
Retail				560	269	291
Restaurant				0		
Cinema/Entertainment				0		
Residential				62	38	24
Hotel				192	98	94
All Other Land Uses[2]				0		
Total				1131	459	672

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		22	0	0	2	0
Retail	6		0	0	17	15
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	10	0	0		1
Hotel	0	5	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,131	459	672
Internal Capture Percentage	14%	17%	12%
External Vehicle-Trips[3]	973	380	593
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	13%	9%
Retail	14%	13%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	50%	50%
Hotel	16%	5%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Riverside Alive
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	54	54	1.00	263	263
Retail	1.00	269	269	1.00	291	291
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	38	38	1.00	24	24
Hotel	1.00	98	98	1.00	94	94

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		53	11	0	5	0
Retail	6		84	12	76	15
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	10	5	0		1
Hotel	0	15	64	0	2	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		22	0	0	2	0
Retail	17		0	0	17	17
Restaurant	16	135		0	6	70
Cinema/Entertainment	3	11	0		2	1
Residential	31	27	0	0		12
Hotel	0	5	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	7	47	54	47	0	0
Retail	37	232	269	232	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	19	19	38	19	0	0
Hotel	16	82	98	82	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	24	239	263	239	0	0
Retail	38	253	291	253	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	12	24	12	0	0
Hotel	5	89	94	89	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Attachment D

Project Trip Distribution

Figure : Project Trip Distribution (Outbound)

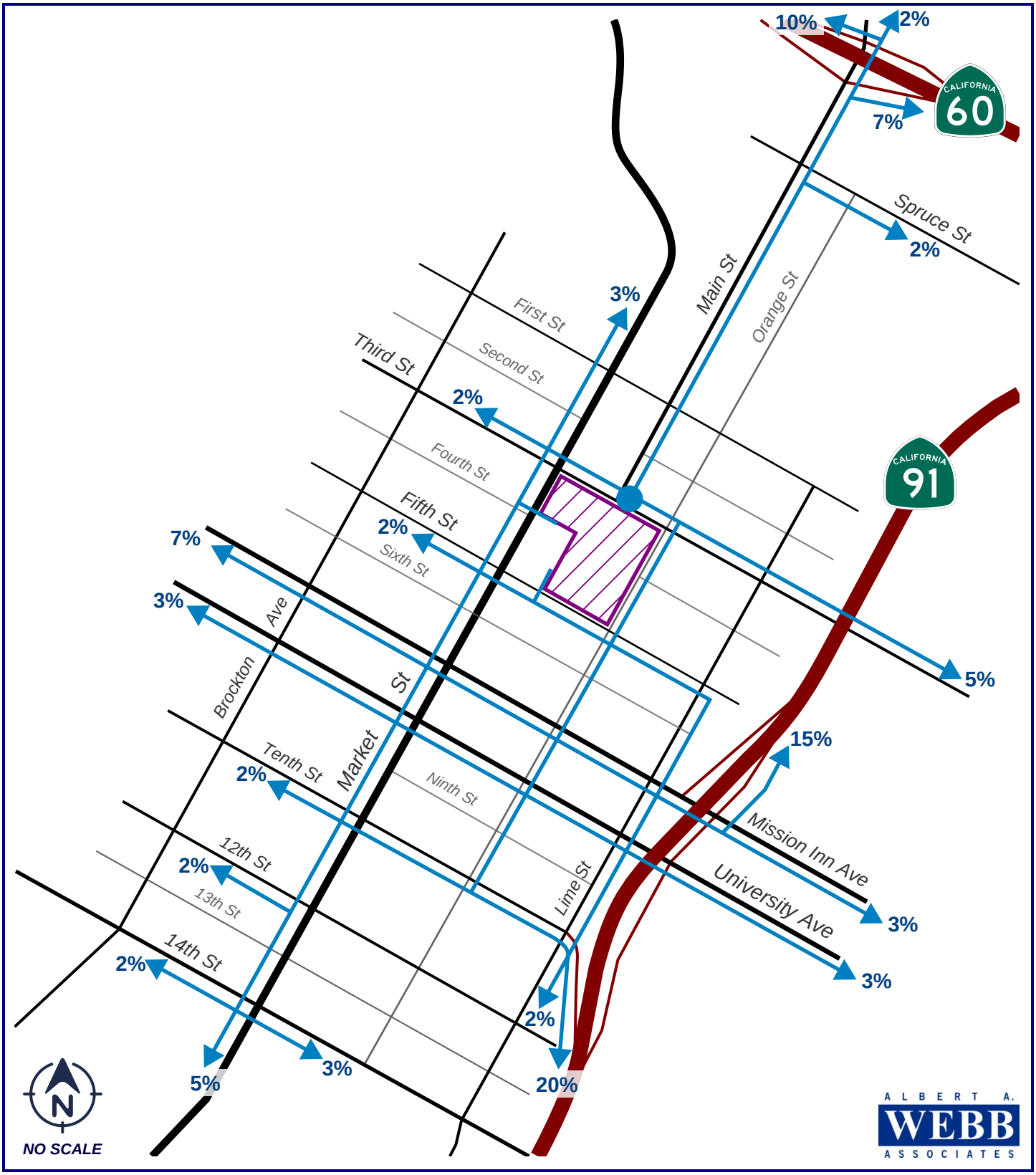
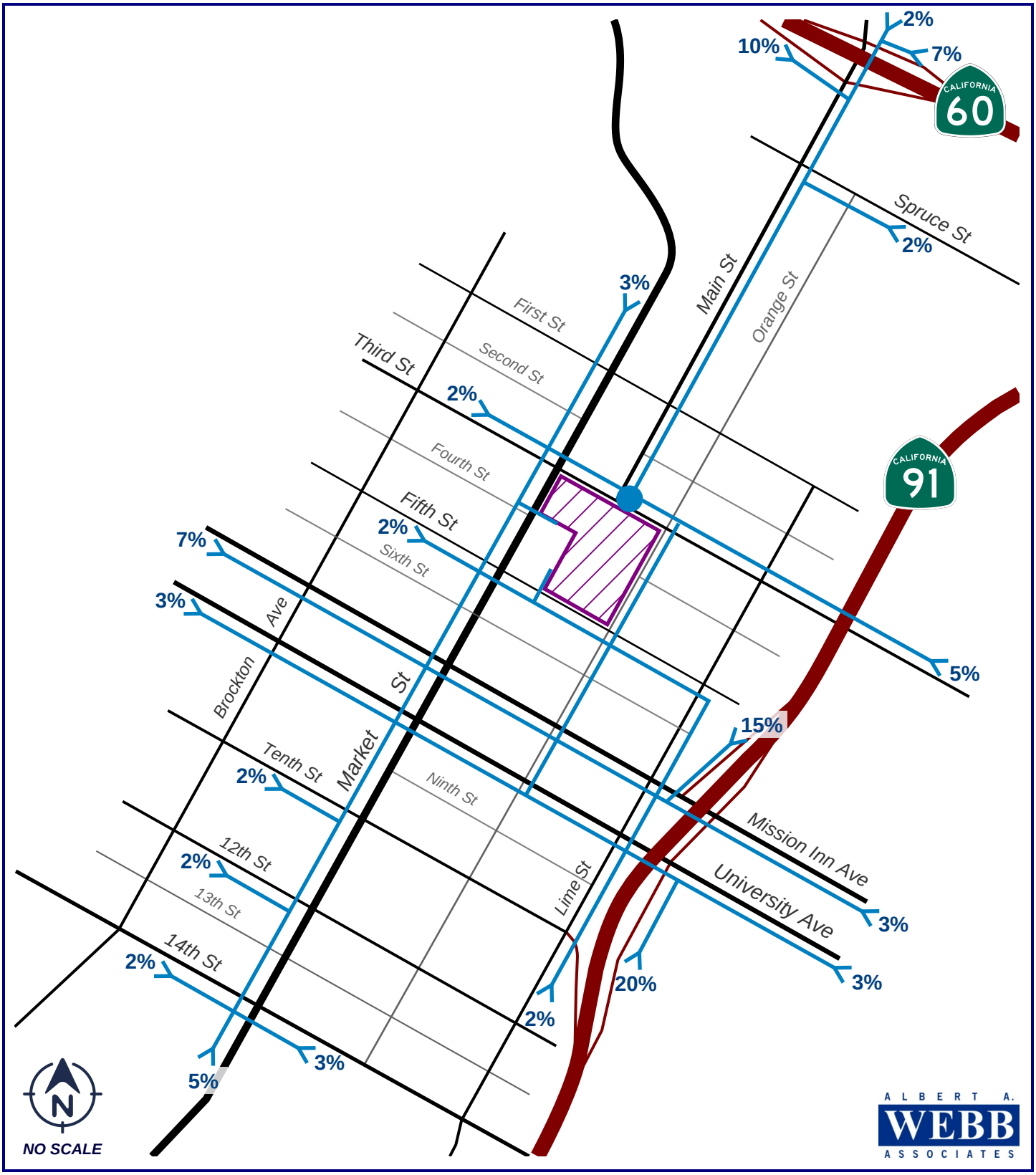


Figure : Project Trip Distribution (Inbound)



Appendix B

California MUTCD Table 4D-102

Table 4D-102 (CA). Minimum Yellow Change Interval Timing

Yellow Time = $\frac{\text{Detector Setback Distance}}{\text{Speed}}$

$T = \frac{D}{V}$ = The minimum yellow change interval (sec)

V = Speed (ft/sec)

d = Deceleration Rate (10 ft/sec^2)

t_R = Reaction Time (1 sec)

Reaction Distance = Vt_R

Deceleration Distance = $^1/_2dt^2$ or $^1/_2Vt$ or $\frac{V^2}{2d}$

D = Detector Setback = Deceleration Distance + Reaction Distance = $\frac{V^2}{2d} + Vt_R$

$$T = \frac{\frac{V^2}{2d} + Vt_R}{V}$$

$$\boxed{T = \frac{V}{2d} + t_R}$$

a - For Speed determined by 85th Percentile

SPEED (Determined by 85th Percentile Speed)*	MINIMUM YELLOW INTERVAL
mph	Seconds
25 or less	3.0
30	3.2
35	3.6
40	3.9
45	4.3
50	4.7
55	5.0
60	5.4
65	5.8

*See Section 4D.26 Standard under paragraph 14b

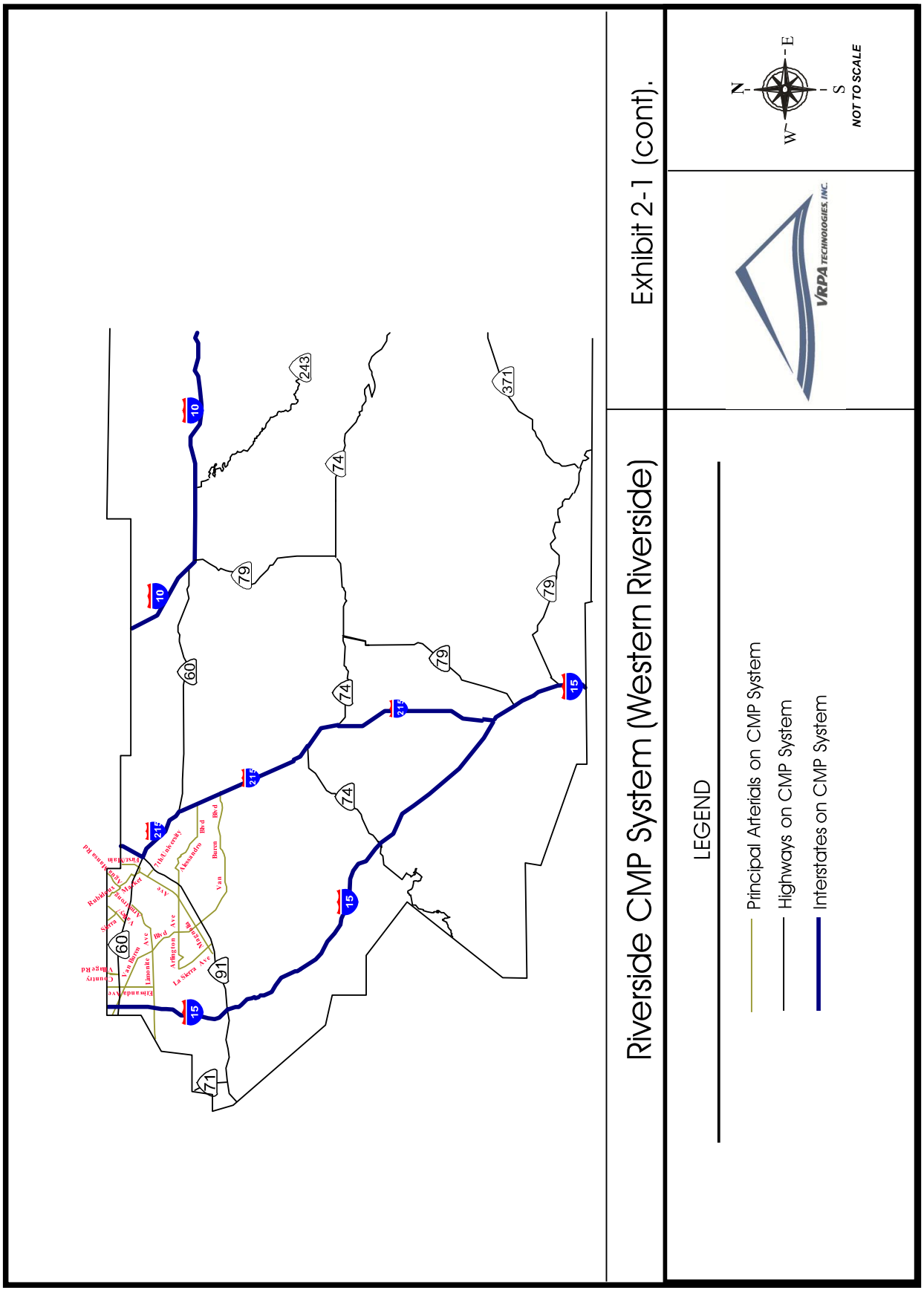
b - For Posted or Prima Facie Speed

POSTED SPEED or UNPOSTED PRIMA FACIE SPEED	MINIMUM YELLOW INTERVAL*	MINIMUM YELLOW INTERVAL*
mph	Seconds	Seconds
15	N/A	3.0
20	N/A	3.2
25	N/A	3.6
30	3.7	N/A
35	4.1	N/A
40	4.4	N/A
45	4.8	N/A
50	5.2	N/A
55	5.5	N/A
60 or higher	5.9	N/A

*Speed values for Table 4D-102b (CA) are inclusive of the 7 MPH added for speeds equal to 30 MPH or higher and 10 MPH for speeds equal to or lower than 25 MPH for determining the minimum values of the yellow intervals.

Appendix C

Riverside County Congestion Management Program System – Western Riverside


Riverside CMP System (Western Riverside)
Exhibit 2-1 (cont).
LEGEND
Principal Arterials on CMP System
Highways on CMP System
Interstates on CMP System
VRPA TECHNOLOGIES, INC.
N
W
E
S
NOT TO SCALE
10
15
60
71
74
79
91
215
243
371

Appendix D

Riverside Convention Center Traffic Volume Data

Thursday, 6 June, 2024 | CITY: Riverside | PROJECT: SC4743

ADT48 Lot 33 north Dwy of 3rd St | **PREPARED BY: AimTD LLC. tel: 714 253 7888**

AM Period	IN		OUT			PM Period	IN		OUT		
00:00						12:00	3		1		
00:15						12:15	3		2		
00:30						12:30	7		2		
00:45						12:45	3	16	6	11	27
01:00						13:00	5		6		
01:15						13:15	8		1		
01:30						13:30	12		1		
01:45						13:45	14	39	0	8	47
02:00						14:00	13		3		
02:15						14:15	10		3		
02:30						14:30	15		3		
02:45						14:45	7	45	1	10	55
03:00						15:00	17		3		
03:15						15:15	24		3		
03:30						15:30	8		1		
03:45						15:45	1	50	4	11	61
04:00						16:00	12		10		
04:15						16:15	9		3		
04:30						16:30	7		4		
04:45						16:45	2	30	10	27	57
05:00						17:00	7		2		
05:15						17:15	11		6		
05:30						17:30	3		0		
05:45						17:45	5	26	5	13	39
06:00	1		5			18:00	0		1		
06:15	1		11			18:15	0		2		
06:30	0		11			18:30	3		1		
06:45	2	4	8	35	39	18:45	2	5	2	6	11
07:00	2		33			19:00	7		1		
07:15	1		52			19:15	0		1		
07:30	2		30			19:30	2		2		
07:45	2	7	34	149	156	19:45	0	9	0	4	13
08:00	2		28			20:00	1		0		
08:15	1		27			20:15	4		1		
08:30	1		22			20:30	3		2		
08:45	2	6	22	99	105	20:45	1	9	1	4	13
09:00	1		23			21:00	0		1		
09:15	1		6			21:15	2		0		
09:30	0		10			21:30	0		0		
09:45	4	6	5	44	50	21:45	0	2	0	1	3
10:00	2		3			22:00					
10:15	1		4			22:15					
10:30	2		7			22:30					
10:45	4	9	7	21	30	22:45					
11:00	4		7			23:00					
11:15	2		1			23:15					
11:30	0		4			23:30					
11:45	4	10	5	17	27	23:45					
Total Vol.	42		365		**407**		231		95		**326**

Daily Totals

IN	OUT	**Combined**
273	460	**733**

	AM			**PM**		
Split %	10.3%	89.7%	**55.5%**	70.9%	29.1%	**44.5%**
Peak Hour	11:45	07:00	**07:00**	14:30	16:00	**14:30**
Volume	17	149	**156**	63	27	**73**
P.H.F.	0.61	0.72	**0.74**	0.66	0.68	**0.68**

Saturday, June 08, 2024 | CITY: Riverside | PROJECT: SC4743

ADT48 Lot 33 north Dwy of 3rd St | **PREPARED BY: AimTD LLC. tel: 714 253 7888**

AM Period	IN		OUT			PM Period	IN		OUT		
00:00						12:00	2		2		
00:15						12:15	2		2		
00:30						12:30	2		1		
00:45						12:45	2	8	1	6	14
01:00						13:00	2		0		
01:15						13:15	3		1		
01:30						13:30	3		1		
01:45						13:45	6	14	0	2	16
02:00						14:00	17		1		
02:15						14:15	19		0		
02:30						14:30	14		1		
02:45						14:45	6	56	9	11	67
03:00						15:00	6		3		
03:15						15:15	6		0		
03:30						15:30	7		2		
03:45						15:45	2	21	1	6	27
04:00						16:00	3		2		
04:15						16:15	4		1		
04:30						16:30	1		0		
04:45						16:45	0	8	0	3	11
05:00						17:00	0		1		
05:15						17:15	1		1		
05:30						17:30	2		0		
05:45						17:45	3	6	1	3	9
06:00	1		1			18:00					
06:15	0		1			18:15					
06:30	0		5			18:30					
06:45	0	1	8	15	16	18:45					
07:00	2		7			19:00					
07:15	0		8			19:15					
07:30	0		13			19:30					
07:45	2	4	13	41	45	19:45					
08:00	0		10			20:00					
08:15	0		11			20:15					
08:30	1		11			20:30					
08:45	0	1	12	44	45	20:45					
09:00	0		18			21:00					
09:15	0		6			21:15					
09:30	1		6			21:30					
09:45	1	2	5	35	37	21:45					
10:00	1		6			22:00					
10:15	3		1			22:15					
10:30	1		2			22:30					
10:45	2	7	0	9	16	22:45					
11:00	2		7			23:00					
11:15	1		1			23:15					
11:30	0		0			23:30					
11:45	2	5	2	10	15	23:45					
Total Vol.	20		154		**174**		113		31		**144**

Daily Totals

IN	OUT	Combined
133	185	**318**

	AM			PM		
Split %	11.5%	88.5%	**54.7%**	78.5%	21.5%	**45.3%**
Peak Hour	10:15	08:15	**08:15**	13:45	14:45	**14:00**
Volume	8	52	**53**	56	14	**67**
P.H.F.	0.67	0.72	**0.74**	0.74	0.39	**0.88**

Thursday, 6 June, 2024 | CITY: Riverside | PROJECT: SC4743

ADT49 5th-Orange Lot West Dwy of Orange St | **PREPARED BY: AimTD LLC. tel: 714 253 7888**

AM Period	IN		OUT			PM Period	IN		OUT		
00:00						12:00	0		0		
00:15						12:15	0		0		
00:30						12:30	0		0		
00:45						12:45	0	0	0	0	
01:00						13:00	0		0		
01:15						13:15	0		0		
01:30						13:30	0		0		
01:45						13:45	0	0	0	0	
02:00						14:00	0		1		
02:15						14:15	0		0		
02:30						14:30	0		0		
02:45						14:45	0	0	0	1	1
03:00						15:00	0		0		
03:15						15:15	0		0		
03:30						15:30	0		0		
03:45						15:45	0	0	0	0	
04:00						16:00	0		1		
04:15						16:15	0		0		
04:30						16:30	0		0		
04:45						16:45	1	1	0	1	2
05:00						17:00	0		0		
05:15						17:15	0		0		
05:30						17:30	0		0		
05:45						17:45	0	0	0	0	
06:00	0		0			18:00	2		1		
06:15	0		0			18:15	0		1		
06:30	0		0			18:30	0		0		
06:45	0	0	0	0		18:45	0	2	0	2	4
07:00	1		0			19:00	0		0		
07:15	0		0			19:15	2		0		
07:30	0		0			19:30	6		0		
07:45	2	3	1	1	4	19:45	1	9	0	0	9
08:00	0		0			20:00	0		0		
08:15	1		1			20:15	0		0		
08:30	1		0			20:30	1		0		
08:45	0	2	0	1	3	20:45	0	1	1	1	2
09:00	0		0			21:00	0		1		
09:15	0		0			21:15	0		1		
09:30	0		0			21:30	0		0		
09:45	0	0	0	0		21:45	0	0	1	3	3
10:00	0		0			22:00					
10:15	0		0			22:15					
10:30	0		0			22:30					
10:45	0	0	0	0		22:45					
11:00	0		0			23:00					
11:15	0		0			23:15					
11:30	0		0			23:30					
11:45	0	0	0	0		23:45					
Total Vol.	5		2		**7**		13		8		**21**

Daily Totals

IN	OUT	**Combined**
18	10	**28**

	AM			**PM**		
Split %	71.4%	28.6%	**25.0%**	61.9%	38.1%	**75.0%**
Peak Hour	07:45	07:30	**07:45**	19:00	20:30	**19:00**
Volume	4	2	**6**	9	3	**9**
P.H.F.	0.50	0.50	**0.50**	0.38	0.75	**0.38**

Saturday, June 08, 2024 | CITY: Riverside | PROJECT: SC4743

ADT49 5th-Orange Lot West Dwy of Orange St | **PREPARED BY: AimTD LLC. tel: 714 253 7888**

AM Period	IN		OUT			PM Period	IN		OUT		
00:00						12:00	8		3		
00:15						12:15	7		2		
00:30						12:30	2		4		
00:45						12:45	4	21	0	9	30
01:00						13:00	4		2		
01:15						13:15	1		3		
01:30						13:30	0		0		
01:45						13:45	1	6	0	5	11
02:00						14:00	0		5		
02:15						14:15	0		6		
02:30						14:30	1		1		
02:45						14:45	1	2	2	14	16
03:00						15:00	0		1		
03:15						15:15	0		0		
03:30						15:30	0		1		
03:45						15:45	0	0	1	3	3
04:00						16:00	0		0		
04:15						16:15	0		0		
04:30						16:30	0		0		
04:45						16:45	1	1	0	0	1
05:00						17:00	0		0		
05:15						17:15	1		0		
05:30						17:30	0		0		
05:45						17:45	1	2	0	0	2
06:00	0		0			18:00					
06:15	0		0			18:15					
06:30	0		0			18:30					
06:45	0	0	0	0		18:45					
07:00	0		0			19:00					
07:15	0		0			19:15					
07:30	3		0			19:30					
07:45	3	6	0	0	6	19:45					
08:00	11		1			20:00					
08:15	10		2			20:15					
08:30	9		2			20:30					
08:45	18	48	0	5	53	20:45					
09:00	24		3			21:00					
09:15	15		3			21:15					
09:30	3		2			21:30					
09:45	25	67	4	12	79	21:45					
10:00	15		2			22:00					
10:15	21		2			22:15					
10:30	13		4			22:30					
10:45	10	59	5	13	72	22:45					
11:00	20		5			23:00					
11:15	13		2			23:15					
11:30	5		1			23:30					
11:45	13	51	7	15	66	23:45					
Total Vol.		231		45	**276**			32		31	**63**

Daily Totals

IN	OUT	Combined
263	76	**339**

	AM			PM		
Split %	83.7%	16.3%	**81.4%**	50.8%	49.2%	**18.6%**
Peak Hour	09:45	10:15	**09:45**	12:00	14:00	**12:00**
Volume	74	16	**86**	21	14	**30**
P.H.F.	0.74	0.80	**0.74**	0.66	0.58	**0.68**

Riverside Convention Center - Front Entrance Observational Counts
3637 5th St
Riverside, CA 92501
06/06/24

Time	Parked between Main St and Orange St and went to RCC	Dropped off between Main St and Orange St and went to RCC	Walking from the businesses/ pedestrian mall across Fifth St	Walking from Main St	Walking from either direction on Fifth St	Total
6:00 AM	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0
6:45 AM	0	2	0	0	0	2
7:00 AM	0	1	2	0	3	6
7:15 AM	2	2	4	1	2	11
7:30 AM	7	0	4	13	7	31
7:45 AM	6	0	6	12	12	36
8:00 AM	6	1	5	15	14	41
8:15 AM	6	0	1	7	4	18
8:30 AM	7	0	2	5	3	17
8:45 AM	4	0	4	4	4	16
9:00 AM	4	0	0	1	2	7
9:15 AM	1	0	0	0	0	1
9:30 AM	7	0	1	2	0	10
9:45 AM	2	0	3	16	3	24
10:00 AM	2	0	0	6	7	15
10:15 AM	0	0	1	3	1	5
10:30 AM	0	1	1	0	1	3
10:45 AM	0	0	1	0	3	4
11:00 AM	2	0	1	1	9	13
11:15 AM	2	0	0	0	1	3
11:30 AM	1	0	0	1	1	3
11:45 AM	1	0	1	13	5	20
12:00 PM	0	0	2	22	6	30
12:15 PM	0	0	2	7	6	15
12:30 PM	3	0	0	11	2	16
12:45 PM	0	0	1	1	2	4
1:00 PM	0	1	0	3	3	7
1:15 PM	0	0	2	7	0	9
1:30 PM	1	0	1	1	1	4
1:45 PM	1	0	0	2	0	3
2:00 PM	0	0	0	1	2	3
2:15 PM	0	0	0	1	0	1
2:30 PM	0	0	0	0	0	0
2:45 PM	0	0	0	5	0	5
3:00 PM	0	0	2	2	3	7
3:15 PM	0	0	2	0	0	2
3:30 PM	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0
4:45 PM	2	0	0	0	0	2
5:00 PM	0	0	0	0	1	1
5:15 PM	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0
6:00 PM	1	0	0	1	0	2
6:15 PM	0	0	1	2	0	3
6:30 PM	0	0	1	14	3	18
6:45 PM	0	0	1	11	0	12
7:00 PM	0	0	1	18	10	29
7:15 PM	0	0	5	2	3	10
7:30 PM	0	0	0	4	1	5
7:45 PM	0	0	0	4	3	7
8:00 PM	0	0	0	0	0	0
8:15 PM	0	0	0	0	2	2
8:30 PM	0	0	0	2	0	2
8:45 PM	0	0	0	0	0	0
9:00 PM	0	0	0	5	0	5
9:15 PM	0	0	0	0	0	0
9:30 PM	0	0	0	1	0	1
9:45 PM	0	0	0	0	0	0
	68	8	58	227	130	491

Prepared by AimTD LLC
cs@aimtd.com
714.253.7888

Riverside Convention Center - Front Entrance Observational Counts

3637 5th St
Riverside, CA 92501
06/08/24

Time	Parked between Main St and Orange St and went to RCC	Dropped off between Main St and Orange St and went to RCC	Walking from the businesses/ pedestrian mall across Fifth St	Walking from Main St	Walking from either direction on Fifth St	Total
6:00 AM	1	0	1	0	0	2
6:15 AM	2	0	1	0	0	3
6:30 AM	1	0	2	0	0	3
6:45 AM	2	0	0	0	0	2
7:00 AM	0	0	0	1	1	2
7:15 AM	5	0	0	0	3	8
7:30 AM	1	0	0	0	17	18
7:45 AM	6	0	1	0	29	36
8:00 AM	0	0	5	0	11	16
8:15 AM	1	0	0	0	8	9
8:30 AM	1	0	0	1	15	17
8:45 AM	1	1	0	4	20	26
9:00 AM	2	0	1	1	28	32
9:15 AM	0	0	0	5	12	17
9:30 AM	0	0	5	0	4	9
9:45 AM	1	0	0	2	15	18
10:00 AM	0	0	1	15	6	22
10:15 AM	0	0	0	6	3	9
10:30 AM	0	0	1	0	0	1
10:45 AM	0	0	0	4	0	4
11:00 AM	0	0	1	0	0	1
11:15 AM	0	0	1	1	5	7
11:30 AM	0	0	0	2	0	2
11:45 AM	0	0	2	5	1	8
12:00 PM	1	0	0	1	2	4
12:15 PM	0	0	0	3	3	6
12:30 PM	0	0	0	1	1	2
12:45 PM	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0
1:45 PM	0	0	0	0	2	2
2:00 PM	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0
2:30 PM	0	0	0	7	0	7
2:45 PM	0	0	0	1	0	1
3:00 PM	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0
4:15 PM	0	0	0	1	0	1
4:30 PM	0	0	2	0	0	2
4:45 PM	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0
	25	1	24	61	186	297

Prepared by AimTD LLC
cs@aimtd.com
714.253.7888

Appendix E

NCHRP Internal Capture Worksheets

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Riverside Alive	**Organization:**	City of Riverside
Project Location:	Riverside Convention Center	**Performed By:**	Albert A Webb Associates
Scenario Description:	Project	**Date:**	05/23/24
Analysis Year:	Opening Year	**Checked By:**	KCM
Analysis Period:	**AM Street Peak Hour**	**Date:**	05/23/24

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				334	294	40
Retail				219	136	83
Restaurant				0		
Cinema/Entertainment				0		
Residential				55	13	42
Hotel				173	97	76
All Other Land Uses[2]				0		
Total				781	540	241

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		11	0	0	0	0
Retail	12		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	0	0		0
Hotel	9	5	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	781	540	241
Internal Capture Percentage	10%	7%	16%
External Vehicle-Trips[3]	705	502	203
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	7%	28%
Retail	12%	14%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	2%
Hotel	0%	18%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Riverside Alive
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	294	294	1.00	40	40
Retail	1.00	136	136	1.00	83	83
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	13	13	1.00	42	42
Hotel	1.00	97	97	1.00	76	76

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		11	25	0	0	0
Retail	24		11	0	12	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	8	0		0
Hotel	57	11	7	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		44	0	0	0	0
Retail	12		0	0	0	0
Restaurant	41	11		0	1	4
Cinema/Entertainment	0	0	0		0	0
Residential	9	23	0	0		0
Hotel	9	5	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	22	272	294	272	0	0
Retail	16	120	136	120	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	13	13	13	0	0
Hotel	0	97	97	97	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	11	29	40	29	0	0
Retail	12	71	83	71	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	41	42	41	0	0
Hotel	14	62	76	62	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Riverside Alive	**Organization:**	City of Riverside
Project Location:	Riverside Convention Center	**Performed By:**	Albert A Webb Associates
Scenario Description:	Project	**Date:**	05/23/24
Analysis Year:	Opening Year	**Checked By:**	KCM
Analysis Period:	**PM Street Peak Hour**	**Date:**	05/23/24

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				317	54	263
Retail				560	269	291
Restaurant				0		
Cinema/Entertainment				0		
Residential				62	38	24
Hotel				192	98	94
All Other Land Uses[2]				0		
Total				1131	459	672

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		22	0	0	2	0
Retail	6		0	0	17	15
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	10	0	0		1
Hotel	0	5	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,131	459	672
Internal Capture Percentage	14%	17%	12%
External Vehicle-Trips[3]	973	380	593
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	13%	9%
Retail	14%	13%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	50%	50%
Hotel	16%	5%

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Riverside Alive
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	54	54	1.00	263	263
Retail	1.00	269	269	1.00	291	291
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	38	38	1.00	24	24
Hotel	1.00	98	98	1.00	94	94

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		53	11	0	5	0
Retail	6		84	12	76	15
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	10	5	0		1
Hotel	0	15	64	0	2	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		22	0	0	2	0
Retail	17		0	0	17	17
Restaurant	16	135		0	6	70
Cinema/Entertainment	3	11	0		2	1
Residential	31	27	0	0		12
Hotel	0	5	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	7	47	54	47	0	0
Retail	37	232	269	232	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	19	19	38	19	0	0
Hotel	16	82	98	82	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	24	239	263	239	0	0
Retail	38	253	291	253	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	12	24	12	0	0
Hotel	5	89	94	89	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

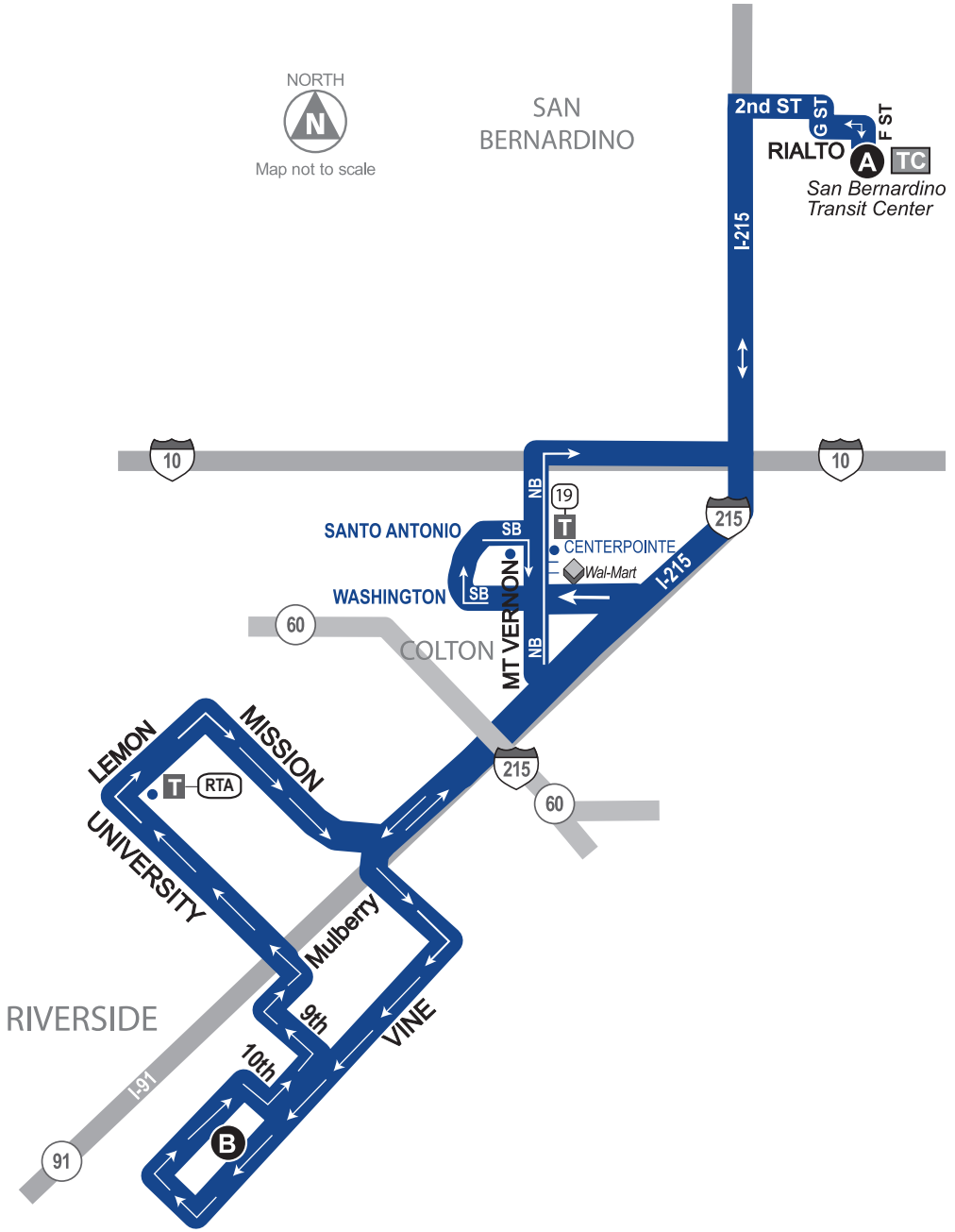
[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Appendix F

Downtown Riverside Transit Maps


NORTH
N
Map not to scale
SAN BERNARDINO
2nd ST
G ST
F ST
RIALTO
A
TC
San Bernardino Transit Center
I-215
10
10
19
T
NB
SB
SANTO ANTONIO
CENTERPOINTE
Wal-Mart
WASHINGTON
SB
MT VERNON
NB
215
I-215
60
COLTON
LEMON
MISSION
T
RTA
215
60
UNIVERSITY
Mulberry
RIVERSIDE
9th
10th
VINE
I-91
B
91

SYSTEM MAP

MAP NOT TO SCALE

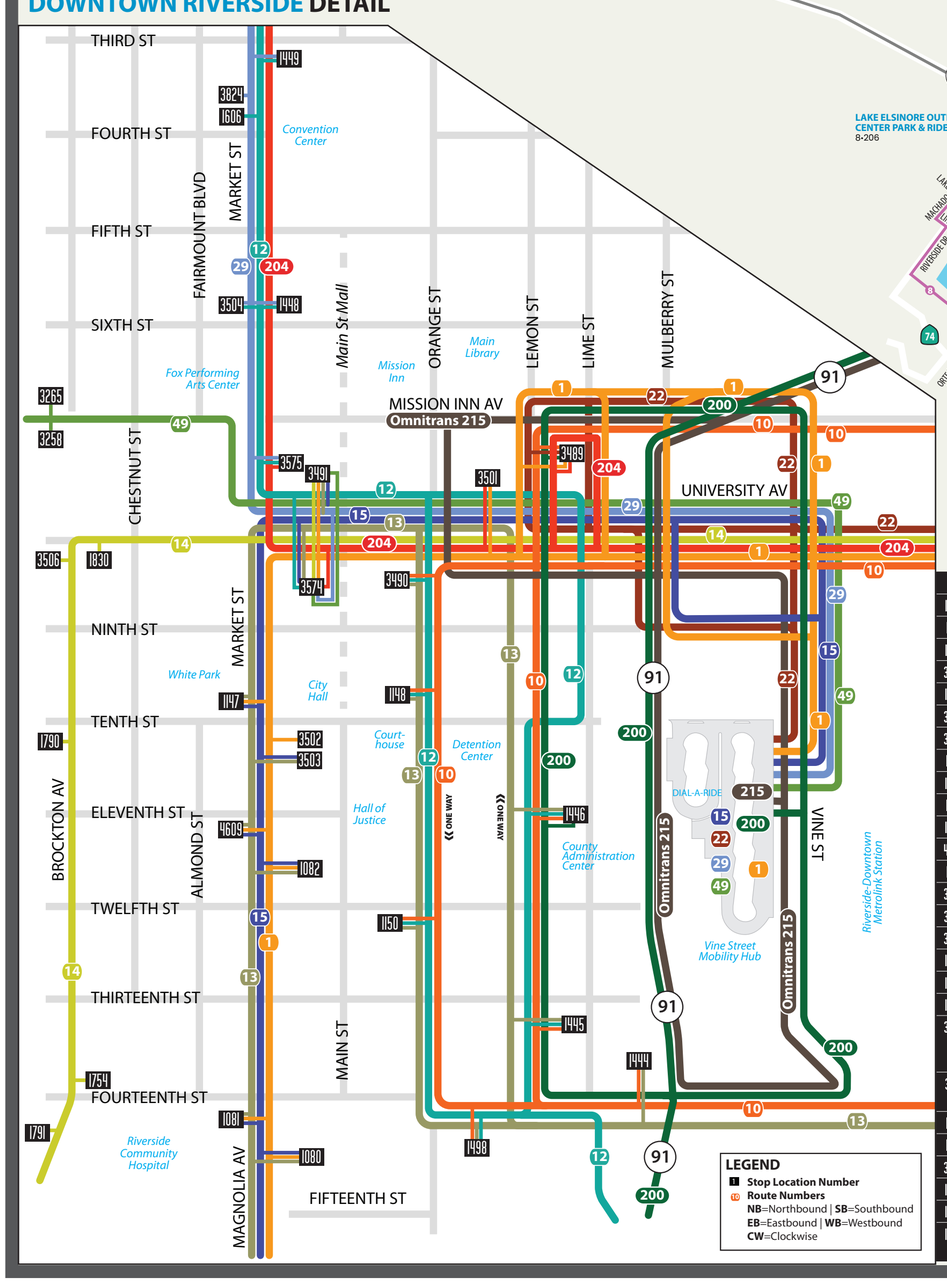
Welcome aboard the Riverside Transit Agency (RTA), your community transportation provider. The RTA operates 47 bus routes to provide you with safe, cost-effective and reliable service in western Riverside County. We hope that this System Map is useful to you in planning your trip. Should you need additional information, please call the Customer Information Center at (951) 565-5002.

- 41 Route Number
- Route Path
- Commuter Routing
- Alternate Routing
- Point of Interest
- Medical Facility
- Transfer Point
- Metrolink Station
- Interstate
- State Highway
- Main Road
- Water

(951) 565-5002 | RiversideTransit.com

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DOWNTOWN RIVERSIDE DETAIL



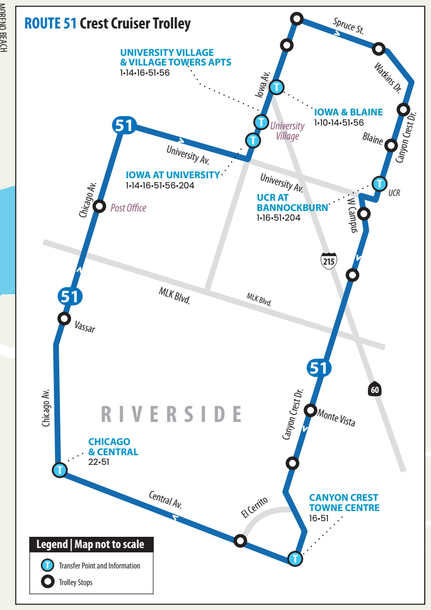
LEGEND
- Stop Location Number
- Route Numbers
- NB=Northbound | SB=Southbound
- EB=Eastbound | WB=Westbound
- CW=Clockwise

BUS STOP NUMBER		ROUTES & DIRECTION
1754	Brockton & 14th	14EB
1791	Brockton & 14th	14WB
1790	Brockton & 10th	14WB
3506	Brockton & University	14WB
1830	University & Brockton	14EB
3258	Mission Inn & Brockton	49EB
3265	Mission Inn & Brockton	49WB
1081	Magnolia & 14th	1WB, 13WB, 15WB
1080	Magnolia & 15th	1EB, 13EB, 15EB
1149	Market & 12th	1WB, 13WB, 15WB
1082	Market & 12th	1EB, 13EB, 15EB
4609	Market & 11th	1WB, 13WB, 15WB
1147	Market & 10th	1WB, 13WB, 15WB
3503	Market & 10th	13EB, 15EB
3575	Market & University	12EB, 29WB, 204NB
3504	Market & 6th	12WB, 29EB
1148	Market & 6th	12EB, 29WB
1606	Market & 6th	12WB
1449	Market & 3rd	2EB, 29WB
3574	University & Market	1EB, 12WB, 13EB, 14EB, 15EB, 29EB, 49EB, 204SB
3491	University & Market	1WB, 13WB, 14WB, 15WB, 49WB
1150	Orange & 12th	10WB, 12WB, 13EB
1148	Orange & 10th	10WB, 12WB, 13EB
3490	Orange & University	10WB, 12WB, 13EB
1498	14th & Orange Grove	10WB, 12WB, 13EB
1445	Lemon & 14th	10EB, 12EB, 13WB
1446	Lemon & 12th	10EB, 12EB, 13WB, 200EB/WB

BUS STOP NUMBER		ROUTES & DIRECTION
3489	Lemon & University	1EB, 10EB, 22NB/SB, 200EB/WB, 204SB, OmniTrans 215
3501	University & Lemon	1WB, 204NB
4786	Vine St Mobility Hub Boarding at **Bay B**	OmniTrans 215
4786	Vine St Mobility Hub Boarding at **Bay C**	200EB
4786	Vine St Mobility Hub Boarding at **Bay D**	200WB
4786	Vine St Mobility Hub Boarding at **Bay E**	1EB
4786	Vine St Mobility Hub Boarding at **Bay F**	1WB
4786	Vine St Mobility Hub Boarding at **Bay G**	49EB/WB
4786	Vine St Mobility Hub Boarding at **Bay H**	29EB/WB
4786	Vine St Mobility Hub Boarding at **Bay I**	22NB/SB
4786	Vine St Mobility Hub Boarding at **Bay J**	15EB/WB
4786	Vine St Mobility Hub Boarding at **Bay N**	DIAL-A-RIDE

BUS STOP NUMBER		ROUTES & DIRECTION
3824	Market & 4th	29EB
3502	Market & 10th	1EB
1444	14th & Lime	10EB, 13WB

ROUTE 51 Crest Cruiser Trolley



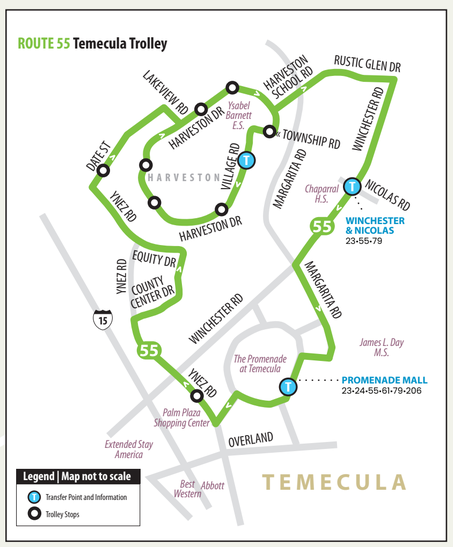


GoMicro offers shared rides in the Hemet-San Jacinto microtransit zone (within the dotted line). GoMicro provides an easy way to schedule and track trips in real-time. Book your trips in the app for an easy way to get around without having to transfer if you're traveling within the zone.

Details at RiversideTransit.com/GoMicro

Download on the App Store | GET IT ON Google Play

ROUTE 55 Temecula Trolley



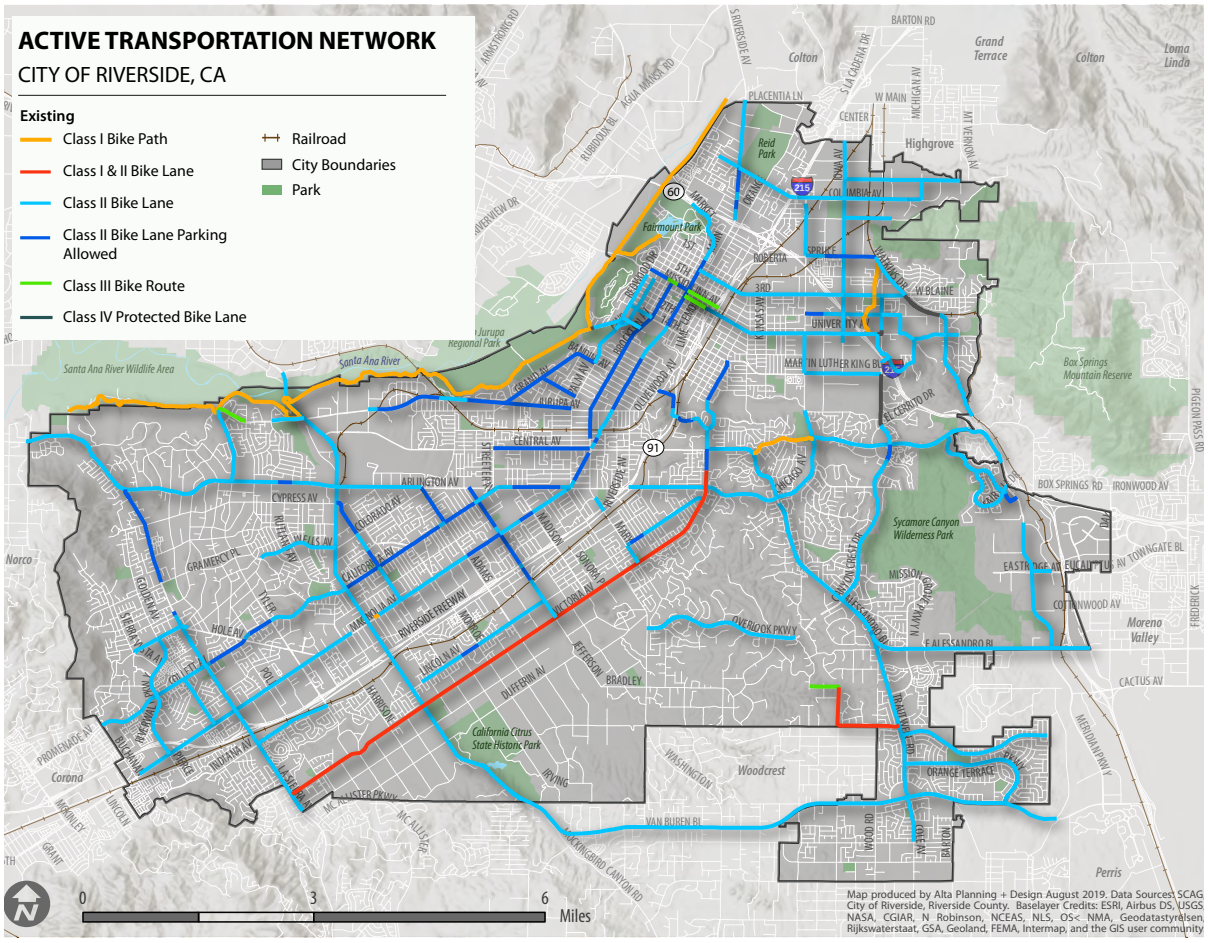
Appendix G

Riverside PACT Active Transportation Plan Bicycle Facilities

Types of Bicycle Facilities

AS OF 2020, THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) DESIGNATES FOUR CLASSES OF BICYCLE FACILITIES: CLASS I SHARED USE PATHS, CLASS II BICYCLE LANES, CLASS III BICYCLE ROUTES, AND CLASS IV SEPARATED BIKEWAYS. THE CITY'S CURRENT BICYCLE NETWORK HAS APPROXIMATELY 156 MILES OF BIKEWAYS, AS SHOWN IN FIGURE 4-3. DESCRIPTIONS OF EACH BIKEWAY CLASSIFICATION ARE INCLUDED IN THE FOLLOWING SECTION.

FIGURE 4-3 EXISTING BIKEWAYS MAP



CLASS I SHARED USE PATHS

Class I shared use paths are paved trails completely separated from the street. They allow two-way travel by people bicycling and walking and are often considered the most comfortable facilities for children and inexperienced riders as there are few potential conflicts between cyclists and motorists.

There are currently over 14 miles of Class I shared use paths in Riverside.

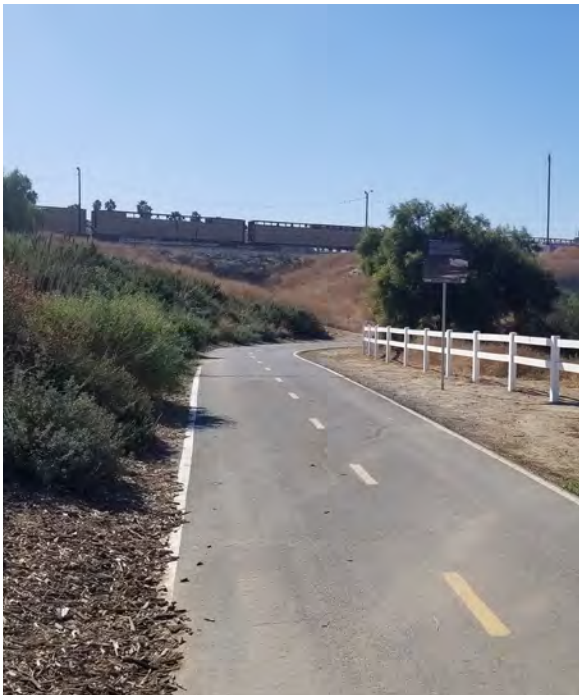


Photo Caption: Santa Ana River Trail

CLASS II BICYCLE LANES

Class II bicycle lanes are striped preferential lanes on the roadway for one-way bicycle travel. Some bicycle lanes include a striped buffer on one or both sides to increase separation from the traffic lane or from parked cars where people may open doors into the bicycle lane (buffered bicycle lanes are referred to in this Plan as “Class IIB”).

There are currently 122 miles of Class II bicycle lanes and approximately 7 miles of buffered bicycle lanes in Riverside.



Photo Caption: Class II Bicycle Lane located on Market St.

CLASS III BICYCLE ROUTES

Class III bicycle routes are signed routes where people bicycling share a travel lane with people driving. Because they are shared facilities, bicycle routes are primarily used on select low-speed streets. Some Class III bicycle routes include shared lane markings or "sharrows" that recommend proper bicycle positioning in the center of the travel lane and alert drivers that bicyclists may be present.

There are currently over 2 miles of Class III bicycle routes in the City.



Photo Caption: Class III Bicycle Route on Mission Inn Ave

CLASS III BICYCLE BOULEVARD

Other bicycle routes include more robust traffic calming features to promote bicyclist comfort and are known as "bicycle boulevards" (referred to in this Plan as "Class IIIB"). The Riverside Fire Department will be included in discussions about new or altered features on bicycle boulevards to ensure that access for emergency responders is maintained.

There are currently no Class III bicycle boulevards in the City.



Photo Caption: Class III Bicycle Boulevard with green Shared Lane Markings in Vancouver, BC.



Photo Caption: Class IV Separated Bikeway along Canyon Crest Dr.



Photo Caption: Class IV Separated Bikeway in Seattle, WA.

CLASS IV SEPARATED BIKEWAYS

Class IV separated bikeways are on-street bicycle facilities that are physically separated from motor vehicle traffic by a vertical element or barrier, such as a curb, bollards, or vehicle parking aisle. They can allow for one- or two-way travel on one or both sides of the roadway.

Currently just over one mile of Class IV separated bikeway exists in Riverside.

PREVIOUSLY PLANNED FACILITIES

While Riverside's existing bikeway network covers over 150 miles, previous planning efforts have offered visions for a more comprehensive and connected network spanning more than an additional 105 total miles. Figure 4-4 shows the locations and types of bicycle facilities that have been recommended as part of the 2012 Bicycle Master Plan Addendum. This Plan builds on those recommendations and provides an updated vision of Riverside's active transportation network.

FIGURE 4-4 PREVIOUSLY PLANNED BIKEWAYS MAP

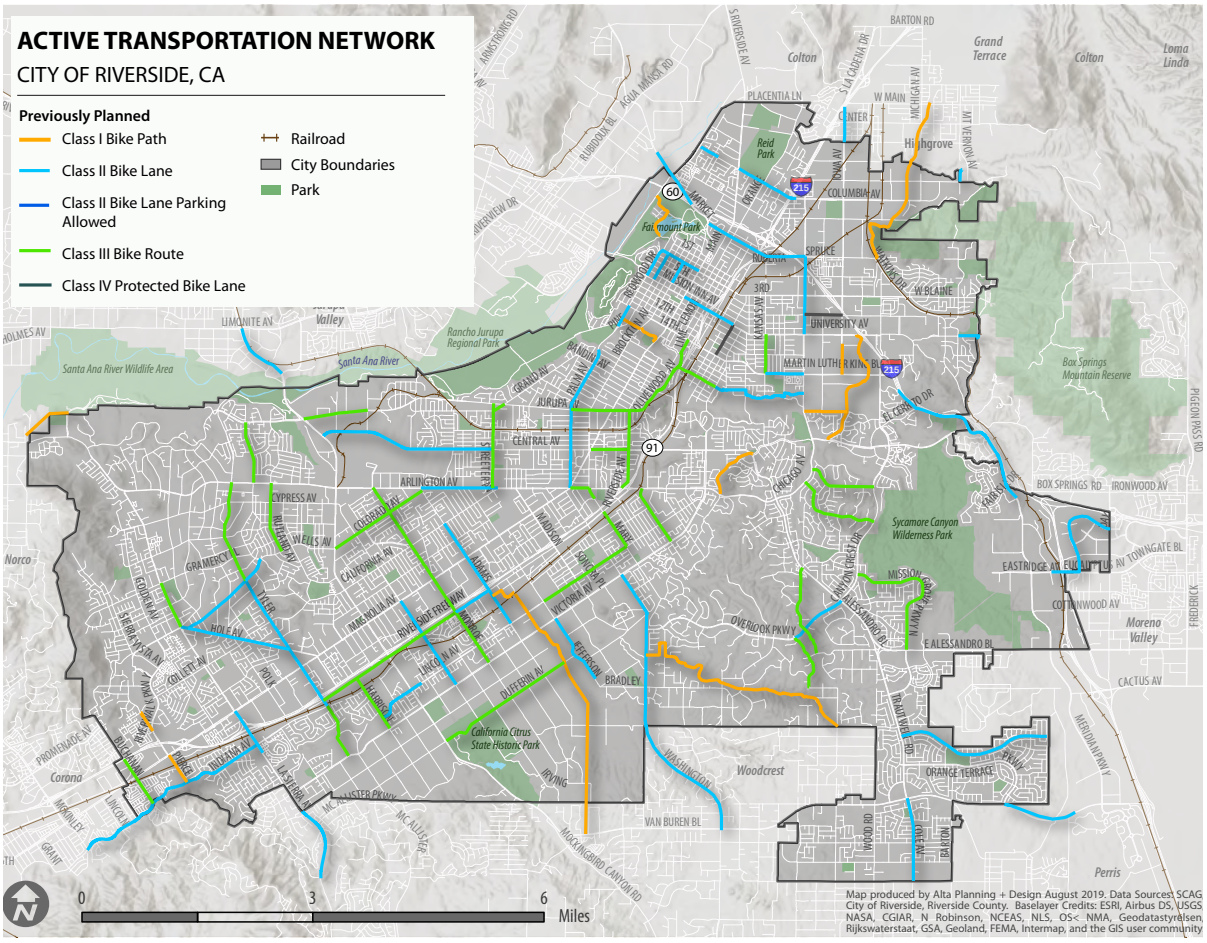


FIGURE 4-21 RECOMMENDED BIKEWAYS WARD 1

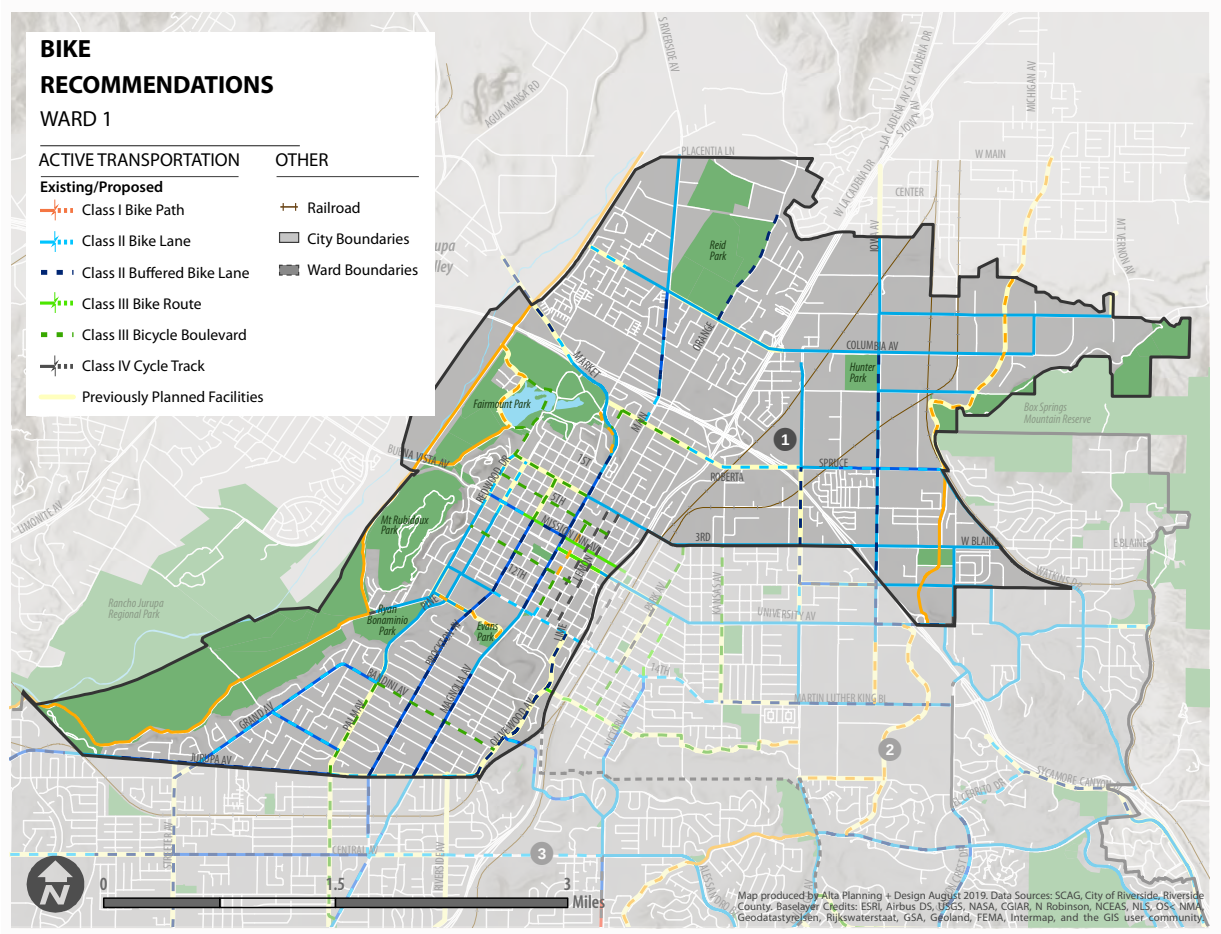
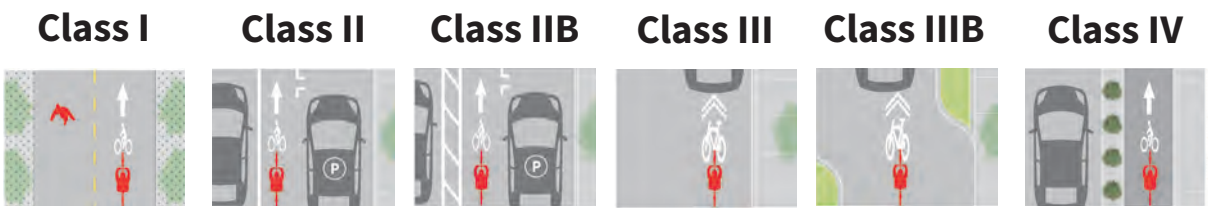


TABLE 4-18 RECOMMENDED BIKEWAYS WARD 1

CORRIDOR	FROM	TO	FACILITY TYPE	LENGTH (MILES)
14th St	Brockton Ave	SR-91 Fwy WB Offramp	II	0.7
10th St	Lemon St	Redwood Dr	IIIB	0.8
3rd St	Market St	Redwood Ave	IIIB	0.6
5th St	Lemon St	Redwood Dr	IIIB	0.8
Bandini Ave	Olivewood Ave	Palm Ave	IIIB	0.9
Brockton Av	Mission Inn Ave	3rd St	IIIB	0.3
Chicago Av	University Ave	W Blaine St	II	0.5
Chicago Av	W Linden St	Spruce St	IIB	0.8
Columbia Av	American Dr	Salmon River Rd	II	0.3
Dexter Dr	Redwood DR	SART entrance	IIIB	0.1
Iowa Ave	Columbia Ave	I-215 Overpass	IIB	1.4
Jurupa Ave	Riverside Ave	Palm Ave	II	0.8
Lemon St	14th St	3rd St	IV	0.8

TABLE 4-18 RECOMMENDED BIKEWAYS WARD 1

CORRIDOR	FROM	TO	FACILITY TYPE	LENGTH (MILES)
Main St Pedestrian Mall	10th St	6th St	I	0.3
Main St	14th St	13th St	II	0.1
Main St	Oakley Ave	Spruce St	II	0.2
Main St	Strong St	Spruce St	IIB	0.3
Main St	13th St	10th St	IIIB	0.2
Main St	6th St	5th St	IIIB	0.2
Market St	Ridge Rd	Locust St	I	0.3
Market St	Rivera St	Santa Ana River Trail	II	0.6
Market St	1st St	Ridge Rd	II	0.2
N Orange St	Colombia Ave	Burl Dr	IIB	0.8
Northbend St	Spruce St	Market St	IIIB	0.1
Olivewood Ave	14th St	Jurupa Ave	IIB	1.1
Orange St	14th St	3rd St	IV	0.8
Palm Av	Bandini Ave	Jurupa Ave	IIIB	1.6
Pine St	University Ave	3rd St	II	0.4
Redwood Dr	University Ave	3rd St	II	0.4
Redwood Dr	3rd St	Field Ln	IIIB	0.7
Spruce St	Chicago Ave	Mulberry Ave	II	0.8
Spruce St	Mulberry Ave	Norhtbend St	IIIB	0.5
			Total	**18.4**



Diagrams for illustrative purposes only

Appendix H

Existing Traffic Volume Data

Appendix H-1

Roadway Segment Data

Thursday, June 06, 2024 | CITY: Riverside | PROJECT: SC4743

ADT4 Main St north of 3rd St

PREPARED BY: AimTD LLC. tel: 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
00:00	11		8			12:00	72		61		
00:15	9		10			12:15	64		64		
00:30	12		7			12:30	63		53		
00:45	3	35	15	40	75	12:45	61	260	64	242	502
01:00	3		5			13:00	42		81		
01:15	7		8			13:15	69		79		
01:30	11		6			13:30	71		64		
01:45	7	28	12	31	59	13:45	72	254	64	288	542
02:00	4		7			14:00	74		67		
02:15	11		4			14:15	57		90		
02:30	8		7			14:30	85		92		
02:45	6	29	4	22	51	14:45	60	276	83	332	608
03:00	5		5			15:00	59		88		
03:15	10		4			15:15	78		82		
03:30	7		2			15:30	98		103		
03:45	8	30	6	17	47	15:45	91	326	103	376	702
04:00	14		3			16:00	87		116		
04:15	16		9			16:15	91		128		
04:30	27		17			16:30	103		96		
04:45	19	76	13	42	118	16:45	74	355	103	443	798
05:00	15		24			17:00	122		84		
05:15	27		20			17:15	98		101		
05:30	37		26			17:30	81		103		
05:45	30	109	38	108	217	17:45	76	377	87	375	752
06:00	31		22			18:00	59		71		
06:15	33		36			18:15	75		75		
06:30	49		44			18:30	63		55		
06:45	43	156	49	151	307	18:45	58	255	68	269	524
07:00	32		47			19:00	53		51		
07:15	44		79			19:15	56		56		
07:30	63		67			19:30	42		44		
07:45	58	197	79	272	469	19:45	53	204	41	192	396
08:00	57		72			20:00	51		51		
08:15	57		60			20:15	37		46		
08:30	68		65			20:30	56		41		
08:45	57	239	81	278	517	20:45	59	203	36	174	377
09:00	53		68			21:00	44		33		
09:15	50		54			21:15	59		34		
09:30	59		61			21:30	48		31		
09:45	40	202	70	253	455	21:45	43	194	24	122	316
10:00	61		54			22:00	45		21		
10:15	75		53			22:15	26		14		
10:30	55		65			22:30	27		30		
10:45	50	241	56	228	469	22:45	14	112	18	83	195
11:00	48		56			23:00	9		17		
11:15	60		50			23:15	18		18		
11:30	58		55			23:30	19		16		
11:45	56	222	55	216	438	23:45	15	61	15	66	127
Total Vol.		1564		1658	**3222**			2877		2962	**5839**

Daily Totals

NB	SB	**Combined**
4441	4620	**9061**

	AM			**PM**		
Split %	48.5%	51.5%	**35.6%**	49.3%	50.7%	**64.4%**
Peak Hour	11:45	07:15	**07:15**	16:30	15:30	**15:30**
Volume	255	297	**519**	397	450	**817**
P.H.F.	0.89	0.94	**0.95**	0.81	0.88	**0.93**

Saturday, June 08, 2024 | CITY: Riverside | PROJECT: SC4743

ADT4 Main St north of 3rd St

PREPARED BY: AimTD LLC. tel: 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
00:00	25		14			12:00	54		61		
00:15	9		15			12:15	60		75		
00:30	14		18			12:30	63		65		
00:45	18	66	13	60	126	12:45	55	232	72	273	505
01:00	13		9			13:00	64		76		
01:15	16		9			13:15	75		59		
01:30	10		9			13:30	76		58		
01:45	18	57	9	36	93	13:45	50	265	66	259	524
02:00	22		10			14:00	60		61		
02:15	20		7			14:15	82		59		
02:30	7		3			14:30	62		70		
02:45	14	63	7	27	90	14:45	44	248	77	267	515
03:00	8		7			15:00	57		58		
03:15	7		6			15:15	56		55		
03:30	8		8			15:30	47		54		
03:45	12	35	2	23	58	15:45	61	221	78	245	466
04:00	6		3			16:00	54		59		
04:15	8		6			16:15	64		49		
04:30	9		4			16:30	49		59		
04:45	8	31	7	20	51	16:45	58	225	53	220	445
05:00	6		9			17:00	59		63		
05:15	10		10			17:15	51		56		
05:30	16		13			17:30	52		53		
05:45	9	41	15	47	88	17:45	52	214	55	227	441
06:00	13		11			18:00	51		52		
06:15	21		16			18:15	35		49		
06:30	22		18			18:30	35		71		
06:45	28	84	22	67	151	18:45	29	150	52	224	374
07:00	24		24			19:00	39		44		
07:15	25		26			19:15	41		37		
07:30	25		20			19:30	37		46		
07:45	36	110	48	118	228	19:45	49	166	58	185	351
08:00	44		36			20:00	36		42		
08:15	33		29			20:15	41		51		
08:30	34		41			20:30	53		58		
08:45	52	163	48	154	317	20:45	41	171	45	196	367
09:00	52		52			21:00	36		40		
09:15	55		36			21:15	37		44		
09:30	54		50			21:30	40		29		
09:45	59	220	47	185	405	21:45	37	150	49	162	312
10:00	63		59			22:00	35		43		
10:15	49		48			22:15	40		33		
10:30	57		54			22:30	36		38		
10:45	53	222	54	215	437	22:45	40	151	36	150	301
11:00	47		56			23:00	27		20		
11:15	62		76			23:15	24		28		
11:30	49		69			23:30	16		20		
11:45	59	217	78	279	496	23:45	32	99	21	89	188
Total Vol.		1309		1231	**2540**			2292		2497	**4789**

Daily Totals

NB	SB	**Combined**
3601	3728	**7329**

	AM			**PM**		
Split %	51.5%	48.5%	**34.7%**	47.9%	52.1%	**65.3%**
Peak Hour	11:45	11:15	**11:45**	12:45	12:15	**12:45**
Volume	236	284	**515**	270	288	**535**
P.H.F.	0.94	0.91	**0.94**	0.89	0.95	**0.96**

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

Thursday, June 06, 2024 CITY: Riverside PROJECT: SC4743

ADT1 Market St north of 3rd St **PREPARED BY: AimTD LLC. tel: 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
00:00	12		15			12:00	106		120		
00:15	12		15			12:15	135		108		
00:30	11		10			12:30	135		124		
00:45	15	50	15	55	105	12:45	123	499	130	482	981
01:00	4		12			13:00	117		138		
01:15	11		9			13:15	112		141		
01:30	15		7			13:30	113		157		
01:45	8	38	7	35	73	13:45	115	457	173	609	1066
02:00	11		5			14:00	123		169		
02:15	18		1			14:15	118		189		
02:30	9		7			14:30	131		221		
02:45	10	48	6	19	67	14:45	118	490	239	818	1308
03:00	8		6			15:00	109		241		
03:15	17		8			15:15	147		202		
03:30	17		12			15:30	140		218		
03:45	18	60	13	39	99	15:45	128	524	260	921	1445
04:00	12		13			16:00	145		274		
04:15	21		14			16:15	155		269		
04:30	36		16			16:30	166		272		
04:45	36	105	20	63	168	16:45	171	637	262	1077	1714
05:00	26		26			17:00	170		260		
05:15	28		26			17:15	205		238		
05:30	53		43			17:30	136		291		
05:45	47	154	67	162	316	17:45	116	627	218	1007	1634
06:00	59		56			18:00	112		181		
06:15	61		73			18:15	119		127		
06:30	90		105			18:30	98		128		
06:45	80	290	131	365	655	18:45	95	424	88	524	948
07:00	67		128			19:00	102		83		
07:15	85		203			19:15	79		90		
07:30	101		189			19:30	85		75		
07:45	96	349	186	706	1055	19:45	90	356	74	322	678
08:00	93		141			20:00	94		81		
08:15	83		158			20:15	100		60		
08:30	100		127			20:30	77		52		
08:45	91	367	141	567	934	20:45	74	345	61	254	599
09:00	93		93			21:00	68		53		
09:15	93		105			21:15	72		56		
09:30	81		121			21:30	72		54		
09:45	84	351	110	429	780	21:45	42	254	52	215	469
10:00	108		113			22:00	40		41		
10:15	118		101			22:15	51		30		
10:30	100		97			22:30	45		45		
10:45	89	415	113	424	839	22:45	36	172	33	149	321
11:00	114		107			23:00	27		14		
11:15	111		106			23:15	32		31		
11:30	100		103			23:30	18		26		
11:45	135	460	130	446	906	23:45	19	96	24	95	191
Total Vol.		2687		3310	**5997**			4881		6473	**11354**

Daily Totals

NB	SB	**Combined**
7568	9783	**17351**

	AM			**PM**		
Split %	44.8%	55.2%	**34.6%**	43.0%	57.0%	**65.4%**
Peak Hour	11:45	07:15	**07:15**	16:30	16:00	**16:30**
Volume	511	719	**1094**	712	1077	**1744**
P.H.F.	0.95	0.89	**0.94**	0.87	0.98	**0.98**

Saturday, June 08, 2024 CITY: Riverside PROJECT: SC4743

ADT1 Market St north of 3rd St

PREPARED BY: AimTD LLC. tel: 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
00:00	32		38			12:00	99		111		
00:15	35		33			12:15	95		149		
00:30	29		21			12:30	107		160		
00:45	30	126	27	119	245	12:45	93	394	209	629	1023
01:00	31		18			13:00	110		195		
01:15	29		23			13:15	107		160		
01:30	33		13			13:30	109		110		
01:45	33	126	13	67	193	13:45	113	439	127	592	1031
02:00	38		8			14:00	127		139		
02:15	36		9			14:15	133		122		
02:30	27		7			14:30	107		132		
02:45	13	114	7	31	145	14:45	107	474	131	524	998
03:00	21		5			15:00	108		97		
03:15	19		12			15:15	112		127		
03:30	10		7			15:30	121		128		
03:45	13	63	7	31	94	15:45	99	440	122	474	914
04:00	14		11			16:00	106		109		
04:15	10		13			16:15	95		92		
04:30	20		7			16:30	100		100		
04:45	15	59	12	43	102	16:45	96	397	114	415	812
05:00	13		13			17:00	88		126		
05:15	8		23			17:15	99		96		
05:30	25		18			17:30	81		139		
05:45	29	75	17	71	146	17:45	78	346	132	493	839
06:00	45		32			18:00	84		117		
06:15	49		34			18:15	82		137		
06:30	28		43			18:30	93		131		
06:45	41	163	63	172	335	18:45	87	346	84	469	815
07:00	35		44			19:00	63		105		
07:15	45		53			19:15	88		102		
07:30	60		62			19:30	61		95		
07:45	61	201	68	227	428	19:45	93	305	70	372	677
08:00	48		65			20:00	78		75		
08:15	70		63			20:15	68		79		
08:30	69		71			20:30	78		81		
08:45	57	244	89	288	532	20:45	76	300	79	314	614
09:00	67		88			21:00	76		84		
09:15	65		66			21:15	82		62		
09:30	63		76			21:30	59		59		
09:45	67	262	86	316	578	21:45	87	304	61	266	570
10:00	87		97			22:00	67		71		
10:15	82		103			22:15	48		68		
10:30	77		143			22:30	46		68		
10:45	82	328	174	517	845	22:45	51	212	64	271	483
11:00	87		155			23:00	55		50		
11:15	93		115			23:15	51		43		
11:30	83		114			23:30	46		36		
11:45	82	345	122	506	851	23:45	34	186	42	171	357
Total Vol.		2106		2388	**4494**			4143		4990	**9133**

Daily Totals

NB	SB	Combined
6249	7378	**13627**

	AM			PM		
Split %	46.9%	53.1%	**33.0%**	45.4%	54.6%	**67.0%**
Peak Hour	11:45	10:30	**10:30**	13:30	12:30	**12:30**
Volume	383	587	**926**	482	724	**1141**
P.H.F.	0.89	0.84	**0.90**	0.91	0.87	**0.94**

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

Thursday, June 06, 2024 | CITY: Riverside | PROJECT: SC4743

ADT2 Market St between 3rd St and 5th St

PREPARED BY: AimTD LLC. tel: 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
00:00	15		16			12:00	140		141		
00:15	17		21			12:15	181		126		
00:30	15		16			12:30	149		134		
00:45	17	64	16	69	133	12:45	165	635	163	564	1199
01:00	10		11			13:00	140		159		
01:15	17		11			13:15	127		165		
01:30	20		10			13:30	143		154		
01:45	13	60	9	41	101	13:45	164	574	163	641	1215
02:00	15		7			14:00	169		153		
02:15	19		5			14:15	150		156		
02:30	8		12			14:30	166		169		
02:45	14	56	6	30	86	14:45	189	674	180	658	1332
03:00	8		9			15:00	161		177		
03:15	22		7			15:15	185		165		
03:30	15		15			15:30	196		172		
03:45	18	63	12	43	106	15:45	182	724	208	722	1446
04:00	15		12			16:00	210		209		
04:15	21		17			16:15	187		229		
04:30	36		22			16:30	228		201		
04:45	38	110	22	73	183	16:45	212	837	225	864	1701
05:00	32		30			17:00	238		181		
05:15	34		26			17:15	222		188		
05:30	75		45			17:30	175		206		
05:45	64	205	71	172	377	17:45	166	801	183	758	1559
06:00	77		62			18:00	133		136		
06:15	93		78			18:15	167		125		
06:30	103		125			18:30	109		139		
06:45	119	392	160	425	817	18:45	124	533	118	518	1051
07:00	93		156			19:00	109		112		
07:15	121		220			19:15	109		114		
07:30	135		200			19:30	98		98		
07:45	155	504	212	788	1292	19:45	109	425	86	410	835
08:00	139		156			20:00	104		98		
08:15	105		181			20:15	98		78		
08:30	128		151			20:30	107		106		
08:45	127	499	166	654	1153	20:45	96	405	75	357	762
09:00	134		116			21:00	88		68		
09:15	127		130			21:15	93		66		
09:30	101		148			21:30	97		76		
09:45	112	474	137	531	1005	21:45	70	348	62	272	620
10:00	140		137			22:00	66		65		
10:15	145		132			22:15	68		42		
10:30	127		125			22:30	62		55		
10:45	131	543	126	520	1063	22:45	43	239	34	196	435
11:00	133		137			23:00	30		25		
11:15	128		130			23:15	38		41		
11:30	139		125			23:30	27		29		
11:45	158	558	146	538	1096	23:45	22	117	27	122	239
Total Vol.		3528		3884	**7412**			6312		6082	**12394**

Daily Totals

NB	SB	**Combined**
9840	9966	**19806**

	AM			**PM**		
Split %	47.6%	52.4%	**37.4%**	50.9%	49.1%	**62.6%**
Peak Hour	11:45	07:00	**07:15**	16:30	16:00	**16:00**
Volume	628	788	**1338**	900	864	**1701**
P.H.F.	0.87	0.90	**0.91**	0.95	0.94	**0.97**

Saturday, June 08, 2024 CITY: Riverside PROJECT: SC4743

ADT2 Market St between 3rd St and 5th St

PREPARED BY: AimTD LLC. tel: 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
00:00	47		40			12:00	140		162		
00:15	39		43			12:15	144		153		
00:30	40		37			12:30	152		138		
00:45	42	168	31	151	319	12:45	132	568	166	619	1187
01:00	36		25			13:00	160		139		
01:15	39		23			13:15	117		151		
01:30	43		16			13:30	131		128		
01:45	45	163	18	82	245	13:45	135	543	140	558	1101
02:00	57		10			14:00	134		138		
02:15	43		13			14:15	131		119		
02:30	32		10			14:30	131		130		
02:45	22	154	10	43	197	14:45	133	529	128	515	1044
03:00	23		10			15:00	150		114		
03:15	27		17			15:15	133		140		
03:30	15		9			15:30	144		114		
03:45	21	86	7	43	129	15:45	126	553	123	491	1044
04:00	12		11			16:00	130		122		
04:15	12		13			16:15	120		98		
04:30	24		5			16:30	116		113		
04:45	13	61	11	40	101	16:45	121	487	125	458	945
05:00	15		10			17:00	99		117		
05:15	13		23			17:15	120		113		
05:30	29		21			17:30	109		112		
05:45	34	91	30	84	175	17:45	91	419	115	457	876
06:00	43		40			18:00	110		121		
06:15	53		37			18:15	114		128		
06:30	45		52			18:30	103		120		
06:45	52	193	80	209	402	18:45	88	415	94	463	878
07:00	51		62			19:00	94		109		
07:15	50		65			19:15	109		94		
07:30	76		57			19:30	84		97		
07:45	87	264	90	274	538	19:45	103	390	82	382	772
08:00	64		76			20:00	98		88		
08:15	93		74			20:15	85		94		
08:30	81		96			20:30	107		95		
08:45	87	325	105	351	676	20:45	93	383	98	375	758
09:00	103		111			21:00	94		96		
09:15	99		95			21:15	96		73		
09:30	89		97			21:30	83		77		
09:45	98	389	120	423	812	21:45	102	375	82	328	703
10:00	110		112			22:00	72		89		
10:15	132		122			22:15	63		72		
10:30	122		138			22:30	65		76		
10:45	135	499	135	507	1006	22:45	60	260	90	327	587
11:00	112		168			23:00	70		67		
11:15	154		101			23:15	57		56		
11:30	115		139			23:30	54		46		
11:45	106	487	132	540	1027	23:45	55	236	54	223	459
Total Vol.		2880		2747	**5627**			5158		5196	**10354**

Daily Totals

NB	SB	Combined
8038	7943	**15981**

	AM			PM		
Split %	51.2%	48.8%	**35.2%**	49.8%	50.2%	**64.8%**
Peak Hour	11:45	11:30	**11:45**	12:15	12:00	**12:00**
Volume	542	586	**1127**	588	619	**1187**
P.H.F.	0.89	0.90	**0.93**	0.92	0.93	**0.98**

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

Thursday, June 06, 2024 CITY: Riverside PROJECT: SC4743

ADT3 Market St south of 5th St **PREPARED BY: AimTD LLC. tel: 714 253 7888**

AM Period	NB		SB			PM Period	NB		SB		
00:00	14		17			12:00	147		150		
00:15	19		22			12:15	179		132		
00:30	18		17			12:30	148		135		
00:45	15	66	17	73	139	12:45	165	639	169	586	1225
01:00	13		14			13:00	141		165		
01:15	16		10			13:15	126		165		
01:30	20		11			13:30	139		159		
01:45	14	63	9	44	107	13:45	166	572	167	656	1228
02:00	14		7			14:00	169		157		
02:15	21		6			14:15	148		159		
02:30	8		12			14:30	166		176		
02:45	12	55	8	33	88	14:45	189	672	178	670	1342
03:00	7		9			15:00	165		171		
03:15	24		8			15:15	188		160		
03:30	14		17			15:30	202		172		
03:45	17	62	11	45	107	15:45	200	755	203	706	1461
04:00	13		12			16:00	213		201		
04:15	19		17			16:15	188		208		
04:30	32		23			16:30	221		182		
04:45	35	99	23	75	174	16:45	210	832	207	798	1630
05:00	34		29			17:00	235		178		
05:15	31		28			17:15	223		175		
05:30	73		44			17:30	182		192		
05:45	63	201	75	176	377	17:45	176	816	176	721	1537
06:00	72		61			18:00	140		138		
06:15	94		79			18:15	172		112		
06:30	102		129			18:30	111		141		
06:45	117	385	162	431	816	18:45	127	550	115	506	1056
07:00	87		153			19:00	116		108		
07:15	108		215			19:15	113		116		
07:30	130		204			19:30	104		106		
07:45	149	474	205	777	1251	19:45	120	453	89	419	872
08:00	133		149			20:00	107		109		
08:15	106		173			20:15	100		81		
08:30	122		151			20:30	105		108		
08:45	127	488	163	636	1124	20:45	105	417	78	376	793
09:00	136		117			21:00	95		79		
09:15	127		127			21:15	90		65		
09:30	96		144			21:30	101		73		
09:45	114	473	133	521	994	21:45	74	360	62	279	639
10:00	144		142			22:00	65		69		
10:15	144		138			22:15	74		46		
10:30	130		131			22:30	60		59		
10:45	136	554	131	542	1096	22:45	42	241	35	209	450
11:00	133		136			23:00	30		29		
11:15	133		136			23:15	34		41		
11:30	138		129			23:30	24		34		
11:45	169	573	158	559	1132	23:45	25	113	31	135	248
Total Vol.		3493		3912	**7405**			6420		6061	**12481**

Daily Totals

NB	SB	**Combined**
9913	9973	**19886**

	AM			**PM**		
Split %	47.2%	52.8%	**37.2%**	51.4%	48.6%	**62.8%**
Peak Hour	11:45	07:00	**07:15**	16:30	16:00	**16:30**
Volume	643	777	**1293**	889	798	**1631**
P.H.F.	0.90	0.90	**0.91**	0.95	0.96	**0.98**

Saturday, June 08, 2024 CITY: Riverside PROJECT: SC4743

ADT3 Market St south of 5th St

PREPARED BY: AimTD LLC. tel: 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
00:00	49		41			12:00	153		168		
00:15	33		43			12:15	150		161		
00:30	43		36			12:30	160		145		
00:45	45	170	31	151	321	12:45	138	601	170	644	1245
01:00	33		31			13:00	164		135		
01:15	45		22			13:15	120		158		
01:30	37		17			13:30	136		135		
01:45	44	159	22	92	251	13:45	144	564	149	577	1141
02:00	59		13			14:00	145		135		
02:15	44		16			14:15	139		120		
02:30	30		13			14:30	132		127		
02:45	29	162	13	55	217	14:45	151	567	131	513	1080
03:00	25		10			15:00	162		124		
03:15	28		17			15:15	141		141		
03:30	13		8			15:30	156		123		
03:45	19	85	6	41	126	15:45	127	586	122	510	1096
04:00	12		11			16:00	138		122		
04:15	12		13			16:15	121		105		
04:30	22		5			16:30	109		115		
04:45	13	59	11	40	99	16:45	121	489	127	469	958
05:00	15		11			17:00	106		120		
05:15	13		21			17:15	125		110		
05:30	29		20			17:30	112		110		
05:45	31	88	35	87	175	17:45	98	441	116	456	897
06:00	35		45			18:00	106		122		
06:15	45		47			18:15	126		127		
06:30	41		57			18:30	103		115		
06:45	55	176	82	231	407	18:45	99	434	96	460	894
07:00	51		65			19:00	98		106		
07:15	48		65			19:15	113		96		
07:30	72		54			19:30	93		103		
07:45	86	257	84	268	525	19:45	115	419	83	388	807
08:00	59		72			20:00	114		98		
08:15	97		67			20:15	84		97		
08:30	85		92			20:30	116		99		
08:45	97	338	104	335	673	20:45	107	421	98	392	813
09:00	103		113			21:00	100		94		
09:15	102		105			21:15	101		71		
09:30	90		92			21:30	86		77		
09:45	101	396	116	426	822	21:45	104	391	84	326	717
10:00	119		118			22:00	79		89		
10:15	151		122			22:15	85		84		
10:30	132		136			22:30	75		82		
10:45	137	539	139	515	1054	22:45	70	309	89	344	653
11:00	131		174			23:00	70		72		
11:15	166		112			23:15	58		57		
11:30	126		142			23:30	58		55		
11:45	120	543	152	580	1123	23:45	65	251	60	244	495
Total Vol.		2972		2821	**5793**			5473		5323	**10796**

Daily Totals

NB	SB	**Combined**
8445	8144	**16589**

	AM			**PM**		
Split %	51.3%	48.7%	**34.9%**	50.7%	49.3%	**65.1%**
Peak Hour	11:45	11:45	**11:45**	12:15	12:00	**12:00**
Volume	583	626	**1209**	612	644	**1245**
P.H.F.	0.91	0.93	**0.94**	0.93	0.95	**0.97**

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
(951) 268-6268
email: counts@countsunlimited.com

City of Riverside
Market Street
S/ 6th Street
24 Hour Directional Volume Count

RIV002
Site Code: 082-24569A

Start Time	6/11/24 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		12	131			17	139				
12:15		12	161			18	137				
12:30		14	139			17	125				
12:45		18	120	56	551	11	138	63	539	119	1090
01:00		22	134			8	131				
01:15		8	163			10	135				
01:30		11	134			8	142				
01:45		3	147	44	578	10	146	36	554	80	1132
02:00		4	117			8	165				
02:15		8	172			3	142				
02:30		5	127			8	155				
02:45		4	155	21	571	7	164	26	626	47	1197
03:00		6	152			4	162				
03:15		13	176			4	187				
03:30		19	199			11	165				
03:45		17	187	55	714	8	196	27	710	82	1424
04:00		12	224			9	161				
04:15		22	217			13	177				
04:30		37	**215**			27	**197**				
04:45		22	**211**	93	867	18	**200**	67	735	160	1602
05:00		31	**220**			21	**188**				
05:15		39	**227**			32	**198**				
05:30		60	208			45	147				
05:45		66	172	196	827	56	185	154	718	350	1545
06:00		49	172			64	171				
06:15		64	154			94	126				
06:30		77	130			128	127				
06:45		114	122	304	578	155	119	441	543	745	1121
07:00		90	119			141	95				
07:15		92	96			**191**	113				
07:30		136	97			**183**	95				
07:45		138	124	456	436	**204**	78	719	381	1175	817
08:00		128	90			**154**	83				
08:15		132	112			135	79				
08:30		114	104			154	76				
08:45		97	93	471	399	146	73	589	311	1060	710
09:00		95	78			109	67				
09:15		108	79			105	64				
09:30		118	58			115	58				
09:45		107	70	428	285	120	36	449	225	877	510
10:00		112	61			109	45				
10:15		107	49			121	47				
10:30		119	52			92	50				
10:45		102	50	440	212	119	39	441	181	881	393
11:00		**122**	39			117	34				
11:15		**131**	32			113	45				
11:30		**130**	29			103	16				
11:45		**160**	29	543	129	149	25	482	120	1025	249
Total		3107	6147	3107	6147	3494	5643	3494	5643	6601	11790
Combined Total		9254		9254		9137		9137		18391	
AM Peak	-	11:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	543	-	-	-	732	-	-	-	-	-
P.H.F.		0.848				0.897					
PM Peak	-	-	04:30	-	-	-	04:30	-	-	-	-
Vol.	-	-	873	-	-	-	783	-	-	-	-
P.H.F.			0.961				0.979				
Percentage		33.6%	66.4%			38.2%	61.8%				
ADT/AADT		ADT 18,391		AADT 18,391							

Appendix H-2

Intersection Traffic Volume Data

INTERSECTION TURNING MOVEMENT COUNTS

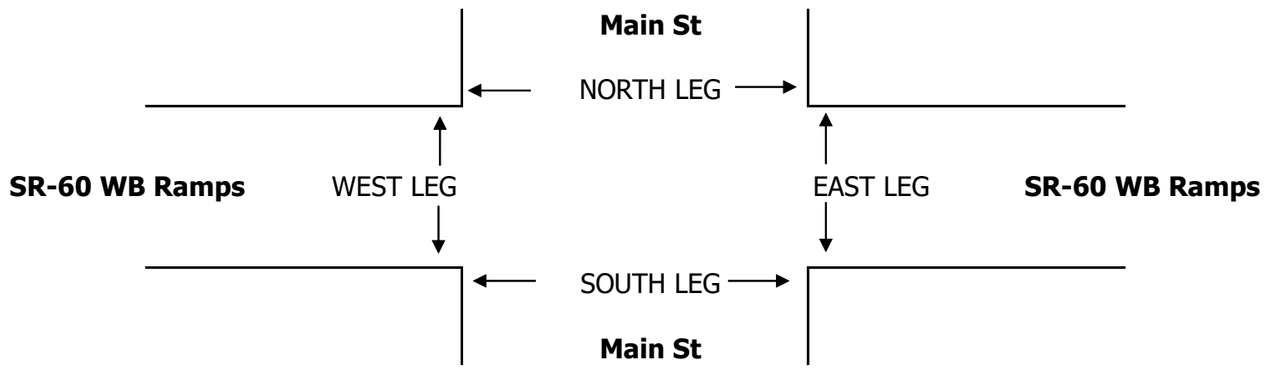
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Main St	LOCATION #:	1
	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Main St			SOUTHBOUND Main St			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL X	ET X	ER X	WL 0.5	WT 0.5	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	32	60	0	0	130	32	0	0	0	7	18	86	365	0	0	0	0	0
	7:15 AM	29	75	0	0	157	34	0	0	0	6	27	96	424	0	0	0	0	0
	7:30 AM	35	77	0	0	187	34	0	0	0	13	16	81	443	0	0	0	0	0
	7:45 AM	43	98	0	0	213	43	0	0	0	13	16	72	498	0	0	0	0	0
	8:00 AM	28	76	0	0	176	32	0	0	0	14	19	73	418	0	0	0	0	0
	8:15 AM	35	79	0	0	133	36	0	0	0	18	21	70	392	0	1	0	0	1
	8:30 AM	25	80	0	0	191	18	0	0	0	14	9	62	399	0	0	0	0	0
	8:45 AM	39	79	0	0	140	27	0	0	0	14	12	64	375	0	0	0	0	0
	VOLUMES	266	624	0	0	1,327	256	0	0	0	99	138	604	3,315	0	1	0	0	1
	APPROACH %	30%	70%	0%	0%	84%	16%	0%	0%	0%	12%	16%	72%						
	APP/DEPART	890	/	1,229	1,584	/	1,426	0	/	0	841	/	660	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	135	326	0	0	733	143	0	0	0	46	78	322	1,783	0	0	0	0	
	APPROACH %	29%	71%	0%	0%	84%	16%	0%	0%	0%	10%	17%	72%						
	PEAK HR FACTOR		0.817			0.855			0.000			0.864		0.895					
	APP/DEPART	461	/	648	876	/	779	0	/	0	446	/	356	0					
PM	4:00 PM	74	89	0	0	166	52	0	0	0	6	22	63	472	0	0	0	0	0
	4:15 PM	58	81	0	0	194	33	0	0	0	10	26	70	472	0	0	0	0	0
	4:30 PM	62	110	0	0	178	40	0	0	0	8	31	73	502	0	0	0	0	0
	4:45 PM	54	104	0	0	173	38	0	0	0	10	21	61	461	0	0	0	0	0
	5:00 PM	83	97	0	0	184	49	0	0	0	10	26	82	531	0	0	0	0	0
	5:15 PM	81	104	0	0	165	37	0	0	0	6	29	70	492	0	0	0	0	0
	5:30 PM	67	101	0	0	152	28	0	0	0	8	20	73	449	0	0	0	0	0
	5:45 PM	44	89	0	0	137	21	0	0	0	11	13	73	388	0	0	0	0	0
	VOLUMES	523	775	0	0	1,349	298	0	0	0	69	188	565	3,767	0	0	0	0	0
	APPROACH %	40%	60%	0%	0%	82%	18%	0%	0%	0%	8%	23%	69%						
	APP/DEPART	1,298	/	1,340	1,647	/	1,418	0	/	0	822	/	1,009	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	280	415	0	0	700	164	0	0	0	34	107	286	1,986	0	0	0	0	
	APPROACH %	40%	60%	0%	0%	81%	19%	0%	0%	0%	8%	25%	67%						
	PEAK HR FACTOR		0.939			0.927			0.000			0.905		0.935					
	APP/DEPART	695	/	701	864	/	734	0	/	0	427	/	551	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Main St	LOCATION #:	2
	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

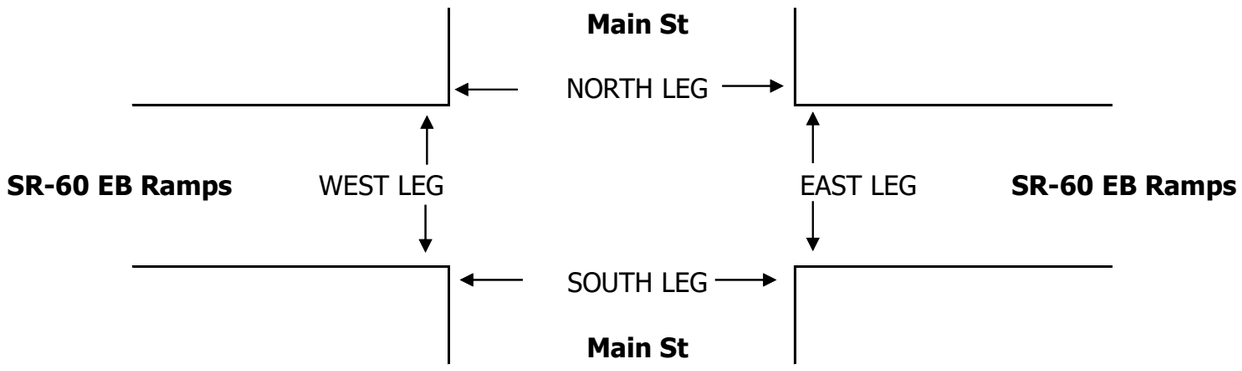
NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Main St			SOUTHBOUND Main St			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps			
	LANES:	NL X	NT 2	NR 1	SL 1	ST 2	SR X	EL 0.5	ET 1	ER 0.5	WL X	WT X	WR X	TOTAL
AM	7:00 AM	0	62	43	91	46	0	36	0	35	0	0	0	313
	7:15 AM	0	68	48	98	65	0	36	0	60	0	0	0	375
	7:30 AM	0	85	56	114	86	0	27	1	53	0	0	0	422
	7:45 AM	0	103	58	130	96	0	38	0	41	0	0	0	466
	8:00 AM	0	72	57	113	72	0	32	2	44	0	0	0	392
	8:15 AM	0	88	35	82	69	0	26	1	45	0	0	0	346
	8:30 AM	0	83	61	123	82	0	22	4	40	0	0	0	415
	8:45 AM	0	89	44	94	60	0	29	5	34	0	0	0	355
	VOLUMES	0	650	402	845	576	0	246	13	352	0	0	0	3,085
	APPROACH %	0%	62%	38%	59%	41%	0%	40%	2%	58%	0%	0%	0%	
	APP/DEPART	1,053	/	896	1,421	/	929	611	/	1,260	0	/	0	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	328	219	455	319	0	133	3	198	0	0	0	1,656
	APPROACH %	0%	60%	40%	59%	41%	0%	40%	1%	59%	0%	0%	0%	
	PEAK HR FACTOR		0.851			0.856			0.870			0.000		0.888
	APP/DEPART	548	/	461	774	/	518	334	/	677	0	/	0	0
PM	4:00 PM	0	134	40	87	85	0	29	7	41	0	0	0	423
	4:15 PM	0	124	37	104	100	0	15	11	47	0	0	0	438
	4:30 PM	0	151	49	95	85	0	21	9	46	0	0	0	456
	4:45 PM	0	132	57	96	87	0	26	9	43	0	0	0	450
	5:00 PM	0	165	41	105	89	0	15	4	38	0	0	0	457
	5:15 PM	0	160	33	95	76	0	25	7	47	0	0	0	443
	5:30 PM	0	143	35	70	90	0	30	1	59	0	0	0	428
	5:45 PM	0	110	38	74	74	0	23	6	36	0	0	0	361
	VOLUMES	0	1,119	330	726	686	0	184	54	357	0	0	0	3,456
	APPROACH %	0%	77%	23%	51%	49%	0%	31%	9%	60%	0%	0%	0%	
	APP/DEPART	1,449	/	1,303	1,412	/	1,043	595	/	1,110	0	/	0	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	608	180	391	337	0	87	29	174	0	0	0	1,806
	APPROACH %	0%	77%	23%	54%	46%	0%	30%	10%	60%	0%	0%	0%	
	PEAK HR FACTOR		0.956			0.938			0.918			0.000		0.988
	APP/DEPART	788	/	695	728	/	511	290	/	600	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
	1	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

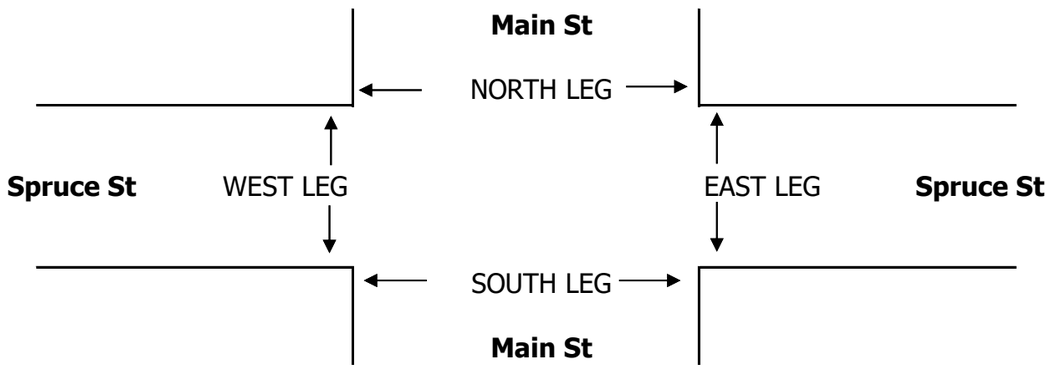
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Main St	LOCATION #:	3
	EAST & WEST:	Spruce St	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Main St			SOUTHBOUND Main St			EASTBOUND Spruce St			WESTBOUND Spruce St				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	41	2	14	38	0	10	5	0	14	8	13	146	0	0	0	0	0
	7:15 AM	1	48	9	28	67	4	6	9	1	11	5	21	210	0	0	0	0	0
	7:30 AM	0	82	2	26	84	0	8	16	3	9	7	23	260	0	0	0	0	0
	7:45 AM	4	78	7	22	79	2	6	19	5	16	6	32	276	0	0	0	0	0
	8:00 AM	2	75	10	27	67	3	2	12	2	20	9	20	249	0	0	0	0	0
	8:15 AM	0	76	4	22	59	3	5	6	2	11	9	21	218	0	0	0	0	0
	8:30 AM	1	91	5	24	67	3	7	8	3	16	7	12	244	0	1	0	0	1
	8:45 AM	1	70	6	13	62	2	4	10	5	16	11	21	221	0	0	0	0	0
	VOLUMES	10	561	45	176	523	17	48	85	21	113	62	163	1,825	0	1	0	0	1
	APPROACH %	2%	91%	7%	25%	73%	2%	31%	55%	14%	33%	18%	48%						
	APP/DEPART	616	/	773	717	/	657	154	/	306	338	/	89	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	6	311	23	97	289	8	21	53	12	56	31	96	1,003	0	0	0	0	
	APPROACH %	2%	91%	7%	25%	73%	2%	24%	62%	14%	31%	17%	52%						
	PEAK HR FACTOR		0.955			0.895			0.717			0.847		0.909					
	APP/DEPART	340	/	428	394	/	357	86	/	173	183	/	45	0					
PM	4:00 PM	1	105	10	25	85	5	9	41	7	16	22	43	369	0	0	0	0	0
	4:15 PM	2	100	7	35	77	2	12	45	6	18	8	30	342	0	0	0	0	0
	4:30 PM	3	128	8	29	64	8	15	41	4	17	5	31	353	0	0	0	0	0
	4:45 PM	0	115	7	34	67	1	16	43	6	21	10	24	344	0	0	0	0	0
	5:00 PM	2	133	8	34	68	2	22	53	6	12	7	41	388	0	0	0	0	0
	5:15 PM	3	121	7	22	73	3	11	47	5	13	9	23	337	0	0	0	0	0
	5:30 PM	1	107	6	46	77	3	16	59	8	8	5	29	365	0	1	0	0	1
	5:45 PM	1	73	8	31	57	3	4	43	1	9	12	29	271	0	0	0	0	0
	VOLUMES	13	882	61	256	568	27	105	372	43	114	78	250	2,770	0	1	0	0	1
	APPROACH %	1%	92%	6%	30%	67%	3%	20%	72%	8%	26%	18%	57%						
	APP/DEPART	956	/	1,238	852	/	725	520	/	689	442	/	118	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	6	476	28	136	285	9	65	202	25	54	31	117	1,435	0	1	0	0	
	APPROACH %	1%	93%	5%	32%	66%	2%	22%	69%	9%	27%	15%	58%						
	PEAK HR FACTOR		0.892			0.848			0.880			0.842		0.925					
	APP/DEPART	510	/	659	431	/	364	292	/	366	202	/	46	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	7:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	7:30 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	7:45 AM	0	0	4	1	5	0	0	4	0	4	0	0	0	1	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	8:30 AM	4	0	2	0	6	4	0	1	0	5	0	0	1	0	1
	8:45 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	TOTAL	6	0	8	2	16	6	0	5	1	12	0	0	3	1	4
	BEGIN PEAK HR			7:30 AM			1	0	4	0	5					
PM	4:00 PM	1	1	1	1	4	1	1	1	1	4	0	0	0	0	0
	4:15 PM	2	0	2	1	5	1	0	0	1	2	1	0	2	0	3
	4:30 PM	0	2	2	2	6	0	1	2	1	4	0	1	0	1	2
	4:45 PM	1	3	1	1	6	0	2	1	0	3	1	1	0	1	3
	5:00 PM	0	0	1	2	3	0	0	1	0	1	0	0	0	2	2
	5:15 PM	0	0	3	2	5	0	0	2	1	3	0	0	1	1	2
	5:30 PM	0	1	4	0	5	0	1	3	0	4	0	0	1	0	1
	5:45 PM	0	0	3	2	5	0	0	1	2	3	0	0	2	0	2
	TOTAL	4	7	17	11	39	2	5	11	6	24	2	2	6	5	15
	BEGIN PEAK HR			4:45 PM			0	3	7	1	11					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Main St
EAST & WEST: 1st St

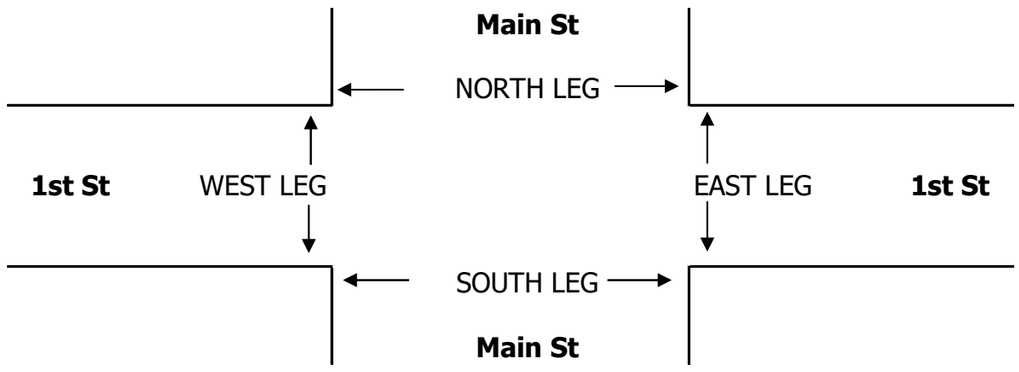
PROJECT #: SC4743
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Main St			SOUTHBOUND Main St			EASTBOUND 1st St			WESTBOUND 1st St				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	26	2	1	30	7	16	3	1	4	7	3	101	0	0	0	0	0
	7:15 AM	0	46	4	0	66	8	12	4	6	3	3	3	155	0	0	0	0	0
	7:30 AM	0	61	1	0	57	15	25	9	6	7	12	3	196	0	0	0	0	0
	7:45 AM	1	64	3	0	62	10	18	14	8	5	4	2	191	0	0	0	0	0
	8:00 AM	4	54	1	3	50	12	24	13	10	10	7	4	192	0	0	0	0	0
	8:15 AM	1	51	3	0	45	10	14	9	6	4	8	3	154	0	0	0	0	0
	8:30 AM	0	70	3	3	58	16	22	8	2	3	7	4	196	0	0	0	0	0
	8:45 AM	0	52	1	1	56	8	13	6	5	11	3	4	160	0	0	0	0	0
	VOLUMES	7	424	18	8	424	86	144	66	44	47	51	26	1,345	0	0	0	0	0
	APPROACH %	2%	94%	4%	2%	82%	17%	57%	26%	17%	38%	41%	21%						
	APP/DEPART	449	/	594	518	/	515	254	/	92	124	/	144	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	5	225	9	3	235	45	79	40	30	25	26	12	734	0	0	0	0	
	APPROACH %	2%	94%	4%	1%	83%	16%	53%	27%	20%	40%	41%	19%						
	PEAK HR FACTOR		0.879			0.956			0.793			0.716		0.936					
	APP/DEPART	239	/	316	283	/	290	149	/	52	63	/	76	0					
PM	4:00 PM	0	82	1	2	79	15	16	25	38	12	13	2	285	0	0	0	0	0
	4:15 PM	1	83	4	1	65	21	20	10	41	11	14	2	273	0	0	0	0	0
	4:30 PM	2	95	3	3	58	15	18	16	22	2	11	4	249	0	0	0	0	0
	4:45 PM	1	70	2	0	62	14	30	17	44	6	14	3	263	0	0	0	0	0
	5:00 PM	5	114	1	3	56	18	18	11	26	2	8	1	263	0	0	0	0	0
	5:15 PM	1	80	6	2	65	20	22	17	46	3	20	4	286	0	0	0	0	0
	5:30 PM	5	69	5	0	66	14	20	11	34	4	17	4	249	0	0	0	0	0
	5:45 PM	5	60	1	1	56	12	20	14	23	3	9	1	205	0	0	0	0	0
	VOLUMES	20	653	23	12	507	129	164	121	274	43	106	21	2,073	0	0	0	0	0
	APPROACH %	3%	94%	3%	2%	78%	20%	29%	22%	49%	25%	62%	12%						
	APP/DEPART	696	/	838	648	/	824	559	/	156	170	/	255	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	4	330	10	6	264	65	84	68	145	31	52	11	1,070	0	0	0	0	
	APPROACH %	1%	96%	3%	2%	79%	19%	28%	23%	49%	33%	55%	12%						
	PEAK HR FACTOR		0.860			0.872			0.816			0.870		0.939					
	APP/DEPART	344	/	425	335	/	440	297	/	84	94	/	121	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:15 AM	0	2	1	0	3	0	1	1	0	2	0	1	0	0	1
	7:30 AM	0	3	2	0	5	0	3	2	0	5	0	0	0	0	0
	7:45 AM	1	1	1	2	5	1	0	1	1	3	0	1	0	1	2
	8:00 AM	1	0	1	1	3	1	0	1	1	3	0	0	0	0	0
	8:15 AM	2	2	0	1	5	2	2	0	1	5	0	0	0	0	0
	8:30 AM	2	1	2	0	5	2	1	1	0	4	0	0	1	0	1
	8:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	TOTAL	7	9	8	4	28	7	7	7	3	24	0	2	1	1	4
	BEGIN PEAK HR	7:15 AM					2	4	5	2	13					
PM	4:00 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:15 PM	2	0	0	2	4	2	0	0	2	4	0	0	0	0	0
	4:30 PM	2	0	0	3	5	0	0	0	1	1	2	0	0	2	4
	4:45 PM	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
	5:00 PM	0	0	0	3	3	0	0	0	1	1	0	0	0	2	2
	5:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:30 PM	1	2	0	2	5	1	2	0	1	4	0	0	0	1	1
	5:45 PM	0	0	4	1	5	0	0	3	1	4	0	0	1	0	1
	TOTAL	6	3	6	11	26	4	3	5	6	18	2	0	1	5	8
	BEGIN PEAK HR	4:00 PM					2	1	2	3	8					

INTERSECTION TURNING MOVEMENT COUNTS

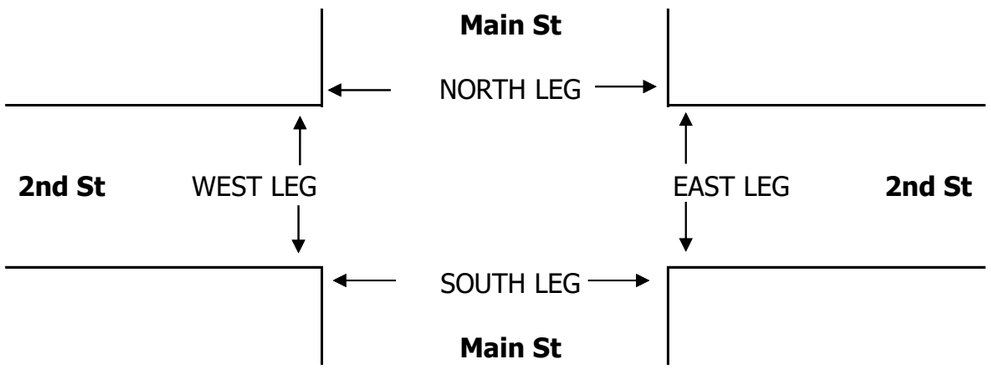
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Main St	LOCATION #:	5
	EAST & WEST:	2nd St	CONTROL:	STOP W

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Main St			SOUTHBOUND Main St			EASTBOUND 2nd St			WESTBOUND 2nd St				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 1	ST 2	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	28	0	0	35	0	0	0	0	1	0	3	67	0	0	0	0	0
	7:15 AM	0	46	0	0	78	0	0	0	0	0	0	1	125	0	0	0	0	0
	7:30 AM	0	62	1	2	68	0	0	0	0	3	0	2	138	0	0	0	0	0
	7:45 AM	0	64	0	0	73	0	0	0	0	2	0	4	143	0	0	0	0	0
	8:00 AM	0	56	0	1	68	0	0	0	0	1	0	1	127	0	0	0	0	0
	8:15 AM	0	57	1	1	54	0	0	0	0	2	0	0	115	0	0	0	0	0
	8:30 AM	0	68	1	0	60	0	0	0	0	3	0	3	135	0	0	0	0	0
	8:45 AM	0	53	1	0	75	0	0	0	0	4	0	0	133	0	0	0	1	1
	VOLUMES	0	434	4	4	511	0	0	0	0	16	0	14	984	0	0	0	1	1
	APPROACH %	0%	99%	1%	1%	99%	0%	0%	0%	0%	52%	0%	45%						
	APP/DEPART	438	/	448	515	/	527	0	/	9	31	/	0	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	228	1	3	287	0	0	0	0	6	0	8	533	0	0	0	0	
	APPROACH %	0%	100%	0%	1%	99%	0%	0%	0%	0%	43%	0%	57%						
	PEAK HR FACTOR		0.895			0.929			0.000			0.583		0.932					
	APP/DEPART	229	/	236	290	/	293	0	/	4	14	/	0	0					
PM	4:00 PM	0	80	1	1	128	0	0	0	0	1	0	3	214	0	0	0	0	0
	4:15 PM	0	88	0	1	116	0	0	0	0	2	0	0	207	0	0	0	0	0
	4:30 PM	0	99	4	0	82	0	0	0	0	6	0	1	192	0	0	0	0	0
	4:45 PM	0	73	2	3	106	0	0	0	0	0	0	1	185	0	0	0	0	0
	5:00 PM	0	119	0	2	82	0	0	0	0	1	0	1	205	0	0	0	0	0
	5:15 PM	0	84	3	2	111	0	0	0	0	6	0	2	208	0	1	0	1	2
	5:30 PM	0	77	2	0	104	0	0	0	0	2	0	2	187	0	0	0	0	0
	5:45 PM	0	65	2	1	81	0	0	0	0	0	0	1	150	0	0	0	1	1
	VOLUMES	0	685	14	10	810	0	0	0	0	18	0	11	1,551	0	1	0	2	3
	APPROACH %	0%	98%	2%	1%	99%	0%	0%	0%	0%	58%	0%	35%						
	APP/DEPART	699	/	697	821	/	828	0	/	26	31	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	340	7	5	432	0	0	0	0	9	0	5	798	0	0	0	0	
	APPROACH %	0%	98%	2%	1%	99%	0%	0%	0%	0%	64%	0%	36%						
	PEAK HR FACTOR		0.842			0.847			0.000			0.500		0.932					
	APP/DEPART	347	/	345	437	/	441	0	/	12	14	/	0	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	7:30 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:45 AM	0	0	4	0	4	0	0	3	0	3	0	0	1	0	1
	8:00 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:15 AM	1	1	1	0	3	1	1	1	0	3	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
	TOTAL	3	2	7	0	12	3	2	6	0	11	0	0	1	0	1
	BEGIN PEAK HR	7:15 AM					2	0	4	0	6					
PM	4:00 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	1	2	0	3	0	1	2	0	3	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	3	0	3	0	0	3	0	3	0	0	0	0	0
	TOTAL	0	1	6	0	7	0	1	6	0	7	0	0	0	0	0
	BEGIN PEAK HR	4:00 PM					0	1	3	0	4					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Main St
EAST & WEST: 3rd St

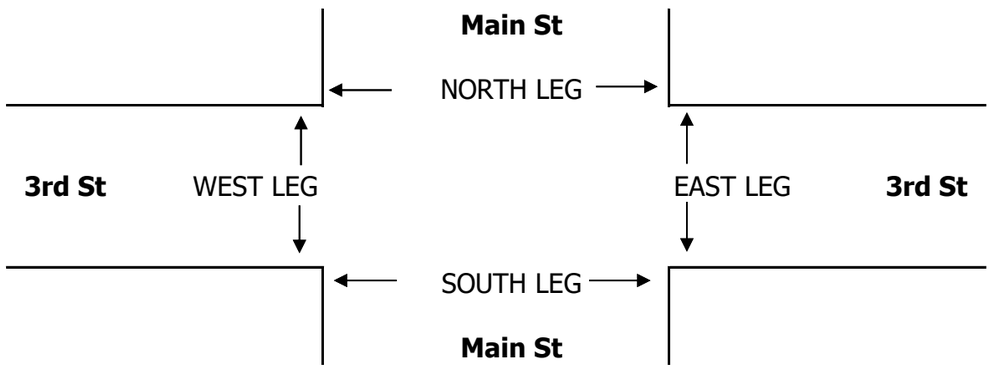
PROJECT #: SC4743
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

	NORTHBOUND Main St			SOUTHBOUND Main St			EASTBOUND 3rd St			WESTBOUND 3rd St				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	1	0	1.5	0.5	1	1	2	0	1	1	0		0	0	0	0	
AM 7:00 AM	2	0	0	28	1	18	21	31	11	21	34	11	178	0	0	0	0	0
7:15 AM	1	0	0	38	6	35	27	57	17	29	44	17	271	0	0	0	0	0
7:30 AM	1	1	0	37	0	30	36	58	17	13	31	26	250	0	0	0	0	0
7:45 AM	0	0	2	43	4	32	39	67	6	24	46	19	282	0	0	0	0	0
8:00 AM	0	0	2	51	0	21	39	65	11	17	39	18	263	0	0	0	0	0
8:15 AM	0	1	0	32	2	26	25	53	9	16	51	31	246	0	0	0	0	0
8:30 AM	0	1	0	32	1	32	36	38	9	12	53	31	245	0	0	0	1	1
8:45 AM	0	0	2	38	1	42	32	59	8	13	46	25	266	0	0	0	0	0
VOLUMES	4	3	6	299	15	236	255	428	88	145	344	178	2,002	0	0	0	1	1
APPROACH %	31%	23%	46%	54%	3%	43%	33%	56%	11%	22%	51%	27%						
APP/DEPART	13	/	436	550	/	248	771	/	734	668	/	584	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	2	1	4	169	10	118	141	247	51	83	160	80	1,066	0	0	0	0	
APPROACH %	29%	14%	57%	57%	3%	40%	32%	56%	12%	26%	50%	25%						
PEAK HR FACTOR		0.875			0.940			0.954			0.897		0.945					
APP/DEPART	7	/	222	297	/	144	439	/	420	323	/	280	0					
PM 4:00 PM	3	3	6	74	2	40	33	173	3	5	61	51	454	0	0	0	0	0
4:15 PM	3	1	5	92	0	36	38	166	2	1	76	52	472	0	0	0	0	0
4:30 PM	1	2	4	66	0	30	45	162	3	1	75	56	445	0	0	0	0	0
4:45 PM	0	0	2	67	2	34	30	186	2	6	71	44	444	0	0	0	0	0
5:00 PM	1	6	0	58	0	26	34	167	1	1	72	82	448	0	0	0	0	0
5:15 PM	3	2	6	72	1	28	34	175	2	3	71	62	459	0	0	0	0	0
5:30 PM	3	0	0	60	0	43	30	198	0	0	68	51	453	0	0	0	0	0
5:45 PM	2	0	3	57	1	29	34	152	1	3	68	42	392	0	0	0	0	0
VOLUMES	16	14	26	546	6	266	278	1,379	14	20	562	440	3,567	0	0	0	0	0
APPROACH %	29%	25%	46%	67%	1%	33%	17%	83%	1%	2%	55%	43%						
APP/DEPART	56	/	732	818	/	40	1,671	/	1,951	1,022	/	844	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	7	6	17	299	4	140	146	687	10	13	283	203	1,815	0	0	0	0	
APPROACH %	23%	20%	57%	67%	1%	32%	17%	81%	1%	3%	57%	41%						
PEAK HR FACTOR		0.625			0.865			0.967			0.945		0.961					
APP/DEPART	30	/	355	443	/	27	843	/	1,003	499	/	430	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	1	0	1	3	0	1	0	1	2	1	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	1	0	1	1	3	1	0	1	1	3	0	0	0	0	0
	8:00 AM	0	0	0	3	3	0	0	0	3	3	0	0	0	0	0
	8:15 AM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	8:30 AM	2	2	0	0	4	0	1	0	0	1	2	1	0	0	3
	8:45 AM	2	1	0	2	5	1	1	0	2	4	1	0	0	0	1
	TOTAL	6	4	1	9	20	2	3	1	9	15	4	1	0	0	5
	BEGIN PEAK HR	7:15 AM					1	1	1	5	8					
PM	4:00 PM	1	4	1	2	8	0	3	1	2	6	1	1	0	0	2
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	2	2	0	0	4	1	2	0	0	3	1	0	0	0	1
	4:45 PM	3	2	0	0	5	2	1	0	0	3	1	1	0	0	2
	5:00 PM	3	4	0	4	11	1	0	0	2	3	2	4	0	2	8
	5:15 PM	2	2	0	1	5	2	1	0	1	4	0	1	0	0	1
	5:30 PM	1	3	0	1	5	1	2	0	0	3	0	1	0	1	2
	5:45 PM	3	4	0	3	10	3	0	0	3	6	0	4	0	0	4
	TOTAL	15	21	1	11	48	10	9	1	8	28	5	12	0	3	20
	BEGIN PEAK HR	4:00 PM					3	6	1	2	12					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Market St
EAST & WEST: 1st St

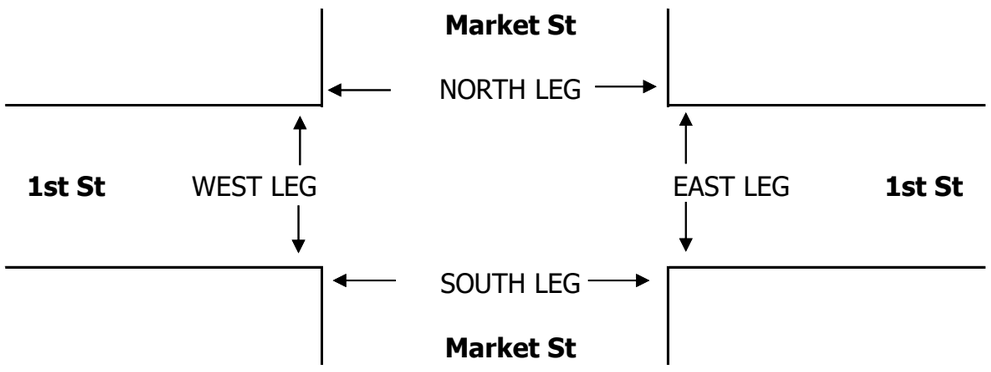
PROJECT #: SC4743
LOCATION #: 7
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 1st St			WESTBOUND 1st St				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	2	58	8	4	119	0	2	8	1	7	5	3	217	0	0	0	0	0
	7:15 AM	1	72	8	4	193	0	3	10	2	5	3	3	304	0	0	0	0	0
	7:30 AM	1	91	9	9	178	0	5	22	4	8	14	3	344	0	0	0	0	0
	7:45 AM	1	80	12	9	179	2	2	19	5	9	4	2	324	0	0	0	0	0
	8:00 AM	3	76	16	7	121	3	1	24	6	10	9	4	280	0	1	1	0	2
	8:15 AM	5	71	9	9	144	3	1	13	2	7	11	1	276	0	0	0	0	0
	8:30 AM	0	84	14	3	114	0	5	15	1	14	7	2	259	0	0	0	0	0
	8:45 AM	2	85	8	2	129	0	3	14	1	6	4	1	255	0	0	0	0	0
	VOLUMES	15	617	84	47	1,177	8	22	125	22	66	57	19	2,261	0	1	1	0	2
	APPROACH %	2%	86%	12%	4%	95%	1%	13%	74%	13%	46%	40%	13%						
	APP/DEPART	716	/	659	1,233	/	1,265	170	/	256	142	/	81	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	6	319	45	29	671	5	11	75	17	32	30	12	1,254	0	1	1	0	
	APPROACH %	2%	86%	12%	4%	95%	1%	11%	72%	16%	43%	41%	16%						
	PEAK HR FACTOR		0.916			0.896			0.813			0.740		0.911					
	APP/DEPART	370	/	343	706	/	720	104	/	149	74	/	42	0					
PM	4:00 PM	6	126	21	35	254	9	3	23	3	19	2	7	508	0	0	0	0	0
	4:15 PM	6	138	13	32	255	7	6	25	3	13	13	8	519	0	0	0	1	1
	4:30 PM	6	147	12	23	259	6	3	24	7	13	7	7	514	0	0	0	1	1
	4:45 PM	6	140	22	37	249	5	5	32	2	11	12	6	527	0	0	0	0	0
	5:00 PM	5	152	16	19	233	8	7	19	3	12	13	5	492	0	0	0	1	1
	5:15 PM	2	180	21	36	242	5	6	28	3	11	15	15	564	0	0	0	0	0
	5:30 PM	4	108	22	24	264	6	4	18	3	12	15	8	488	0	0	0	1	1
	5:45 PM	10	96	13	22	198	3	1	22	2	14	7	5	393	0	0	0	0	0
	VOLUMES	45	1,087	140	228	1,954	49	35	191	26	105	84	61	4,009	0	0	0	4	4
	APPROACH %	4%	85%	11%	10%	88%	2%	14%	76%	10%	41%	33%	24%						
	APP/DEPART	1,272	/	1,183	2,231	/	2,085	252	/	563	254	/	178	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	19	619	71	115	983	24	21	103	15	47	47	33	2,099	0	0	0	2	
	APPROACH %	3%	87%	10%	10%	88%	2%	15%	74%	11%	36%	36%	26%						
	PEAK HR FACTOR		0.873			0.964			0.891			0.787		0.930					
	APP/DEPART	709	/	673	1,122	/	1,045	139	/	291	129	/	90	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1
	7:15 AM	0	0	0	2	2	0	0	0	1	1	0	0	0	1	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1
	8:00 AM	1	0	3	1	5	1	0	3	1	5	0	0	0	0	0
	8:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:30 AM	0	0	1	1	2	0	0	1	1	2	0	0	0	0	0
	8:45 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	TOTAL	3	4	4	5	16	2	2	4	4	12	1	2	0	1	4
	BEGIN PEAK HR	7:15 AM					1	2	3	2	8					
PM	4:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:15 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	4:45 PM	0	0	1	2	3	0	0	1	1	2	0	0	0	1	1
	5:00 PM	1	1	0	2	4	1	0	0	2	3	0	1	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	3	1	2	6	0	3	0	2	5	0	0	1	0	1
	5:45 PM	0	0	0	3	3	0	0	0	3	3	0	0	0	0	0
	TOTAL	1	5	2	11	19	1	4	1	9	15	0	1	1	2	4
	BEGIN PEAK HR	4:30 PM					1	0	1	3	5					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

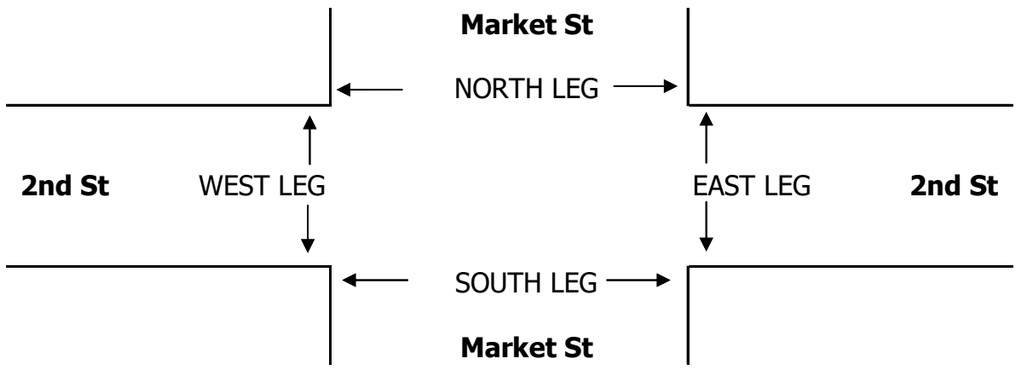
LOCATION: Riverside
NORTH & SOUTH: Market St
EAST & WEST: 2nd St

PROJECT #: SC4743
LOCATION #: 8
CONTROL: STOP E

NOTES: Queue SB PM

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 2nd St			WESTBOUND 2nd St				U-TURNS				
	LANES:	NL 0	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	68	0	0	127	0	0	0	3	0	0	0	199	0	0	0	0	0
	7:15 AM	0	80	0	0	199	1	1	0	1	0	0	0	282	0	0	0	0	0
	7:30 AM	0	100	0	0	189	1	1	0	3	0	0	0	294	0	0	0	0	0
	7:45 AM	1	96	0	0	192	1	0	0	0	0	0	0	290	0	0	0	0	0
	8:00 AM	1	95	0	0	133	1	0	0	0	0	0	0	230	1	0	0	0	1
	8:15 AM	0	84	0	0	153	0	1	0	1	0	0	0	239	0	0	0	0	0
	8:30 AM	4	98	0	0	127	2	0	0	2	0	0	0	233	1	0	0	0	1
	8:45 AM	0	93	0	0	136	0	2	0	3	0	0	0	234	1	0	0	0	1
	VOLUMES	7	714	0	0	1,256	6	5	0	13	0	0	0	2,004	3	0	0	0	3
	APPROACH %	1%	99%	0%	0%	100%	0%	28%	0%	72%	0%	0%	0%						
	APP/DEPART	724	/	719	1,262	/	1,272	18	/	0	0	/	13	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	2	371	0	0	713	4	2	0	4	0	0	0	1,097	1	0	0	0	
	APPROACH %	1%	99%	0%	0%	99%	1%	33%	0%	67%	0%	0%	0%						
	PEAK HR FACTOR		0.935			0.896			0.375			0.000		0.933					
	APP/DEPART	374	/	373	717	/	718	6	/	0	0	/	6	0					
PM	4:00 PM	3	155	0	0	270	6	1	0	1	0	0	0	436	0	0	0	0	0
	4:15 PM	2	156	0	0	269	2	1	0	4	0	0	0	434	1	0	0	0	1
	4:30 PM	2	163	0	0	272	3	2	0	2	0	0	0	444	0	0	0	0	0
	4:45 PM	3	168	0	0	262	0	0	0	1	0	0	0	434	0	0	0	0	0
	5:00 PM	4	170	0	0	247	1	3	0	0	0	0	0	425	1	0	0	0	1
	5:15 PM	2	199	0	0	254	2	4	0	2	0	0	0	463	2	0	0	0	2
	5:30 PM	3	133	0	0	275	4	1	0	0	0	0	0	416	0	0	1	0	1
	5:45 PM	1	116	0	0	214	0	3	0	2	0	0	0	336	1	0	0	0	1
	VOLUMES	20	1,260	0	0	2,063	18	15	0	12	0	0	0	3,394	5	0	1	0	6
	APPROACH %	2%	98%	0%	0%	99%	1%	54%	0%	43%	0%	0%	0%						
	APP/DEPART	1,285	/	1,275	2,081	/	2,080	28	/	0	0	/	39	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	11	700	0	0	1,035	6	9	0	5	0	0	0	1,769	3	0	0	0	
	APPROACH %	2%	98%	0%	0%	99%	1%	64%	0%	36%	0%	0%	0%						
	PEAK HR FACTOR		0.879			0.946			0.583			0.000		0.951					
	APP/DEPART	714	/	709	1,041	/	1,043	14	/	0	0	/	17	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	2	2	0	0	0	1	1	0	0	0	1	1
	7:15 AM	0	0	1	1	2	0	0	0	0	0	0	0	1	1	2
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	1	3	4	0	0	1	3	4	0	0	0	0	0
	8:00 AM	0	0	1	3	4	0	0	1	2	3	0	0	0	1	1
	8:15 AM	0	0	3	2	5	0	0	3	2	5	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	6	11	17	0	0	5	8	13	0	0	1	3	4
	BEGIN PEAK HR	7:15 AM					0	0	2	5	7					
PM	4:00 PM	3	0	1	4	8	3	0	0	4	7	0	0	1	0	1
	4:15 PM	2	0	3	4	9	2	0	3	2	7	0	0	0	2	2
	4:30 PM	0	0	2	4	6	0	0	0	1	1	0	0	2	3	5
	4:45 PM	0	0	1	1	2	0	0	1	1	2	0	0	0	0	0
	5:00 PM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	5:15 PM	0	0	0	7	7	0	0	0	6	6	0	0	0	1	1
	5:30 PM	0	0	2	6	8	0	0	1	3	4	0	0	1	3	4
	5:45 PM	1	0	0	4	5	1	0	0	4	5	0	0	0	0	0
	TOTAL	7	0	9	31	47	6	0	5	21	32	1	0	4	10	15
	BEGIN PEAK HR	4:30 PM					0	0	1	8	9					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

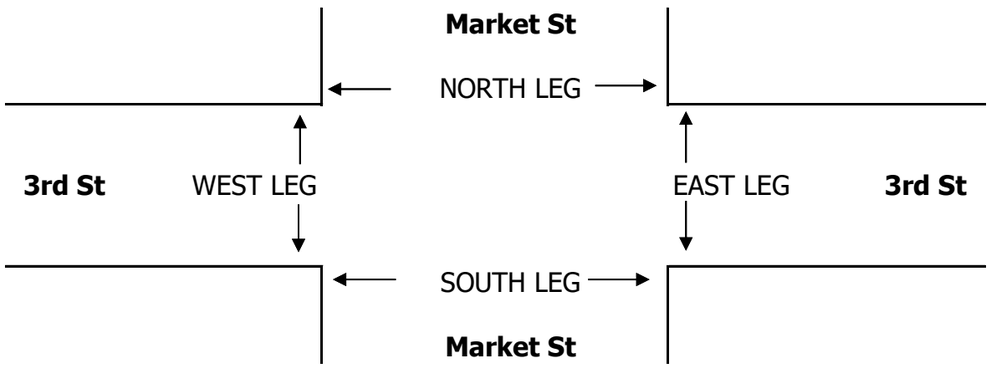
DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Market St	LOCATION #:	9
	EAST & WEST:	3rd St	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 3rd St			WESTBOUND 3rd St				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	47	34	16	109	3	4	13	3	38	2	16	285	0	0	0	0	0
	7:15 AM	0	58	67	26	172	5	5	12	2	44	8	22	421	1	0	0	0	1
	7:30 AM	1	78	61	15	170	4	8	25	6	34	13	15	430	0	0	0	0	0
	7:45 AM	0	74	72	17	165	4	7	22	3	50	13	15	442	0	0	0	0	0
	8:00 AM	0	72	64	22	115	4	6	33	1	39	5	15	376	0	0	0	0	0
	8:15 AM	3	58	32	18	136	4	6	26	4	42	15	19	363	0	0	0	1	1
	8:30 AM	4	73	51	20	106	1	4	17	1	40	22	23	362	0	0	0	0	0
	8:45 AM	1	57	59	24	114	3	9	16	5	48	14	25	375	0	0	0	0	0
	VOLUMES	9	517	440	158	1,087	28	49	164	25	335	92	150	3,056	1	0	0	1	2
	APPROACH %	1%	53%	46%	12%	85%	2%	21%	69%	11%	58%	16%	26%						
	APP/DEPART	967	/	716	1,273	/	1,448	238	/	763	578	/	129	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	1	282	264	80	622	17	26	92	12	167	39	67	1,670	1	0	0	0	
	APPROACH %	0%	51%	48%	11%	87%	2%	20%	71%	9%	61%	14%	25%						
	PEAK HR FACTOR		0.938			0.885			0.813			0.875		0.945					
	APP/DEPART	548	/	375	719	/	802	130	/	436	273	/	57	0					
PM	4:00 PM	2	118	75	96	171	7	3	37	1	58	19	24	611	0	0	0	0	0
	4:15 PM	3	112	63	109	154	6	11	27	4	61	29	32	611	0	0	0	0	0
	4:30 PM	4	131	73	103	158	11	8	37	4	49	24	27	629	0	0	0	0	0
	4:45 PM	2	135	84	95	161	6	8	40	4	44	29	28	636	0	0	0	0	0
	5:00 PM	1	138	68	107	146	7	4	39	2	40	27	28	607	0	0	0	0	0
	5:15 PM	4	153	86	93	141	4	10	17	3	44	24	42	621	0	0	0	0	0
	5:30 PM	1	95	84	125	163	3	7	31	1	52	22	34	618	0	0	0	0	0
	5:45 PM	2	87	71	83	129	6	3	21	1	47	27	26	503	0	0	0	0	0
	VOLUMES	19	969	604	811	1,223	50	54	249	20	395	201	241	4,836	0	0	0	0	0
	APPROACH %	1%	61%	38%	39%	59%	2%	17%	77%	6%	47%	24%	29%						
	APP/DEPART	1,592	/	1,264	2,084	/	1,638	323	/	1,664	837	/	270	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	11	557	311	398	606	28	30	133	13	177	104	125	2,493	0	0	0	0	
	APPROACH %	1%	63%	35%	39%	59%	3%	17%	76%	7%	44%	26%	31%						
	PEAK HR FACTOR		0.904			0.949			0.846			0.923		0.980					
	APP/DEPART	879	/	712	1,032	/	796	176	/	842	406	/	143	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	1	1	2	4	0	1	1	1	3	0	0	0	1	1
	7:15 AM	1	0	1	1	3	0	0	0	0	0	1	0	1	1	3
	7:30 AM	2	0	1	1	4	2	0	1	1	4	0	0	0	0	0
	7:45 AM	1	3	1	1	6	1	3	0	1	5	0	0	1	0	1
	8:00 AM	0	6	1	2	9	0	6	1	2	9	0	0	0	0	0
	8:15 AM	1	3	3	2	9	1	3	3	2	9	0	0	0	0	0
	8:30 AM	1	4	0	2	7	0	4	0	2	6	1	0	0	0	1
	8:45 AM	1	0	0	2	3	0	0	0	2	2	1	0	0	0	1
	TOTAL	7	17	8	13	45	4	17	6	11	38	3	0	2	2	7
	BEGIN PEAK HR	7:15 AM					3	9	2	4	18					
PM	4:00 PM	0	6	0	3	9	0	5	0	3	8	0	1	0	0	1
	4:15 PM	1	8	2	4	15	1	8	2	2	13	0	0	0	2	2
	4:30 PM	2	3	1	4	10	1	3	0	1	5	1	0	1	3	5
	4:45 PM	2	4	3	6	15	1	4	2	6	13	1	0	1	0	2
	5:00 PM	3	2	1	5	11	1	0	1	5	7	2	2	0	0	4
	5:15 PM	0	7	1	10	18	0	5	1	8	14	0	2	0	2	4
	5:30 PM	1	4	2	7	14	1	1	2	6	10	0	3	0	1	4
	5:45 PM	2	5	1	6	14	1	4	0	6	11	1	1	1	0	3
	TOTAL	11	39	11	45	106	6	30	8	37	81	5	9	3	8	25
	BEGIN PEAK HR	4:30 PM					3	12	4	20	39					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Market St
EAST & WEST: 4th St

PROJECT #: SC4743
LOCATION #: 10
CONTROL: STOP E/W

NOTES:

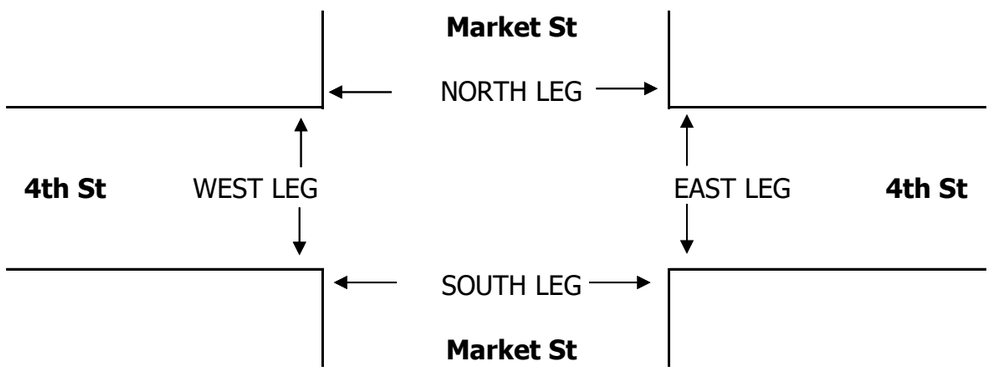
AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

	NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 4th St			WESTBOUND 4th St			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	0	90	1	2	151	1	2	0	6	0	0	4	257
7:15 AM	3	118	2	1	213	3	3	0	2	1	0	6	352
7:30 AM	3	131	1	6	197	0	5	0	2	1	0	10	356
7:45 AM	0	146	0	6	213	1	4	0	2	0	0	3	375
8:00 AM	1	142	1	1	147	0	2	0	5	0	0	7	306
8:15 AM	2	101	0	1	178	1	1	0	1	1	0	1	287
8:30 AM	3	124	3	0	150	0	3	0	5	0	0	3	291
8:45 AM	2	120	0	3	158	1	2	0	2	0	0	4	292
AM VOLUMES	14	972	8	20	1,407	7	22	0	25	3	0	38	2,520
AM APPROACH %	1%	98%	1%	1%	98%	0%	47%	0%	53%	7%	0%	93%	
AM APP/DEPART	995	/	1,035	1,437	/	1,436	47	/	28	41	/	21	0
AM BEGIN PEAK HR		7:15 AM											
AM VOLUMES	7	537	4	14	770	4	14	0	11	2	0	26	1,393
AM APPROACH %	1%	98%	1%	2%	97%	1%	56%	0%	44%	7%	0%	93%	
AM PEAK HR FACTOR		0.940			0.899			0.893			0.636		0.929
AM APP/DEPART	549	/	580	791	/	784	25	/	18	28	/	11	0
4:00 PM	3	189	0	1	202	1	2	0	1	0	0	1	400
4:15 PM	8	176	0	0	224	3	4	0	3	0	0	2	420
4:30 PM	6	223	0	1	206	1	5	0	5	0	0	5	452
4:45 PM	5	203	0	1	208	2	0	0	5	0	0	2	426
5:00 PM	9	219	1	2	180	2	1	0	1	0	0	4	419
5:15 PM	2	234	0	1	186	1	3	0	2	0	0	3	432
5:30 PM	2	172	0	2	204	1	2	0	6	0	0	2	391
5:45 PM	1	163	1	2	173	2	1	0	6	0	0	0	349
PM VOLUMES	36	1,579	2	10	1,583	13	18	0	29	0	0	19	3,299
PM APPROACH %	2%	98%	0%	1%	98%	1%	38%	0%	62%	0%	0%	100%	
PM APP/DEPART	1,617	/	1,626	1,616	/	1,612	47	/	12	19	/	49	0
PM BEGIN PEAK HR		4:30 PM											
PM VOLUMES	22	879	1	5	780	6	9	0	13	0	0	14	1,734
PM APPROACH %	2%	97%	0%	1%	98%	1%	41%	0%	59%	0%	0%	100%	
PM PEAK HR FACTOR		0.956			0.934			0.550			0.700		0.959
PM APP/DEPART	902	/	907	796	/	793	22	/	6	14	/	28	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
1	1	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	3	0	0	4
1	3	0	0	
0	3	0	0	3
0	0	0	0	0
0	0	0	0	0
0	2	0	0	2
0	2	0	0	2
0	1	0	0	1
0	2	0	0	2
0	0	0	0	0
0	10	0	0	10
0	5	0	0	



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	1	5	6	0	0	1	4	5	0	0	0	1	1
	7:15 AM	0	0	1	2	3	0	0	0	1	1	0	0	1	1	2
	7:30 AM	0	0	2	2	4	0	0	2	2	4	0	0	0	0	0
	7:45 AM	0	0	0	2	2	0	0	0	1	1	0	0	0	1	1
	8:00 AM	0	0	8	1	9	0	0	8	1	9	0	0	0	0	0
	8:15 AM	0	0	5	2	7	0	0	5	2	7	0	0	0	0	0
	8:30 AM	1	0	4	7	12	1	0	3	6	10	0	0	1	1	2
	8:45 AM	0	0	2	1	3	0	0	1	1	2	0	0	1	0	1
	TOTAL	1	0	23	22	46	1	0	20	18	39	0	0	3	4	7
	BEGIN PEAK HR			7:15 AM			0	0	10	5	15					
PM	4:00 PM	0	0	2	5	7	0	0	2	5	7	0	0	0	0	0
	4:15 PM	0	0	7	7	14	0	0	7	5	12	0	0	0	2	2
	4:30 PM	0	2	5	11	18	0	2	4	8	14	0	0	1	3	4
	4:45 PM	0	0	3	4	7	0	0	3	4	7	0	0	0	0	0
	5:00 PM	0	0	2	4	6	0	0	2	4	6	0	0	0	0	0
	5:15 PM	2	0	3	8	13	1	0	2	5	8	1	0	1	3	5
	5:30 PM	0	0	2	9	11	0	0	2	8	10	0	0	0	1	1
	5:45 PM	2	1	2	6	11	2	1	1	6	10	0	0	1	0	1
	TOTAL	4	3	26	54	87	3	3	23	45	74	1	0	3	9	13
	BEGIN PEAK HR			4:30 PM			1	2	11	21	35					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Market St
EAST & WEST: 5th St

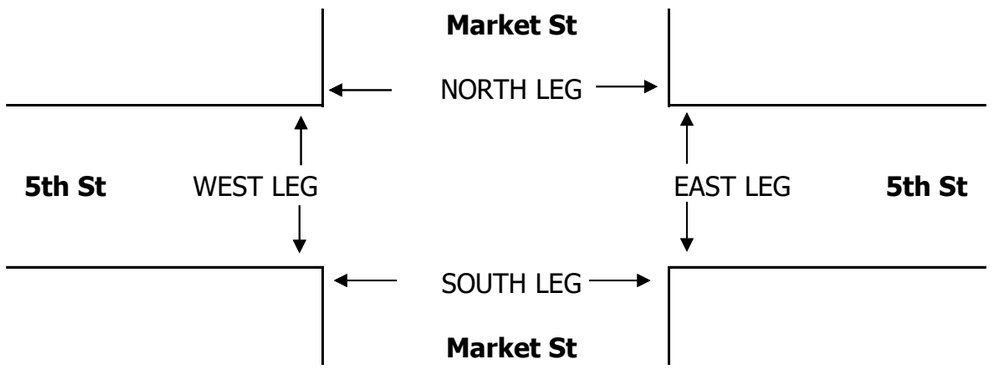
PROJECT #: SC4743
LOCATION #: 11
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

	NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 5th St			WESTBOUND 5th St				U-TURNS				
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
7:00 AM	1	79	7	9	146	1	3	2	3	4	2	11	268	0	0	0	0	0
7:15 AM	2	102	4	15	205	0	4	0	5	5	1	15	358	0	0	0	0	0
7:30 AM	5	120	5	8	191	1	4	0	9	4	1	11	359	0	0	0	0	0
7:45 AM	2	137	10	9	199	3	2	6	4	2	2	15	391	0	1	0	0	1
8:00 AM	1	126	6	11	142	2	3	4	2	5	1	9	312	0	1	0	0	1
8:15 AM	2	92	12	13	167	1	1	0	3	3	3	12	309	0	0	0	0	0
8:30 AM	2	112	8	5	144	2	8	3	2	5	0	8	299	0	0	0	0	0
8:45 AM	1	114	12	8	154	4	6	3	3	6	1	7	319	0	0	0	0	0
AM VOLUMES	16	882	64	78	1,348	14	31	18	31	34	11	88	2,617	0	2	0	0	2
AM APPROACH %	2%	92%	7%	5%	93%	1%	39%	23%	39%	26%	8%	66%						
AM APP/DEPART	962	/	1,003	1,442	/	1,413	80	/	160	133	/	41	0					
AM BEGIN PEAK HR		7:15 AM																
AM VOLUMES	10	485	25	43	737	6	13	10	20	16	5	50	1,422	0	2	0	0	
AM APPROACH %	2%	93%	5%	5%	94%	1%	30%	23%	47%	23%	7%	70%						
AM PEAK HR FACTOR		0.872			0.895			0.827			0.845		0.907					
AM APP/DEPART	520	/	550	788	/	773	43	/	78	71	/	21	0					
4:00 PM	4	197	9	15	190	4	6	3	2	6	7	7	450	3	0	0	0	3
4:15 PM	4	176	7	25	199	5	2	4	4	4	8	9	447	1	0	0	0	1
4:30 PM	3	209	7	23	173	5	7	3	3	4	3	12	452	2	0	0	0	2
4:45 PM	4	199	6	20	197	7	3	2	5	4	4	9	460	1	1	0	0	2
5:00 PM	7	217	10	14	165	2	2	0	5	7	6	19	454	1	0	0	0	1
5:15 PM	3	210	8	19	164	5	6	3	3	6	1	6	434	2	0	0	0	2
5:30 PM	6	163	13	20	181	5	6	1	5	6	3	6	415	0	0	0	0	0
5:45 PM	7	161	7	14	165	4	2	2	6	4	4	3	379	1	0	0	0	1
PM VOLUMES	38	1,532	67	150	1,434	37	34	18	33	41	36	71	3,503	11	1	0	0	12
PM APPROACH %	2%	93%	4%	9%	88%	2%	40%	21%	39%	28%	24%	48%						
PM APP/DEPART	1,648	/	1,638	1,622	/	1,519	85	/	235	148	/	111	0					
PM BEGIN PEAK HR		4:15 PM																
PM VOLUMES	18	801	30	82	734	19	14	9	17	19	21	49	1,819	5	1	0	0	
PM APPROACH %	2%	94%	4%	10%	88%	2%	35%	23%	43%	21%	24%	55%						
PM PEAK HR FACTOR		0.909			0.913			0.769			0.695		0.984					
PM APP/DEPART	854	/	865	836	/	775	40	/	121	89	/	58	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	3	1	1	2	7	3	1	1	1	6	0	0	0	1	1
	7:15 AM	1	2	1	2	6	1	1	0	0	2	0	1	1	2	4
	7:30 AM	1	2	6	1	10	1	2	6	1	10	0	0	0	0	0
	7:45 AM	1	1	0	4	6	1	1	0	3	5	0	0	0	1	1
	8:00 AM	3	0	4	1	8	3	0	3	1	7	0	0	1	0	1
	8:15 AM	2	0	3	1	6	2	0	3	1	6	0	0	0	0	0
	8:30 AM	6	0	2	3	11	6	0	1	3	10	0	0	1	0	1
	8:45 AM	1	0	1	1	3	1	0	1	1	3	0	0	0	0	0
	TOTAL	18	6	18	15	57	18	5	15	11	49	0	1	3	4	8
	BEGIN PEAK HR	7:15 AM					6	4	9	5	24					
PM	4:00 PM	2	3	3	7	15	2	3	3	6	14	0	0	0	1	1
	4:15 PM	0	3	2	6	11	0	3	2	5	10	0	0	0	1	1
	4:30 PM	1	4	4	10	19	1	4	3	7	15	0	0	1	3	4
	4:45 PM	3	6	1	12	22	2	6	1	12	21	1	0	0	0	1
	5:00 PM	1	2	2	7	12	1	2	2	7	12	0	0	0	0	0
	5:15 PM	5	5	4	9	23	5	5	3	6	19	0	0	1	3	4
	5:30 PM	4	6	5	8	23	4	6	5	7	22	0	0	0	1	1
	5:45 PM	1	4	3	9	17	1	3	3	9	16	0	1	0	0	1
	TOTAL	17	33	24	68	142	16	32	22	59	129	1	1	2	9	13
	BEGIN PEAK HR	4:15 PM					4	15	8	31	58					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

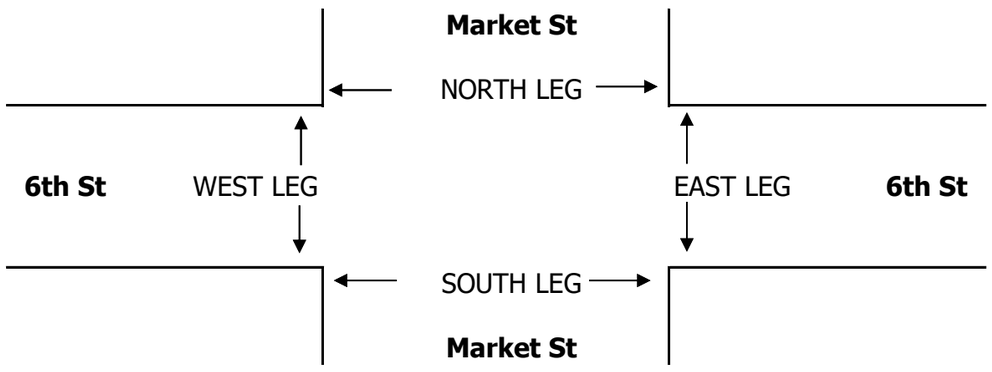
DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Market St	LOCATION #:	12
	EAST & WEST:	6th St	CONTROL:	SIGNAL

NOTES:

Lanes from Video

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 6th St			WESTBOUND 6th St				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL X	ET X	ER 1	WL X	WT X	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	78	3	4	156	0	0	0	2	0	0	1	245	0	0	0	0	0
	7:15 AM	1	107	2	1	190	4	0	0	3	0	0	3	311	0	0	0	0	0
	7:30 AM	1	118	5	2	191	2	0	0	4	0	0	5	328	0	0	0	0	0
	7:45 AM	3	144	0	0	209	6	0	0	3	0	0	2	367	0	1	0	0	1
	8:00 AM	6	135	5	2	152	3	0	0	2	0	0	4	309	0	0	0	0	0
	8:15 AM	2	93	6	1	174	4	0	0	2	0	0	4	286	0	0	0	0	0
	8:30 AM	2	119	5	2	149	2	0	0	4	0	0	4	287	0	0	0	0	0
	8:45 AM	6	111	4	4	149	0	0	0	3	0	0	9	286	0	0	0	0	0
	VOLUMES	22	905	30	16	1,370	21	0	0	23	0	0	32	2,420	0	1	0	0	1
	APPROACH %	2%	95%	3%	1%	97%	1%	0%	0%	100%	0%	0%	100%						
	APP/DEPART	957	/	938	1,408	/	1,393	23	/	46	32	/	43	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	11	504	12	5	742	15	0	0	12	0	0	14	1,316	0	1	0	0	
	APPROACH %	2%	96%	2%	1%	97%	2%	0%	0%	100%	0%	0%	100%						
	PEAK HR FACTOR		0.896			0.883			0.750			0.700		0.894					
	APP/DEPART	527	/	519	763	/	754	12	/	17	14	/	26	0					
PM	4:00 PM	11	170	5	4	178	10	0	0	12	0	0	11	401	1	0	0	0	1
	4:15 PM	10	187	4	2	170	10	0	0	11	0	0	5	399	0	0	0	0	0
	4:30 PM	11	211	10	5	200	7	0	0	10	0	0	5	459	0	0	0	0	0
	4:45 PM	7	179	9	6	169	9	0	0	11	0	0	13	403	1	0	0	0	1
	5:00 PM	7	226	4	5	160	17	0	0	8	0	0	19	446	2	0	0	0	2
	5:15 PM	8	207	13	3	154	9	0	0	20	0	0	11	425	0	0	0	0	0
	5:30 PM	8	187	11	5	193	8	0	0	16	0	0	12	440	0	0	0	0	0
	5:45 PM	11	158	7	5	152	13	0	0	9	0	0	9	364	2	0	0	0	2
	VOLUMES	73	1,525	63	35	1,376	83	0	0	97	0	0	85	3,343	6	0	0	0	6
	APPROACH %	4%	91%	4%	2%	92%	6%	0%	0%	100%	0%	0%	100%						
	APP/DEPART	1,667	/	1,610	1,494	/	1,479	97	/	98	85	/	156	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	33	823	36	19	683	42	0	0	49	0	0	48	1,736	3	0	0	0	
	APPROACH %	4%	92%	4%	3%	92%	6%	0%	0%	100%	0%	0%	100%						
	PEAK HR FACTOR		0.936			0.877			0.613			0.632		0.946					
	APP/DEPART	895	/	871	744	/	735	49	/	55	48	/	75	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	2	0	2	5	9	2	0	2	3	7	0	0	0	2	2
	7:15 AM	0	0	1	4	5	0	0	0	1	1	0	0	1	3	4
	7:30 AM	1	0	3	7	11	1	0	3	7	11	0	0	0	0	0
	7:45 AM	3	0	0	4	7	3	0	0	4	7	0	0	0	0	0
	8:00 AM	3	0	4	2	9	3	0	4	1	8	0	0	0	1	1
	8:15 AM	0	1	3	4	8	0	0	3	4	7	0	1	0	0	1
	8:30 AM	4	2	5	1	12	4	2	4	1	11	0	0	1	0	1
	8:45 AM	3	4	0	2	9	2	4	0	2	8	1	0	0	0	1
	TOTAL	16	7	18	29	70	15	6	16	23	60	1	1	2	6	10
	BEGIN PEAK HR	7:15 AM					7	0	7	13	27					
PM	4:00 PM	6	4	4	10	24	5	4	4	9	22	1	0	0	1	2
	4:15 PM	5	18	4	12	39	5	18	4	11	38	0	0	0	1	1
	4:30 PM	2	16	2	19	39	2	16	1	16	35	0	0	1	3	4
	4:45 PM	5	8	3	21	37	5	8	2	21	36	0	0	1	0	1
	5:00 PM	8	15	3	13	39	8	14	3	13	38	0	1	0	0	1
	5:15 PM	4	18	3	19	44	4	18	3	15	40	0	0	0	4	4
	5:30 PM	3	16	3	27	49	3	16	2	26	47	0	0	1	1	2
	5:45 PM	3	15	4	15	37	2	15	4	15	36	1	0	0	0	1
	TOTAL	36	110	26	136	308	34	109	23	126	292	2	1	3	10	16
	BEGIN PEAK HR	4:30 PM					19	56	9	65	149					

INTERSECTION TURNING MOVEMENT COUNTS

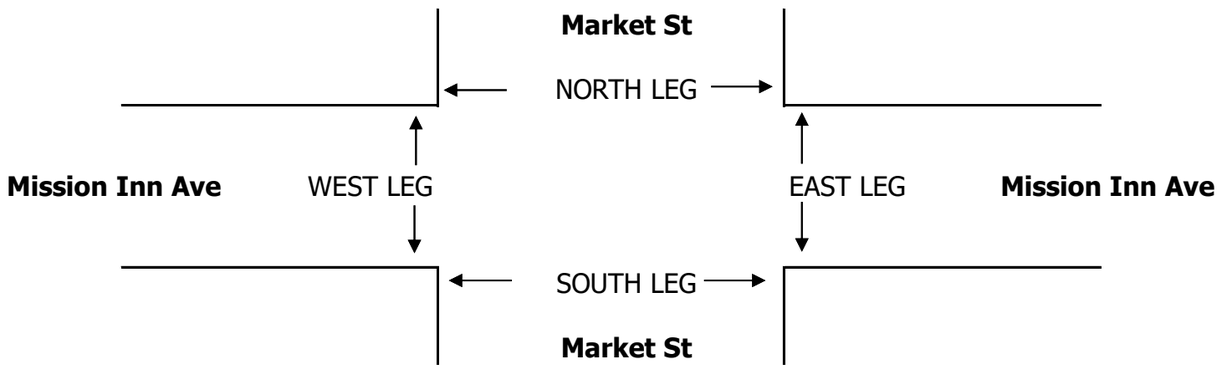
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Market St	LOCATION #:	13
	EAST & WEST:	Mission Inn Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND Mission Inn Ave			WESTBOUND Mission Inn Ave				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	11	67	10	6	128	23	9	41	13	15	31	7	361	0	0	0	0	0
	7:15 AM	11	70	5	7	171	15	29	41	26	22	42	11	450	0	0	0	0	0
	7:30 AM	13	88	8	6	176	13	28	63	33	32	41	9	510	0	0	0	0	0
	7:45 AM	18	93	9	6	190	15	45	47	45	34	41	10	553	0	0	0	0	0
	8:00 AM	15	94	11	10	128	16	41	40	34	26	52	11	478	0	0	0	0	0
	8:15 AM	10	81	9	11	145	21	15	29	22	28	40	6	417	0	0	0	0	0
	8:30 AM	7	93	6	10	128	15	25	36	25	29	39	9	422	0	0	0	0	0
	8:45 AM	16	84	9	3	133	15	23	51	23	23	41	14	435	0	0	0	0	0
	VOLUMES	101	670	67	59	1,199	133	215	348	221	209	327	77	3,626	0	0	0	0	0
	APPROACH %	12%	80%	8%	4%	86%	10%	27%	44%	28%	34%	53%	13%						
	APP/DEPART	838	/	962	1,391	/	1,629	784	/	474	613	/	561	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	57	345	33	29	665	59	143	191	138	114	176	41	1,991	0	0	0	0	
	APPROACH %	13%	79%	8%	4%	88%	8%	30%	40%	29%	34%	53%	12%						
	PEAK HR FACTOR		0.906			0.892			0.861			0.930		0.900					
	APP/DEPART	435	/	529	753	/	917	472	/	253	331	/	292	0					
PM	4:00 PM	46	142	28	14	151	25	33	43	42	20	42	13	599	0	0	0	0	0
	4:15 PM	17	139	17	14	137	29	52	92	34	19	61	11	622	0	0	0	0	0
	4:30 PM	24	175	26	20	168	21	46	76	50	18	49	10	683	0	1	0	0	1
	4:45 PM	21	122	24	14	146	21	56	66	40	18	57	18	603	0	0	0	0	0
	5:00 PM	19	178	29	19	128	22	51	76	47	12	62	10	653	0	0	0	0	0
	5:15 PM	37	147	10	19	145	9	66	80	47	18	55	15	648	0	0	0	0	0
	5:30 PM	22	142	16	13	168	27	52	65	37	13	50	12	617	0	1	0	0	1
	5:45 PM	24	107	31	14	124	25	53	61	43	20	66	19	587	0	0	0	0	0
	VOLUMES	210	1,152	181	127	1,167	179	409	559	340	138	442	108	5,014	0	2	0	0	2
	APPROACH %	14%	75%	12%	9%	79%	12%	31%	43%	26%	20%	64%	16%						
	APP/DEPART	1,543	/	1,671	1,475	/	1,645	1,308	/	867	688	/	831	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	101	622	89	72	587	73	219	298	184	66	223	53	2,588	0	1	0	0	
	APPROACH %	12%	77%	11%	10%	80%	10%	31%	43%	26%	19%	65%	15%						
	PEAK HR FACTOR		0.898			0.873			0.908			0.919		0.946					
	APP/DEPART	812	/	895	733	/	837	701	/	459	342	/	397	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	1	5	1	3	10	1	5	1	1	8	0	0	0	2	2
	7:15 AM	4	7	2	2	15	3	7	1	1	12	1	0	1	1	3
	7:30 AM	3	10	3	1	17	3	10	3	1	17	0	0	0	0	0
	7:45 AM	8	12	5	4	29	8	12	5	4	29	0	0	0	0	0
	8:00 AM	4	4	7	2	17	4	4	6	2	16	0	0	1	0	1
	8:15 AM	5	3	4	0	12	5	2	4	0	11	0	1	0	0	1
	8:30 AM	1	3	5	1	10	1	3	4	1	9	0	0	1	0	1
	8:45 AM	2	7	4	0	13	2	7	4	0	13	0	0	0	0	0
	TOTAL	28	51	31	13	123	27	50	28	10	115	1	1	3	3	8
	BEGIN PEAK HR			7:15 AM			18	33	15	8	74					
PM	4:00 PM	9	6	4	6	25	9	6	4	5	24	0	0	0	1	1
	4:15 PM	11	10	2	10	33	11	9	2	9	31	0	1	0	1	2
	4:30 PM	6	7	7	9	29	5	7	6	6	24	1	0	1	3	5
	4:45 PM	27	20	6	23	76	24	19	6	23	72	3	1	0	0	4
	5:00 PM	27	27	18	23	95	26	24	18	23	91	1	3	0	0	4
	5:15 PM	24	11	19	14	68	23	10	18	10	61	1	1	1	4	7
	5:30 PM	9	10	4	7	30	9	9	4	7	29	0	1	0	0	1
	5:45 PM	25	31	8	36	100	25	31	8	36	100	0	0	0	0	0
	TOTAL	138	122	68	128	456	132	115	66	119	432	6	7	2	9	24
	BEGIN PEAK HR			4:30 PM			78	60	48	62	248					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

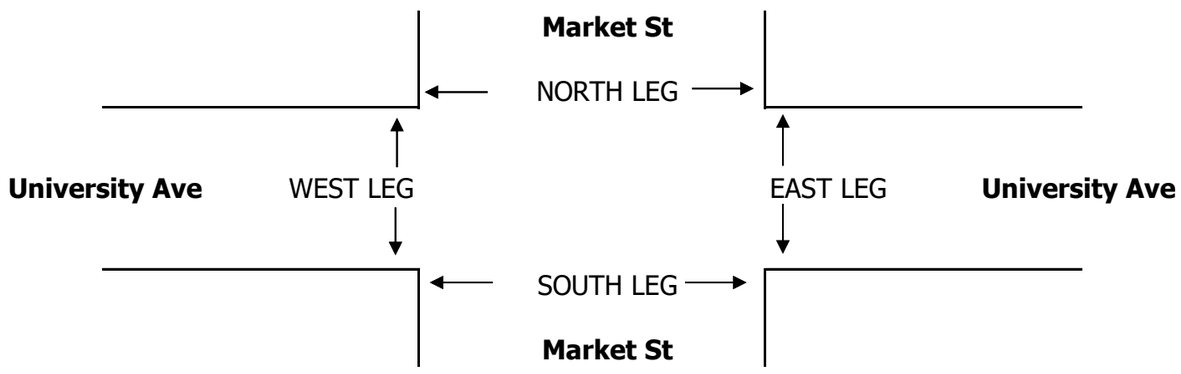
DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Market St	LOCATION #:	14
	EAST & WEST:	University Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND University Ave			WESTBOUND University Ave				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	5	61	8	8	134	7	8	36	13	11	47	21	359	0	0	0	0	0
	7:15 AM	6	66	11	15	187	12	8	52	13	7	48	15	440	0	0	0	0	0
	7:30 AM	6	94	9	17	210	10	5	59	20	11	47	19	507	0	0	0	0	0
	7:45 AM	12	92	17	15	233	14	8	69	28	17	72	23	600	0	0	0	0	0
	8:00 AM	9	89	17	13	144	13	10	69	10	11	68	19	472	0	0	0	0	0
	8:15 AM	3	77	11	15	154	15	13	37	15	9	44	16	409	0	1	0	0	1
	8:30 AM	11	73	14	23	138	18	9	43	10	14	45	23	421	0	0	0	0	0
	8:45 AM	7	81	17	15	144	14	9	45	7	18	52	16	425	0	0	0	0	0
	VOLUMES	59	633	104	121	1,344	103	70	410	116	98	423	152	3,634	0	1	0	0	1
	APPROACH %	7%	80%	13%	8%	86%	7%	12%	69%	19%	15%	63%	23%						
	APP/DEPART	796	/	856	1,569	/	1,558	596	/	635	673	/	585	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	33	341	54	60	774	49	31	249	71	46	235	76	2,019	0	0	0	0	
	APPROACH %	8%	80%	13%	7%	88%	6%	9%	71%	20%	13%	66%	21%						
	PEAK HR FACTOR		0.884			0.843			0.836			0.797		0.841					
	APP/DEPART	428	/	448	883	/	891	351	/	363	357	/	317	0					
PM	4:00 PM	15	161	32	36	171	17	11	109	25	15	70	31	693	0	0	0	0	0
	4:15 PM	17	136	29	38	135	18	18	97	17	18	75	30	628	0	1	0	0	1
	4:30 PM	18	161	37	60	171	8	14	116	21	23	65	27	721	0	0	0	0	0
	4:45 PM	17	151	34	39	155	13	5	78	16	11	68	28	615	0	1	0	0	1
	5:00 PM	28	156	32	47	121	10	9	90	25	15	74	20	627	1	0	0	0	1
	5:15 PM	22	170	25	41	149	11	10	109	15	15	75	25	667	0	0	0	0	0
	5:30 PM	27	138	21	51	158	12	9	93	19	20	77	24	649	0	0	0	1	1
	5:45 PM	17	112	21	35	124	9	6	75	17	13	87	42	558	0	0	0	0	0
	VOLUMES	161	1,185	231	347	1,184	98	82	767	155	130	591	227	5,162	1	2	0	1	4
	APPROACH %	10%	75%	15%	21%	73%	6%	8%	76%	15%	14%	62%	24%						
	APP/DEPART	1,578	/	1,496	1,631	/	1,470	1,004	/	1,346	949	/	850	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	67	609	132	173	632	56	48	400	79	67	278	116	2,659	0	2	0	0	
	APPROACH %	8%	75%	16%	20%	73%	6%	9%	76%	15%	15%	60%	25%						
	PEAK HR FACTOR		0.935			0.903			0.873			0.937		0.922					
	APP/DEPART	808	/	775	863	/	778	527	/	705	461	/	401	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	3	2	3	2	10	3	2	2	0	7	0	0	1	2	3
	7:15 AM	4	3	3	3	13	3	3	2	3	11	1	0	1	0	2
	7:30 AM	5	3	7	2	17	4	3	7	2	16	1	0	0	0	1
	7:45 AM	3	2	8	1	14	3	1	7	1	12	0	1	1	0	2
	8:00 AM	1	5	3	6	15	1	5	2	6	14	0	0	1	0	1
	8:15 AM	9	3	11	0	23	8	3	11	0	22	1	0	0	0	1
	8:30 AM	1	6	3	1	11	1	6	2	1	10	0	0	1	0	1
	8:45 AM	3	7	4	2	16	3	7	4	2	16	0	0	0	0	0
	TOTAL	29	31	42	17	119	26	30	37	15	108	3	1	5	2	11
	BEGIN PEAK HR	7:15 AM					11	12	18	12	53					
PM	4:00 PM	5	9	2	5	21	5	8	2	4	19	0	1	0	1	2
	4:15 PM	9	7	4	6	26	7	6	4	6	23	2	1	0	0	3
	4:30 PM	6	15	3	16	40	4	14	3	12	33	2	1	0	4	7
	4:45 PM	6	4	4	13	27	6	4	3	13	26	0	0	1	0	1
	5:00 PM	9	6	8	6	29	8	6	7	6	27	1	0	1	0	2
	5:15 PM	2	13	7	6	28	2	11	6	3	22	0	2	1	3	6
	5:30 PM	3	6	4	5	18	3	4	4	5	16	0	2	0	0	2
	5:45 PM	12	8	14	7	41	12	5	14	6	37	0	3	0	1	4
	TOTAL	52	68	46	64	230	47	58	43	55	203	5	10	3	9	27
	BEGIN PEAK HR	4:00 PM					22	32	12	35	101					

INTERSECTION TURNING MOVEMENT COUNTS

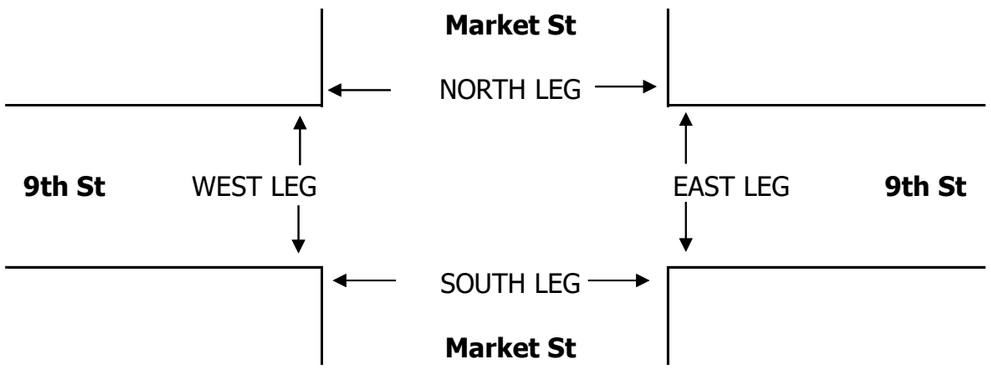
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Market St	LOCATION #:	15
	EAST & WEST:	9th St	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 9th St			WESTBOUND 9th St				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	63	7	20	131	0	0	0	0	3	0	10	234	0	0	0	0	0
	7:15 AM	0	76	5	30	176	0	0	0	0	1	0	4	292	0	0	0	0	0
	7:30 AM	0	104	8	21	220	0	0	0	0	2	0	3	358	0	0	0	0	0
	7:45 AM	0	116	14	17	257	0	0	0	0	2	0	5	411	0	0	0	0	0
	8:00 AM	0	112	11	18	150	0	0	0	0	1	0	7	299	0	0	0	0	0
	8:15 AM	0	78	8	10	173	0	0	0	0	1	0	7	277	0	1	0	0	1
	8:30 AM	0	92	3	13	146	0	0	0	0	6	0	4	264	0	1	0	0	1
	8:45 AM	0	104	5	12	159	0	0	0	0	4	0	7	291	0	0	0	0	0
	VOLUMES	0	745	61	141	1,412	0	0	0	0	20	0	47	2,428	0	2	0	0	2
	APPROACH %	0%	92%	8%	9%	91%	0%	0%	0%	0%	30%	0%	70%						
	APP/DEPART	806	/	794	1,555	/	1,432	0	/	202	67	/	0	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	408	38	86	803	0	0	0	0	6	0	19	1,360	0	0	0	0	
	APPROACH %	0%	91%	9%	10%	90%	0%	0%	0%	0%	24%	0%	76%						
	PEAK HR FACTOR		0.858			0.811			0.000			0.781		0.827					
	APP/DEPART	446	/	427	889	/	809	0	/	124	25	/	0	0					
PM	4:00 PM	0	176	7	11	204	0	0	0	0	10	0	24	432	0	0	0	0	0
	4:15 PM	0	158	11	13	166	0	0	0	0	8	0	12	368	0	0	0	0	0
	4:30 PM	0	196	14	11	200	0	0	0	0	11	0	18	450	0	0	0	0	0
	4:45 PM	0	171	6	10	181	0	0	0	0	8	0	19	395	0	0	0	0	0
	5:00 PM	0	202	9	7	153	0	0	0	0	16	0	21	408	0	0	0	0	0
	5:15 PM	0	182	13	10	183	0	0	0	0	8	0	19	415	0	0	0	0	0
	5:30 PM	0	157	10	14	187	0	0	0	0	9	0	20	397	0	0	0	0	0
	5:45 PM	0	134	8	19	148	0	0	0	0	5	0	12	326	0	0	0	0	0
	VOLUMES	0	1,376	78	95	1,422	0	0	0	0	75	0	145	3,191	0	0	0	0	0
	APPROACH %	0%	95%	5%	6%	94%	0%	0%	0%	0%	34%	0%	66%						
	APP/DEPART	1,454	/	1,521	1,517	/	1,497	0	/	173	220	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	751	42	38	717	0	0	0	0	43	0	77	1,668	0	0	0	0	
	APPROACH %	0%	95%	5%	5%	95%	0%	0%	0%	0%	36%	0%	64%						
	PEAK HR FACTOR		0.940			0.895			0.000			0.811		0.927					
	APP/DEPART	793	/	828	755	/	760	0	/	80	120	/	0	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	1	0	1	2	4	1	0	0	0	1	0	0	1	2	3
	7:15 AM	0	0	3	0	3	0	0	2	0	2	0	0	1	0	1
	7:30 AM	0	3	2	0	5	0	3	2	0	5	0	0	0	0	0
	7:45 AM	0	2	2	0	4	0	2	1	0	3	0	0	1	0	1
	8:00 AM	0	3	3	0	6	0	3	1	0	4	0	0	2	0	2
	8:15 AM	0	3	8	0	11	0	3	8	0	11	0	0	0	0	0
	8:30 AM	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
	8:45 AM	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
	TOTAL	1	12	22	2	37	1	12	17	0	30	0	0	5	2	7
	BEGIN PEAK HR			7:15 AM			0	8	6	0	14					
PM	4:00 PM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
	4:15 PM	0	1	2	0	3	0	1	1	0	2	0	0	1	0	1
	4:30 PM	0	3	8	4	15	0	3	7	0	10	0	0	1	4	5
	4:45 PM	0	5	2	0	7	0	5	2	0	7	0	0	0	0	0
	5:00 PM	1	3	6	2	12	1	2	4	0	7	0	1	2	2	5
	5:15 PM	0	3	5	1	9	0	3	3	0	6	0	0	2	1	3
	5:30 PM	0	0	3	4	7	0	0	3	0	3	0	0	0	4	4
	5:45 PM	0	1	6	1	8	0	1	5	0	6	0	0	1	1	2
	TOTAL	1	16	34	12	63	1	15	26	0	42	0	1	8	12	21
	BEGIN PEAK HR			4:30 PM			1	13	16	0	30					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Market St
EAST & WEST: 10th St

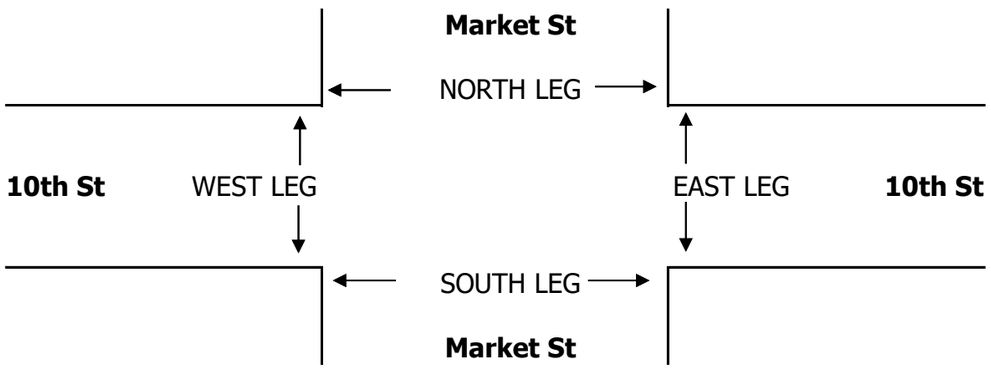
PROJECT #: SC4743
LOCATION #: 16
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 10th St			WESTBOUND 10th St				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	2	67	7	15	112	8	3	3	3	1	3	2	226	0	0	0	0	0
	7:15 AM	0	76	5	19	157	6	2	7	1	3	3	3	282	0	0	0	0	0
	7:30 AM	1	102	5	25	184	9	4	13	1	2	4	6	356	0	0	0	0	0
	7:45 AM	8	122	6	30	194	13	1	6	3	4	6	5	398	1	0	0	0	1
	8:00 AM	3	115	10	24	140	4	4	6	5	11	7	2	331	0	1	0	0	1
	8:15 AM	2	75	10	33	129	8	2	7	3	4	3	8	284	0	0	0	0	0
	8:30 AM	3	93	11	18	125	4	0	4	2	10	3	8	281	1	0	0	0	1
	8:45 AM	3	96	9	19	133	14	10	11	2	3	4	3	307	0	0	0	0	0
	VOLUMES	22	746	63	183	1,174	66	26	57	20	38	33	37	2,468	2	1	0	0	3
	APPROACH %	3%	90%	8%	13%	82%	5%	25%	55%	19%	35%	31%	34%						
	APP/DEPART	833	/	810	1,424	/	1,234	103	/	303	108	/	121	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	14	414	31	112	647	34	11	32	12	21	20	21	1,371	1	1	0	0	
	APPROACH %	3%	90%	7%	14%	81%	4%	20%	58%	22%	34%	32%	34%						
	PEAK HR FACTOR		0.839			0.838			0.764			0.775		0.859					
	APP/DEPART	460	/	447	794	/	681	55	/	175	62	/	68	0					
PM	4:00 PM	3	163	6	23	175	3	3	17	5	9	2	10	419	0	0	0	0	0
	4:15 PM	2	150	2	22	151	3	8	13	3	7	3	13	377	0	0	0	0	0
	4:30 PM	6	188	4	22	175	5	10	10	1	4	6	13	444	0	1	0	0	1
	4:45 PM	3	158	7	17	162	9	9	8	4	5	4	12	398	0	0	0	0	0
	5:00 PM	3	202	11	7	151	3	13	21	6	9	9	14	449	0	0	0	0	0
	5:15 PM	2	175	4	14	172	9	2	11	5	6	8	10	418	0	0	0	0	0
	5:30 PM	4	144	2	8	174	5	5	7	3	0	9	12	373	1	0	0	0	1
	5:45 PM	4	135	1	8	146	6	4	6	5	5	4	7	331	0	0	0	0	0
	VOLUMES	27	1,315	37	121	1,306	43	54	93	32	45	45	91	3,211	1	1	0	0	2
	APPROACH %	2%	95%	3%	8%	89%	3%	30%	52%	18%	25%	25%	50%						
	APP/DEPART	1,380	/	1,461	1,471	/	1,384	179	/	251	181	/	115	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	14	723	26	60	660	26	34	50	16	24	27	49	1,710	0	1	0	0	
	APPROACH %	2%	95%	3%	8%	88%	3%	34%	50%	16%	24%	27%	49%						
	PEAK HR FACTOR		0.883			0.920			0.625			0.781		0.952					
	APP/DEPART	763	/	807	747	/	700	100	/	136	100	/	67	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	2	1	3	3	9	2	1	1	1	5	0	0	2	2	4
	7:15 AM	4	1	2	1	8	4	1	1	1	7	0	0	1	0	1
	7:30 AM	5	4	1	1	11	5	4	1	1	11	0	0	0	0	0
	7:45 AM	14	1	1	1	17	14	1	1	1	17	0	0	0	0	0
	8:00 AM	6	5	7	3	21	6	5	5	3	19	0	0	2	0	2
	8:15 AM	8	3	4	4	19	8	3	3	4	18	0	0	1	0	1
	8:30 AM	2	2	3	0	7	2	2	3	0	7	0	0	0	0	0
	8:45 AM	3	1	4	0	8	3	1	4	0	8	0	0	0	0	0
	TOTAL	44	18	25	13	100	44	18	19	11	92	0	0	6	2	8
	BEGIN PEAK HR	7:30 AM					33	13	10	9	65					
PM	4:00 PM	6	2	2	6	16	6	2	1	6	15	0	0	1	0	1
	4:15 PM	1	4	3	1	9	1	4	2	1	8	0	0	1	0	1
	4:30 PM	4	3	2	5	14	4	3	1	1	9	0	0	1	4	5
	4:45 PM	2	1	2	2	7	2	1	2	2	7	0	0	0	0	0
	5:00 PM	16	2	6	7	31	15	2	5	5	27	1	0	1	2	4
	5:15 PM	2	3	5	2	12	2	3	3	2	10	0	0	2	0	2
	5:30 PM	0	2	3	6	11	0	2	3	0	5	0	0	0	6	6
	5:45 PM	6	0	5	2	13	6	0	4	1	11	0	0	1	1	2
	TOTAL	37	17	28	31	113	36	17	21	18	92	1	0	7	13	21
	BEGIN PEAK HR	4:30 PM					23	9	11	10	53					

INTERSECTION TURNING MOVEMENT COUNTS

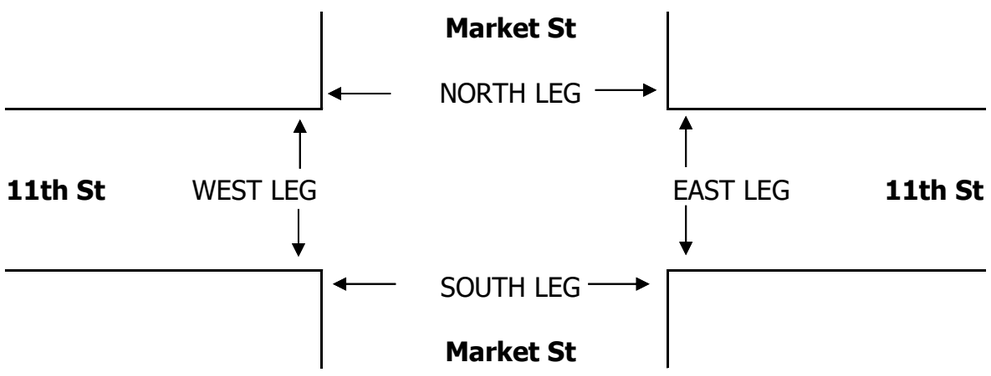
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Market St	LOCATION #:	17
	EAST & WEST:	11th St	CONTROL:	STOP E/W

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 11th St			WESTBOUND 11th St				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	3	74	1	3	110	2	1	0	2	2	0	0	198	0	0	0	0	0
	7:15 AM	5	82	6	7	152	4	1	2	7	2	0	2	270	0	0	0	0	0
	7:30 AM	5	105	9	12	167	6	2	1	1	1	0	4	313	0	0	0	0	0
	7:45 AM	5	149	10	5	187	8	1	2	2	2	2	4	377	0	0	0	0	0
	8:00 AM	5	108	13	11	136	2	0	1	2	3	1	8	290	0	0	0	0	0
	8:15 AM	4	84	13	8	115	7	2	1	3	3	5	5	250	0	0	0	0	0
	8:30 AM	2	101	15	8	122	5	1	0	3	4	1	7	269	0	0	0	0	0
	8:45 AM	6	94	7	5	123	4	3	0	2	1	0	9	254	0	0	0	0	0
	VOLUMES	35	797	74	59	1,112	38	11	7	22	18	9	39	2,221	0	0	0	0	0
	APPROACH %	4%	88%	8%	5%	92%	3%	28%	18%	55%	27%	14%	59%						
	APP/DEPART	906	/	847	1,209	/	1,152	40	/	140	66	/	82	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	20	444	38	35	642	20	4	6	12	8	3	18	1,250	0	0	0	0	
	APPROACH %	4%	88%	8%	5%	92%	3%	18%	27%	55%	28%	10%	62%						
	PEAK HR FACTOR		0.765			0.871			0.550			0.604		0.829					
	APP/DEPART	502	/	466	697	/	662	22	/	79	29	/	43	0					
PM	4:00 PM	1	166	2	5	179	3	2	2	6	4	1	5	376	0	0	0	0	0
	4:15 PM	1	149	1	2	162	2	3	0	4	0	1	3	328	0	0	0	0	0
	4:30 PM	1	188	0	2	177	2	2	0	9	1	0	7	389	0	0	0	0	0
	4:45 PM	5	166	1	0	167	2	0	0	3	1	0	2	347	0	0	0	0	0
	5:00 PM	4	211	2	1	169	1	4	0	16	2	0	8	418	0	0	0	0	0
	5:15 PM	1	168	1	0	186	2	1	0	12	0	0	3	374	0	0	0	0	0
	5:30 PM	4	142	1	1	174	0	1	1	5	0	0	0	329	2	0	0	0	2
	5:45 PM	4	141	0	1	157	0	0	0	5	0	0	0	308	0	0	0	0	0
	VOLUMES	21	1,331	8	12	1,371	12	13	3	60	8	2	28	2,871	2	0	0	0	2
	APPROACH %	2%	98%	1%	1%	98%	1%	17%	4%	79%	21%	5%	74%						
	APP/DEPART	1,362	/	1,372	1,395	/	1,441	76	/	23	38	/	35	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	11	733	4	3	699	7	7	0	40	4	0	20	1,528	0	0	0	0	
	APPROACH %	1%	98%	1%	0%	99%	1%	15%	0%	85%	17%	0%	83%						
	PEAK HR FACTOR		0.862			0.943			0.588			0.600		0.914					
	APP/DEPART	748	/	760	709	/	743	47	/	7	24	/	18	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	2	3	5	0	0	0	1	1	0	0	2	2	4
	7:15 AM	1	3	1	0	5	1	3	0	0	4	0	0	1	0	1
	7:30 AM	2	1	1	1	5	2	1	1	1	5	0	0	0	0	0
	7:45 AM	4	7	3	3	17	4	7	2	3	16	0	0	1	0	1
	8:00 AM	3	13	0	1	17	3	13	0	1	17	0	0	0	0	0
	8:15 AM	4	12	4	0	20	4	12	3	0	19	0	0	1	0	1
	8:30 AM	2	14	2	0	18	2	14	2	0	18	0	0	0	0	0
	8:45 AM	0	6	0	0	6	0	6	0	0	6	0	0	0	0	0
	TOTAL	16	56	13	8	93	16	56	8	6	86	0	0	5	2	7
	BEGIN PEAK HR	7:15 AM					10	24	3	5	42					
PM	4:00 PM	3	1	3	0	7	3	1	2	0	6	0	0	1	0	1
	4:15 PM	3	0	0	2	5	3	0	0	2	5	0	0	0	0	0
	4:30 PM	4	2	3	5	14	3	2	2	1	8	1	0	1	4	6
	4:45 PM	2	1	0	5	8	2	1	0	5	8	0	0	0	0	0
	5:00 PM	4	2	1	4	11	4	2	0	2	8	0	0	1	2	3
	5:15 PM	0	0	6	2	8	0	0	4	2	6	0	0	2	0	2
	5:30 PM	0	0	0	6	6	0	0	0	0	0	0	0	0	6	6
	5:45 PM	0	1	5	3	9	0	1	4	2	7	0	0	1	1	2
	TOTAL	16	7	18	27	68	15	7	12	14	48	1	0	6	13	20
	BEGIN PEAK HR	4:30 PM					9	5	6	10	30					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

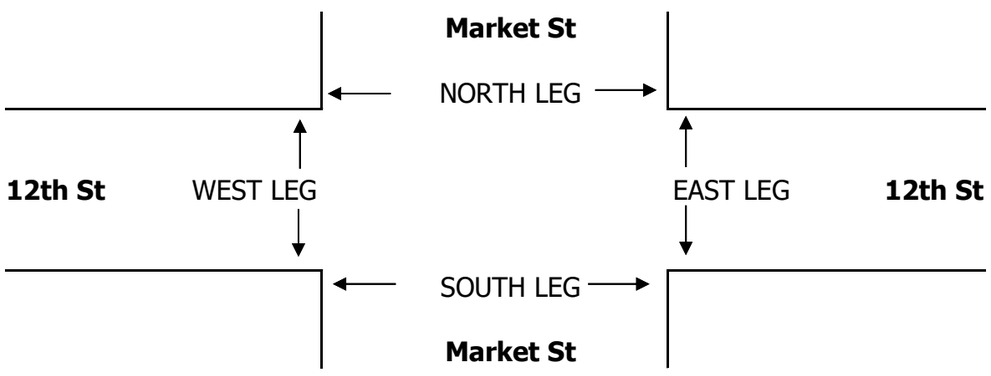
DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Market St	LOCATION #:	18
	EAST & WEST:	12th St	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 12th St			WESTBOUND 12th St				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	2	80	5	18	90	1	0	5	1	2	1	1	206	0	0	0	0	0
	7:15 AM	10	96	18	27	110	8	3	5	2	1	0	2	282	0	0	0	0	0
	7:30 AM	5	116	5	23	140	5	2	3	4	1	2	5	311	0	0	0	0	0
	7:45 AM	8	156	12	25	141	8	2	3	0	1	5	5	366	0	0	0	0	0
	8:00 AM	16	116	10	18	120	4	3	1	4	7	2	5	306	0	0	0	0	0
	8:15 AM	17	95	10	17	94	6	2	2	3	5	3	10	264	0	0	0	0	0
	8:30 AM	11	98	8	19	104	8	4	0	1	3	1	11	268	3	0	0	0	3
	8:45 AM	6	92	2	13	109	6	2	6	6	2	4	9	257	0	0	0	0	0
	VOLUMES	75	849	70	160	908	46	18	25	21	22	18	48	2,263	3	0	0	0	3
	APPROACH %	8%	85%	7%	14%	82%	4%	28%	39%	33%	25%	20%	55%						
	APP/DEPART	997	/	915	1,114	/	954	64	/	255	88	/	139	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	39	484	45	93	511	25	10	12	10	10	9	17	1,265	0	0	0	0	
	APPROACH %	7%	85%	8%	15%	81%	4%	31%	38%	31%	28%	25%	47%						
	PEAK HR FACTOR		0.807			0.904			0.800			0.643		0.864					
	APP/DEPART	568	/	511	629	/	531	32	/	150	36	/	73	0					
PM	4:00 PM	7	140	2	5	177	3	9	8	12	4	3	15	385	0	0	0	0	0
	4:15 PM	8	135	1	9	158	4	2	3	7	3	1	10	341	1	0	0	0	1
	4:30 PM	4	153	2	9	175	2	6	12	13	4	4	21	405	0	0	0	0	0
	4:45 PM	6	149	5	6	165	7	8	7	9	1	1	14	378	0	0	0	0	0
	5:00 PM	4	167	1	7	164	5	16	15	29	11	7	24	450	0	1	0	0	1
	5:15 PM	1	156	4	10	201	0	4	4	14	3	2	12	411	0	0	0	0	0
	5:30 PM	3	133	1	1	169	2	5	3	7	5	3	7	339	1	0	0	0	1
	5:45 PM	5	132	1	2	168	0	6	0	6	2	0	5	327	1	0	0	0	1
	VOLUMES	38	1,165	17	49	1,377	23	56	52	97	33	21	108	3,040	3	1	0	0	4
	APPROACH %	3%	95%	1%	3%	95%	2%	27%	25%	47%	20%	13%	67%						
	APP/DEPART	1,223	/	1,330	1,450	/	1,510	205	/	118	162	/	82	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	15	625	12	32	705	14	34	38	65	19	14	71	1,645	0	1	0	0	
	APPROACH %	2%	96%	2%	4%	94%	2%	25%	28%	47%	18%	13%	68%						
	PEAK HR FACTOR		0.948			0.891			0.571			0.619		0.912					
	APP/DEPART	652	/	731	752	/	789	137	/	82	104	/	43	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	1	0	1	3	5	1	0	0	1	2	0	0	1	2	3
	7:15 AM	2	1	1	0	4	2	0	0	0	2	0	1	1	0	2
	7:30 AM	0	0	1	1	2	0	0	1	1	2	0	0	0	0	0
	7:45 AM	3	0	1	2	6	3	0	0	2	5	0	0	1	0	1
	8:00 AM	2	1	2	0	5	2	1	1	0	4	0	0	1	0	1
	8:15 AM	3	4	2	1	10	3	3	2	1	9	0	1	0	0	1
	8:30 AM	3	1	4	1	9	3	1	4	1	9	0	0	0	0	0
	8:45 AM	4	4	3	2	13	4	4	3	2	13	0	0	0	0	0
	TOTAL	18	11	15	10	54	18	9	11	8	46	0	2	4	2	8
	BEGIN PEAK HR			7:15 AM			7	1	2	3	13					
PM	4:00 PM	3	1	4	0	8	3	1	2	0	6	0	0	2	0	2
	4:15 PM	2	3	3	2	10	2	3	3	2	10	0	0	0	0	0
	4:30 PM	1	1	2	5	9	0	1	1	1	3	1	0	1	4	6
	4:45 PM	0	2	0	3	5	0	2	0	3	5	0	0	0	0	0
	5:00 PM	0	5	4	4	13	0	5	4	2	11	0	0	0	2	2
	5:15 PM	0	0	6	2	8	0	0	4	2	6	0	0	2	0	2
	5:30 PM	0	0	1	7	8	0	0	1	1	2	0	0	0	6	6
	5:45 PM	0	1	4	1	6	0	0	3	0	3	0	1	1	1	3
	TOTAL	6	13	24	24	67	5	12	18	11	46	1	1	6	13	21
	BEGIN PEAK HR			4:30 PM			0	8	9	8	25					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Market St
EAST & WEST: 13th St

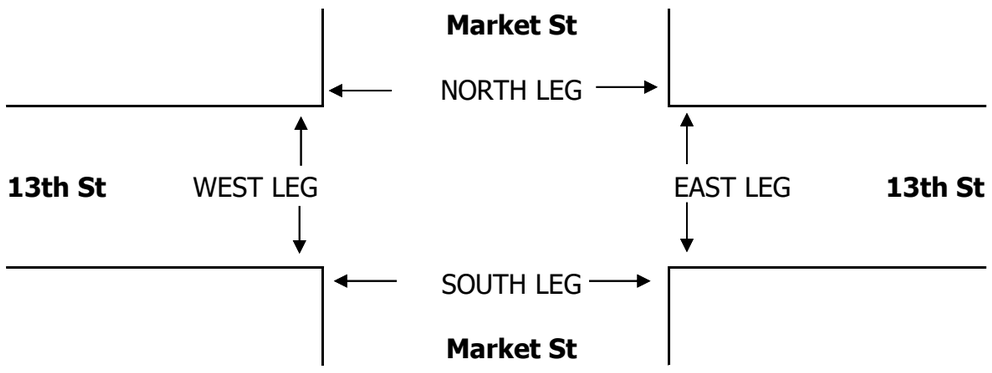
PROJECT #: SC4743
LOCATION #: 19
CONTROL: STOP E/W

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 13th St			WESTBOUND 13th St				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	7	79	4	3	80	4	1	0	0	2	0	3	183	0	0	0	0	0
	7:15 AM	5	112	11	5	99	4	0	0	1	1	1	5	244	0	0	0	0	0
	7:30 AM	4	123	4	6	135	6	0	0	2	1	0	5	286	0	0	0	0	0
	7:45 AM	11	168	9	8	127	5	0	3	2	2	1	8	344	0	0	0	0	0
	8:00 AM	5	141	2	11	113	3	0	0	3	0	2	7	287	0	0	0	0	0
	8:15 AM	2	112	2	5	96	1	0	0	6	0	4	10	238	2	0	0	0	2
	8:30 AM	4	110	4	3	98	4	0	1	4	1	1	8	238	0	0	0	0	0
	8:45 AM	3	99	6	4	114	2	1	0	5	1	2	6	243	0	0	0	0	0
	VOLUMES	41	944	42	45	862	29	2	4	23	8	11	52	2,065	2	0	0	0	2
	APPROACH %	4%	92%	4%	5%	92%	3%	7%	14%	79%	11%	15%	73%						
	APP/DEPART	1,029	/	998	936	/	895	29	/	91	71	/	81	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	25	544	26	30	474	18	0	3	8	4	4	25	1,161	0	0	0	0	
	APPROACH %	4%	91%	4%	6%	91%	3%	0%	27%	73%	12%	12%	76%						
	PEAK HR FACTOR		0.791			0.888			0.550			0.750		0.844					
	APP/DEPART	595	/	569	522	/	486	11	/	59	33	/	47	0					
PM	4:00 PM	2	140	6	9	191	1	2	1	16	2	0	6	376	0	0	0	0	0
	4:15 PM	0	141	4	2	158	2	0	2	6	1	1	6	323	1	0	0	0	1
	4:30 PM	2	142	7	12	178	1	1	4	21	0	2	18	388	1	0	0	0	1
	4:45 PM	2	151	0	6	159	3	1	1	6	0	1	9	339	0	0	0	0	0
	5:00 PM	1	161	6	8	200	1	1	3	21	2	0	15	419	0	1	0	0	1
	5:15 PM	1	149	2	2	205	3	1	1	5	0	1	9	379	0	0	0	0	0
	5:30 PM	1	128	1	2	178	0	0	0	5	0	1	10	326	0	0	0	0	0
	5:45 PM	1	136	1	6	168	1	0	0	5	1	0	4	323	0	0	0	0	0
	VOLUMES	10	1,148	27	47	1,437	12	6	12	85	6	6	77	2,876	2	1	0	0	3
	APPROACH %	1%	97%	2%	3%	96%	1%	6%	12%	83%	7%	7%	87%						
	APP/DEPART	1,187	/	1,232	1,497	/	1,530	103	/	86	89	/	28	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	6	603	15	28	742	8	4	9	53	2	4	51	1,527	1	1	0	0	
	APPROACH %	1%	96%	2%	4%	95%	1%	6%	14%	80%	4%	7%	89%						
	PEAK HR FACTOR		0.930			0.927			0.635			0.713		0.909					
	APP/DEPART	625	/	659	779	/	798	66	/	52	57	/	18	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	2	3	5	0	0	1	2	3	0	0	1	1	2
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	1	0	0	2	3	1	0	0	1	2	0	0	0	1	1
	7:45 AM	0	0	1	2	3	0	0	0	2	2	0	0	1	0	1
	8:00 AM	0	0	1	1	2	0	0	0	1	1	0	0	1	0	1
	8:15 AM	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
	8:30 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	8:45 AM	0	0	0	3	3	0	0	0	3	3	0	0	0	0	0
	TOTAL	1	0	7	11	19	1	0	4	9	14	0	0	3	2	5
	BEGIN PEAK HR			7:15 AM			1	0	0	4	5					
PM	4:00 PM	0	0	1	2	3	0	0	0	1	1	0	0	1	1	2
	4:15 PM	0	0	1	3	4	0	0	0	2	2	0	0	1	1	2
	4:30 PM	0	1	2	6	9	0	1	1	2	4	0	0	1	4	5
	4:45 PM	0	1	0	1	2	0	0	0	1	1	0	1	0	0	1
	5:00 PM	0	0	0	4	4	0	0	0	2	2	0	0	0	2	2
	5:15 PM	2	0	8	0	10	2	0	6	0	8	0	0	2	0	2
	5:30 PM	0	0	6	3	9	0	0	1	2	3	0	0	5	1	6
	5:45 PM	1	1	2	2	6	1	1	2	1	5	0	0	0	1	1
	TOTAL	3	3	20	21	47	3	2	10	11	26	0	1	10	10	21
	BEGIN PEAK HR			4:30 PM			2	1	7	5	15					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Market St
EAST & WEST: 14th St

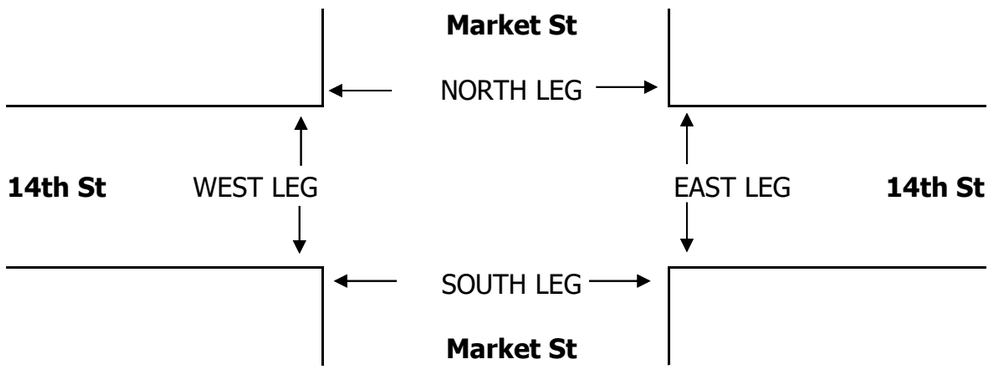
PROJECT #: SC4743
LOCATION #: 20
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Market St			SOUTHBOUND Market St			EASTBOUND 14th St			WESTBOUND 14th St				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	8	60	19	11	59	19	7	59	5	35	107	23	412	1	0	0	0	1
	7:15 AM	6	91	28	14	68	17	14	99	4	41	124	24	530	0	0	0	0	0
	7:30 AM	8	78	43	18	104	13	24	128	11	49	116	28	620	0	0	0	0	0
	7:45 AM	13	122	45	19	89	13	29	114	14	44	132	38	672	0	0	0	0	0
	8:00 AM	14	97	33	23	76	17	16	98	4	42	175	38	633	0	0	0	0	0
	8:15 AM	8	74	30	16	58	23	10	76	6	24	121	35	481	0	0	0	0	0
	8:30 AM	14	79	30	12	76	15	10	62	7	33	149	24	511	0	0	0	0	0
	8:45 AM	9	85	27	6	86	24	12	108	8	38	122	16	541	0	0	0	0	0
	VOLUMES	80	686	255	119	616	141	122	744	59	306	1,046	226	4,401	1	0	0	0	1
	APPROACH %	8%	67%	25%	14%	70%	16%	13%	80%	6%	19%	66%	14%						
	APP/DEPART	1,022	/	1,034	876	/	982	925	/	1,118	1,578	/	1,267	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	41	388	149	74	337	60	83	439	33	176	547	128	2,455	0	0	0	0	
	APPROACH %	7%	67%	26%	16%	72%	13%	15%	79%	6%	21%	64%	15%						
	PEAK HR FACTOR		0.803			0.872			0.851			0.834		0.913					
	APP/DEPART	578	/	599	471	/	546	555	/	662	851	/	648	0					
PM	4:00 PM	9	114	50	39	148	17	15	136	11	46	95	19	699	0	0	0	0	0
	4:15 PM	19	116	33	34	125	7	12	97	8	36	71	14	572	0	0	0	0	0
	4:30 PM	15	113	46	32	151	10	20	127	19	41	94	17	685	0	0	0	0	0
	4:45 PM	11	120	31	24	136	7	11	85	11	33	120	23	612	0	0	0	0	0
	5:00 PM	9	114	37	50	151	7	19	123	11	45	136	28	730	0	0	0	0	0
	5:15 PM	18	118	37	44	155	13	16	73	8	57	96	17	652	0	0	0	0	0
	5:30 PM	9	110	32	33	138	16	6	100	7	51	122	15	639	0	0	0	0	0
	5:45 PM	14	105	36	38	123	14	11	69	13	51	96	23	593	0	0	0	0	0
	VOLUMES	104	910	302	294	1,127	91	110	810	88	360	830	156	5,182	0	0	0	0	0
	APPROACH %	8%	69%	23%	19%	75%	6%	11%	80%	9%	27%	62%	12%						
	APP/DEPART	1,316	/	1,176	1,512	/	1,575	1,008	/	1,406	1,346	/	1,025	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	53	465	151	150	593	37	66	408	49	176	446	85	2,679	0	0	0	0	
	APPROACH %	8%	70%	23%	19%	76%	5%	13%	78%	9%	25%	63%	12%						
	PEAK HR FACTOR		0.961			0.920			0.788			0.846		0.917					
	APP/DEPART	669	/	616	780	/	818	523	/	709	707	/	536	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	2	4	6	0	0	0	3	3	0	0	2	1	3
	7:15 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:30 AM	2	0	0	2	4	2	0	0	2	4	0	0	0	0	0
	7:45 AM	1	0	1	3	5	1	0	0	3	4	0	0	1	0	1
	8:00 AM	0	0	2	1	3	0	0	1	1	2	0	0	1	0	1
	8:15 AM	9	0	3	0	12	1	0	2	0	3	8	0	1	0	9
	8:30 AM	2	0	1	2	5	0	0	1	2	3	2	0	0	0	2
	8:45 AM	1	1	0	2	4	1	1	0	2	4	0	0	0	0	0
	TOTAL	15	1	10	14	40	5	1	5	13	24	10	0	5	1	16
	BEGIN PEAK HR	7:15 AM					3	0	2	6	11					
PM	4:00 PM	0	0	1	3	4	0	0	0	2	2	0	0	1	1	2
	4:15 PM	0	1	0	3	4	0	1	0	2	3	0	0	0	1	1
	4:30 PM	0	1	4	4	9	0	1	3	2	6	0	0	1	2	3
	4:45 PM	2	0	0	5	7	2	0	0	3	5	0	0	0	2	2
	5:00 PM	0	0	1	2	3	0	0	1	0	1	0	0	0	2	2
	5:15 PM	0	3	4	6	13	0	3	2	6	11	0	0	2	0	2
	5:30 PM	1	1	8	6	16	1	1	3	5	10	0	0	5	1	6
	5:45 PM	0	1	4	1	6	0	1	2	0	3	0	0	2	1	3
	TOTAL	3	7	22	30	62	3	7	11	20	41	0	0	11	10	21
	BEGIN PEAK HR	4:30 PM					2	4	6	11	23					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

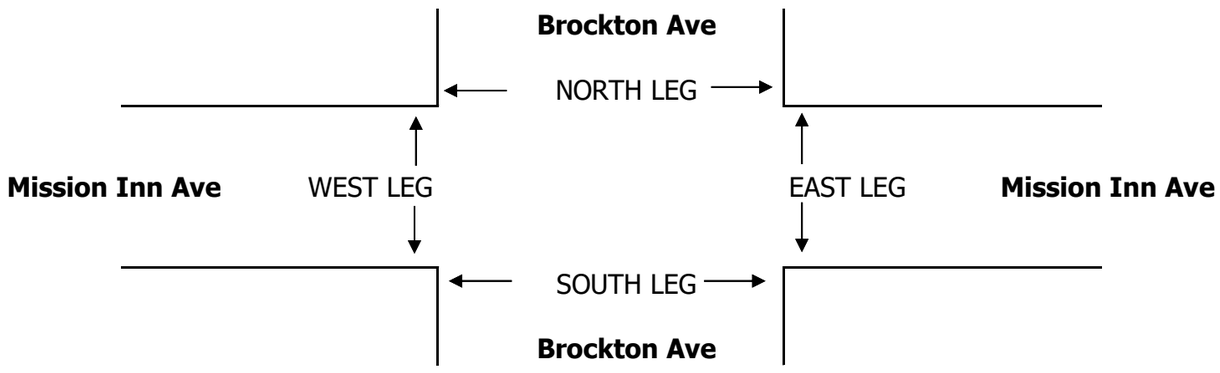
DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Brockton Ave	LOCATION #:	21
	EAST & WEST:	Mission Inn Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Brockton Ave			SOUTHBOUND Brockton Ave			EASTBOUND Mission Inn Ave			WESTBOUND Mission Inn Ave				U-TURNS				
	LANES:	NL 1	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	14	3	6	1	5	0	0	57	9	6	43	2	146	0	0	0	0	0
	7:15 AM	7	6	10	0	8	1	1	82	19	9	41	1	185	0	0	0	0	0
	7:30 AM	10	9	10	3	6	0	0	105	29	10	41	1	224	0	0	0	0	0
	7:45 AM	16	11	17	1	12	1	3	130	37	17	49	1	295	0	0	0	0	0
	8:00 AM	22	6	15	1	9	1	4	86	31	15	61	3	254	0	0	0	0	0
	8:15 AM	26	9	10	0	8	3	1	61	20	10	53	2	203	0	0	0	0	0
	8:30 AM	14	9	12	2	9	1	1	70	25	21	35	1	200	0	0	0	0	0
	8:45 AM	22	4	15	1	8	2	0	72	27	14	45	1	211	0	0	0	0	0
	VOLUMES	131	57	95	9	65	9	10	663	197	102	368	12	1,718	0	0	0	0	0
	APPROACH %	46%	20%	34%	11%	78%	11%	1%	76%	23%	21%	76%	2%						
	APP/DEPART	283	/	79	83	/	364	870	/	767	482	/	508	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	74	35	52	5	35	5	8	382	117	52	204	7	976	0	0	0	0	
	APPROACH %	46%	22%	32%	11%	78%	11%	2%	75%	23%	20%	78%	3%						
	PEAK HR FACTOR		0.894			0.804			0.746			0.832		0.827					
	APP/DEPART	161	/	50	45	/	204	507	/	439	263	/	283	0					
PM	4:00 PM	42	31	14	3	26	8	4	104	23	27	71	3	356	0	0	0	0	0
	4:15 PM	29	25	14	0	24	6	6	170	32	20	72	2	400	0	0	0	0	0
	4:30 PM	40	29	22	1	27	2	6	146	30	10	79	4	396	0	0	0	0	0
	4:45 PM	38	22	19	1	15	7	3	124	35	16	75	9	364	0	0	0	0	0
	5:00 PM	41	25	19	0	28	4	4	130	24	19	71	4	369	0	0	0	0	0
	5:15 PM	27	24	21	1	15	7	4	157	39	17	76	4	392	0	0	0	0	0
	5:30 PM	51	19	13	4	27	3	2	128	29	18	60	4	358	0	0	0	0	0
	5:45 PM	31	7	12	0	12	2	3	126	39	16	75	5	328	0	0	0	0	0
	VOLUMES	299	182	134	10	174	39	32	1,085	251	143	579	35	2,963	0	0	0	0	0
	APPROACH %	49%	30%	22%	4%	78%	17%	2%	79%	18%	19%	76%	5%						
	APP/DEPART	615	/	249	223	/	568	1,368	/	1,229	757	/	917	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	148	101	74	2	94	19	19	570	121	65	297	19	1,529	0	0	0	0	
	APPROACH %	46%	31%	23%	2%	82%	17%	3%	80%	17%	17%	78%	5%						
	PEAK HR FACTOR		0.887			0.898			0.853			0.953		0.956					
	APP/DEPART	323	/	139	115	/	280	710	/	646	381	/	464	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
	7:15 AM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	2	0	3	0	5	2	0	3	0	5	0	0	0	0	0
	8:00 AM	0	0	4	0	4	0	0	3	0	3	0	0	1	0	1
	8:15 AM	0	1	1	1	3	0	0	1	0	1	0	1	0	1	2
	8:30 AM	0	1	0	1	2	0	1	0	0	1	0	0	0	1	1
	8:45 AM	1	2	1	0	4	1	2	1	0	4	0	0	0	0	0
	TOTAL	6	5	9	2	22	6	4	8	0	18	0	1	1	2	4
	BEGIN PEAK HR	7:30 AM					2	0	7	0	9					
PM	4:00 PM	0	0	3	0	3	0	0	3	0	3	0	0	0	0	0
	4:15 PM	1	2	6	0	9	1	1	5	0	7	0	1	1	0	2
	4:30 PM	6	1	3	2	12	5	1	3	2	11	1	0	0	0	1
	4:45 PM	2	5	1	1	9	0	4	0	0	4	2	1	1	1	5
	5:00 PM	1	3	4	1	9	1	2	3	0	6	0	1	1	1	3
	5:15 PM	2	1	3	0	6	2	0	3	0	5	0	1	0	0	1
	5:30 PM	2	5	2	5	14	2	2	2	5	11	0	3	0	0	3
	5:45 PM	1	5	4	2	12	1	5	4	2	12	0	0	0	0	0
	TOTAL	15	22	26	11	74	12	15	23	9	59	3	7	3	2	15
	BEGIN PEAK HR	4:15 PM					7	8	11	2	28					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

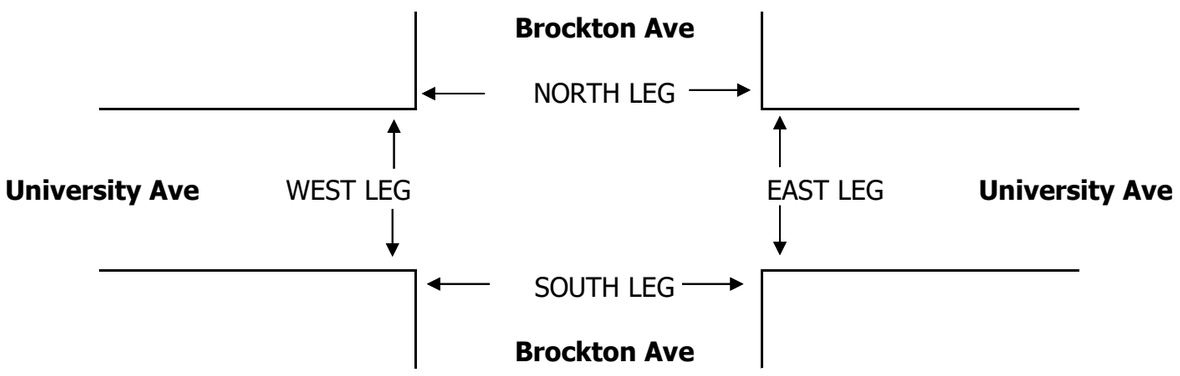
LOCATION: Riverside
NORTH & SOUTH: Brockton Ave
EAST & WEST: University Ave

PROJECT #: SC4743
LOCATION #: 22
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Brockton Ave			SOUTHBOUND Brockton Ave			EASTBOUND University Ave			WESTBOUND University Ave				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	8	23	17	5	16	2	0	39	26	3	31	1	171	0	0	0	0	0
	7:15 AM	16	21	13	6	29	1	1	50	34	7	27	3	208	0	0	0	0	0
	7:30 AM	14	27	19	9	31	0	1	62	38	7	32	2	242	0	0	0	0	0
	7:45 AM	12	43	13	3	70	1	0	79	64	8	31	1	325	0	0	0	0	0
	8:00 AM	23	36	15	4	51	0	0	59	33	11	40	6	278	0	0	0	0	0
	8:15 AM	18	37	17	6	25	2	0	38	42	10	25	9	229	0	0	0	0	0
	8:30 AM	15	32	13	8	51	1	1	46	41	13	30	3	254	0	0	0	0	0
	8:45 AM	19	39	14	9	38	0	0	40	34	11	31	3	238	0	0	0	0	0
	VOLUMES	125	258	121	50	311	7	3	413	312	70	247	28	1,945	0	0	0	0	0
	APPROACH %	25%	51%	24%	14%	85%	2%	0%	57%	43%	20%	72%	8%						
	APP/DEPART	504	/	289	368	/	693	728	/	584	345	/	379	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	68	148	58	21	197	4	1	222	180	42	126	19	1,086	0	0	0	0	
	APPROACH %	25%	54%	21%	9%	89%	2%	0%	55%	45%	22%	67%	10%						
	PEAK HR FACTOR		0.926			0.750			0.705			0.820		0.835					
	APP/DEPART	274	/	168	222	/	419	403	/	301	187	/	198	0					
PM	4:00 PM	41	84	21	15	71	0	2	83	45	15	50	8	435	0	0	0	0	0
	4:15 PM	24	57	19	7	64	2	3	86	50	14	65	7	398	0	0	0	0	0
	4:30 PM	40	85	18	8	64	2	1	106	40	9	68	4	445	0	0	0	0	0
	4:45 PM	38	73	13	8	48	0	1	57	49	10	64	7	368	0	0	0	0	0
	5:00 PM	60	83	21	12	73	1	1	72	34	12	73	4	446	0	0	0	0	0
	5:15 PM	46	58	16	9	52	2	3	94	61	13	79	8	441	0	0	0	0	0
	5:30 PM	43	59	14	9	65	2	3	82	34	13	66	10	400	0	0	0	0	0
	5:45 PM	24	46	11	11	43	1	0	66	51	13	84	5	355	0	0	0	0	0
	VOLUMES	316	545	133	79	480	10	14	646	364	99	549	53	3,288	0	0	0	0	0
	APPROACH %	32%	55%	13%	14%	84%	2%	1%	63%	36%	14%	78%	8%						
	APP/DEPART	994	/	612	569	/	943	1,024	/	858	701	/	875	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	184	299	68	37	237	5	6	329	184	44	284	23	1,700	0	0	0	0	
	APPROACH %	33%	54%	12%	13%	85%	2%	1%	63%	35%	13%	81%	7%						
	PEAK HR FACTOR		0.840			0.811			0.821			0.878		0.953					
	APP/DEPART	551	/	328	279	/	465	519	/	434	351	/	473	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	7:45 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	8:00 AM	2	1	4	0	7	2	0	3	0	5	0	1	1	0	2
	8:15 AM	1	2	1	1	5	1	2	1	1	5	0	0	0	0	0
	8:30 AM	0	1	1	1	3	0	1	1	0	2	0	0	0	1	1
	8:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	TOTAL	4	6	7	2	19	4	5	6	1	16	0	1	1	1	3
	BEGIN PEAK HR	7:45 AM					3	3	6	1	13					
PM	4:00 PM	0	2	2	0	4	0	2	2	0	4	0	0	0	0	0
	4:15 PM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
	4:30 PM	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	1	1	0	2	0	1	0	0	1	0	0	1	0	1
	5:15 PM	2	3	5	0	10	2	3	4	0	9	0	0	1	0	1
	5:30 PM	2	1	2	3	8	2	0	0	3	5	0	1	2	0	3
	5:45 PM	0	3	2	1	6	0	2	2	0	4	0	1	0	1	2
	TOTAL	4	11	15	4	34	4	9	10	3	26	0	2	5	1	8
	BEGIN PEAK HR	4:30 PM					2	5	5	0	12					

INTERSECTION TURNING MOVEMENT COUNTS

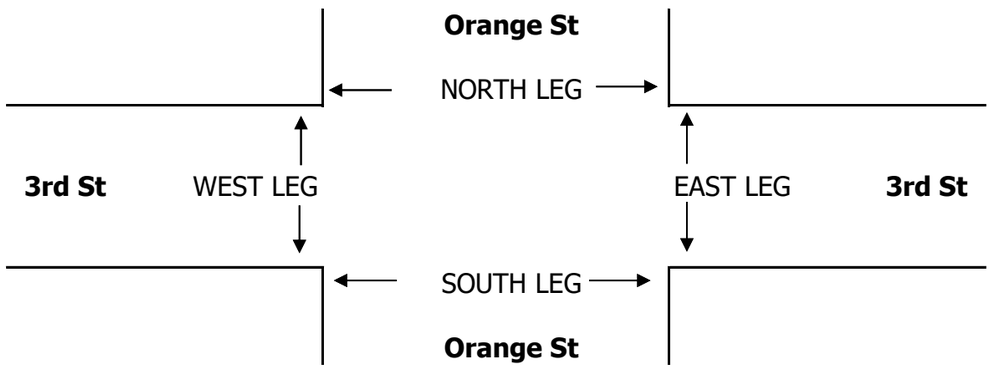
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Orange St	LOCATION #:	25
	EAST & WEST:	3rd St	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Orange St			SOUTHBOUND Orange St			EASTBOUND 3rd St			WESTBOUND 3rd St				U-TURNS				
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR 1	EL 0	ET 2	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	11	0	6	0	0	2	0	44	10	3	58	3	137	0	0	0	0	0
7:15 AM	14	0	1	0	0	2	0	84	15	4	62	3	185	0	0	0	0	0
7:30 AM	5	0	2	0	0	4	0	77	15	6	65	10	184	0	0	0	0	0
7:45 AM	16	0	2	0	0	3	0	102	12	5	68	8	216	0	0	0	0	0
8:00 AM	4	0	2	0	0	3	0	110	8	3	59	15	204	0	0	0	0	0
8:15 AM	12	0	0	0	0	4	0	68	11	7	80	12	194	0	0	0	0	0
8:30 AM	16	0	3	0	0	2	0	65	9	6	83	9	193	0	0	0	0	0
8:45 AM	10	0	8	0	0	3	1	88	12	6	69	10	207	0	0	0	0	0
VOLUMES	88	0	24	0	0	23	1	638	92	40	544	70	1,520	0	0	0	0	0
APPROACH %	79%	0%	21%	0%	0%	100%	0%	87%	13%	6%	83%	11%						
APP/DEPART	112	/	71	23	/	132	731	/	662	654	/	655	0					
BEGIN PEAK HR		7:45 AM																
VOLUMES	48	0	7	0	0	12	0	345	40	21	290	44	807	0	0	0	0	
APPROACH %	87%	0%	13%	0%	0%	100%	0%	90%	10%	6%	82%	12%						
PEAK HR FACTOR		0.724			0.750			0.816			0.896		0.934					
APP/DEPART	55	/	44	12	/	61	385	/	352	355	/	350	0					
PM 4:00 PM	7	0	12	0	0	3	1	237	19	6	115	17	417	0	0	0	0	0
4:15 PM	11	0	15	0	0	5	0	242	13	5	122	24	437	0	0	0	0	0
4:30 PM	10	0	11	0	0	4	1	232	8	4	115	25	410	0	0	0	0	0
4:45 PM	12	0	11	0	0	5	0	250	8	2	95	16	399	0	0	0	0	0
5:00 PM	24	0	11	0	0	2	0	229	11	7	148	28	460	0	0	0	0	0
5:15 PM	14	0	7	0	0	8	0	237	8	5	122	17	418	0	0	0	0	0
5:30 PM	10	0	9	0	0	5	0	259	3	7	98	21	412	0	0	0	0	0
5:45 PM	5	0	8	0	0	7	0	194	7	2	90	21	334	0	0	0	0	0
VOLUMES	93	0	84	0	0	39	2	1,880	77	38	905	169	3,287	0	0	0	0	0
APPROACH %	53%	0%	47%	0%	0%	100%	0%	96%	4%	3%	81%	15%						
APP/DEPART	177	/	171	39	/	115	1,959	/	1,964	1,112	/	1,037	0					
BEGIN PEAK HR		4:15 PM																
VOLUMES	57	0	48	0	0	16	1	953	40	18	480	93	1,706	0	0	0	0	
APPROACH %	54%	0%	46%	0%	0%	100%	0%	96%	4%	3%	81%	16%						
PEAK HR FACTOR		0.750			0.800			0.963			0.807		0.927					
APP/DEPART	105	/	94	16	/	58	994	/	1,001	591	/	553	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:15 AM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
	7:30 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	7:45 AM	3	0	0	3	6	2	0	0	2	4	1	0	0	1	2
	8:00 AM	1	1	0	1	3	1	1	0	0	2	0	0	0	1	1
	8:15 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	8:30 AM	3	2	1	0	6	1	1	1	0	3	2	1	0	0	3
	8:45 AM	3	1	3	1	8	2	0	2	1	5	1	1	1	0	3
	TOTAL	13	4	6	6	29	8	2	4	4	18	5	2	2	2	11
	BEGIN PEAK HR	7:45 AM					5	2	1	3	11					
PM	4:00 PM	1	2	1	1	5	0	2	1	0	3	1	0	0	1	2
	4:15 PM	1	0	2	3	6	0	0	2	3	5	1	0	0	0	1
	4:30 PM	2	5	2	2	11	2	5	2	1	10	0	0	0	1	1
	4:45 PM	1	2	0	0	3	0	1	0	0	1	1	1	0	0	2
	5:00 PM	2	6	1	3	12	2	2	1	0	5	0	4	0	3	7
	5:15 PM	4	2	0	2	8	4	0	0	2	6	0	2	0	0	2
	5:30 PM	0	5	1	1	7	0	2	1	1	4	0	3	0	0	3
	5:45 PM	2	2	4	3	11	1	1	2	3	7	1	1	2	0	4
	TOTAL	13	24	11	15	63	9	13	9	10	41	4	11	2	5	22
	BEGIN PEAK HR	4:15 PM					4	8	5	4	21					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Orange St
EAST & WEST: 4th St

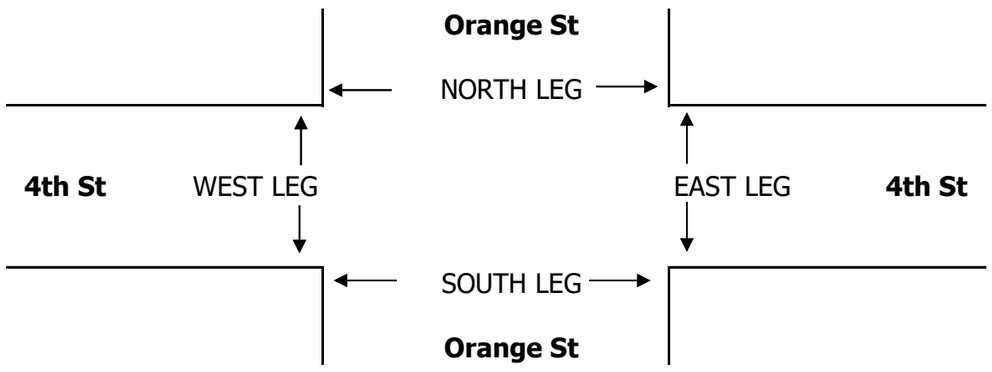
PROJECT #: SC4743
LOCATION #: 26
CONTROL: STOP W

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Orange St			SOUTHBOUND Orange St			EASTBOUND 4th St			WESTBOUND 4th St				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	17	1	1	12	0	0	0	0	0	0	0	31	0	0	0	0	0
	7:15 AM	0	12	2	0	20	0	0	0	0	0	0	1	35	0	1	0	0	1
	7:30 AM	0	6	0	1	19	0	0	0	0	0	0	1	27	0	0	0	0	0
	7:45 AM	0	16	1	2	14	0	0	0	0	1	0	0	34	0	0	0	0	0
	8:00 AM	0	6	0	2	8	0	0	0	0	0	0	1	17	0	0	0	0	0
	8:15 AM	0	11	1	1	16	0	0	0	0	0	0	0	29	0	1	0	0	1
	8:30 AM	0	15	1	2	13	0	0	0	0	1	0	2	34	0	0	0	0	0
	8:45 AM	0	13	2	3	16	0	0	0	0	3	0	5	42	0	2	0	0	2
	VOLUMES	0	96	8	12	118	0	0	0	0	5	0	10	253	0	4	0	0	4
	APPROACH %	0%	92%	8%	9%	88%	0%	0%	0%	0%	33%	0%	67%						
	APP/DEPART	104	/	110	134	/	123	0	/	20	15	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	51	4	4	65	0	0	0	0	1	0	2	128	0	1	0	0	
	APPROACH %	0%	93%	7%	6%	93%	0%	0%	0%	0%	33%	0%	67%						
	PEAK HR FACTOR		0.764			0.833			0.000			0.750		0.889					
	APP/DEPART	55	/	54	70	/	66	0	/	8	3	/	0	0					
PM	4:00 PM	0	17	1	3	17	0	0	0	0	3	0	2	43	0	1	0	0	1
	4:15 PM	0	23	1	2	17	0	0	0	0	2	0	1	46	0	0	0	0	0
	4:30 PM	0	19	3	1	9	0	0	0	0	1	0	2	35	0	0	0	0	0
	4:45 PM	0	24	1	2	10	0	0	0	0	1	0	2	40	0	0	0	0	0
	5:00 PM	0	31	1	2	16	0	0	0	0	1	0	3	54	1	0	0	0	1
	5:15 PM	0	16	1	1	12	0	0	0	0	1	0	4	35	2	0	0	0	2
	5:30 PM	0	19	1	1	13	0	0	0	0	2	0	1	37	0	0	0	0	0
	5:45 PM	0	9	2	0	11	0	0	0	0	0	0	2	24	0	0	0	0	0
	VOLUMES	0	158	11	12	105	0	0	0	0	11	0	17	318	3	1	0	0	4
	APPROACH %	0%	92%	6%	10%	89%	0%	0%	0%	0%	39%	0%	61%						
	APP/DEPART	172	/	176	118	/	119	0	/	23	28	/	0	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	97	6	7	52	0	0	0	0	5	0	8	176	1	0	0	0	
	APPROACH %	0%	93%	6%	12%	88%	0%	0%	0%	0%	38%	0%	62%						
	PEAK HR FACTOR		0.788			0.776			0.000			0.813		0.800					
	APP/DEPART	104	/	105	59	/	58	0	/	13	13	/	0	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:15 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:30 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	7:45 AM	1	0	3	0	4	1	0	3	0	4	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	4	0	4	0	0	3	0	3	0	0	1	0	1
	TOTAL	2	0	10	0	12	2	0	9	0	11	0	0	1	0	1
	BEGIN PEAK HR			7:00 AM			2	0	5	0	7					
PM	4:00 PM	3	0	3	1	7	3	0	3	0	6	0	0	0	1	1
	4:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	4:45 PM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
	5:00 PM	1	0	1	3	5	1	0	1	0	2	0	0	0	3	3
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	1	0	1	1	3	1	0	1	0	2	0	0	0	1	1
	5:45 PM	1	0	5	0	6	1	0	2	0	3	0	0	3	0	3
	TOTAL	8	0	11	6	25	8	0	8	0	16	0	0	3	6	9
	BEGIN PEAK HR			4:15 PM			3	0	2	0	5					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Orange St
EAST & WEST: 5th St

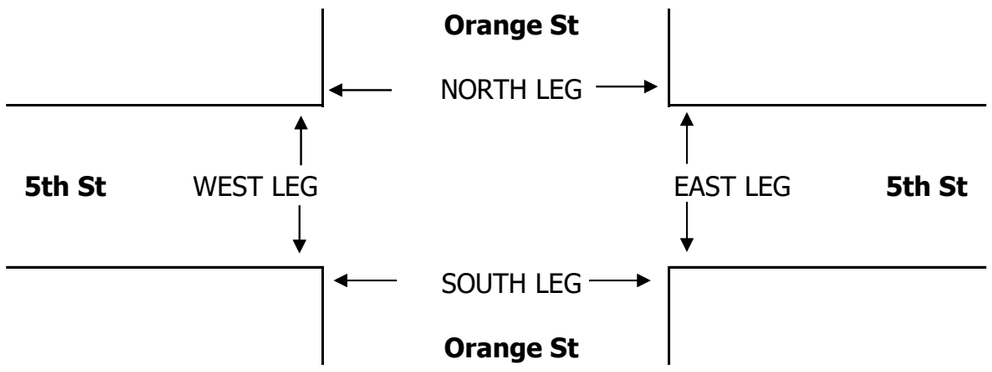
PROJECT #: SC4743
LOCATION #: 27
CONTROL: STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND Orange St			SOUTHBOUND Orange St			EASTBOUND 5th St			WESTBOUND 5th St				U-TURNS				
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	3	3	0	0	9	3	15	4	3	0	17	2	59	0	0	0	0	0
	7:15 AM	4	1	1	3	11	4	8	8	7	1	24	3	75	0	0	0	0	0
	7:30 AM	3	2	1	3	12	3	4	5	2	1	20	0	56	0	0	0	0	0
	7:45 AM	4	0	0	4	5	7	13	12	1	0	24	5	75	0	0	0	0	0
	8:00 AM	3	2	0	3	2	2	2	4	4	2	18	3	45	0	0	1	0	1
	8:15 AM	0	0	1	6	5	6	8	8	1	0	16	3	54	0	0	0	0	0
	8:30 AM	0	2	0	1	5	5	9	4	4	1	12	7	50	0	0	0	0	0
	8:45 AM	1	4	1	5	3	11	8	8	4	0	12	4	61	0	0	2	0	2
	VOLUMES	18	14	4	25	52	41	67	53	26	5	143	27	478	0	0	3	0	3
	APPROACH %	50%	39%	11%	21%	44%	35%	45%	36%	17%	3%	82%	15%						
	APP/DEPART	36	/	108	118	/	83	149	/	82	175	/	205	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	14	6	2	10	37	17	40	29	13	2	85	10	265	0	0	0	0	
	APPROACH %	64%	27%	9%	16%	58%	27%	49%	35%	16%	2%	88%	10%						
	PEAK HR FACTOR		0.917			0.889			0.788			0.836		0.883					
	APP/DEPART	22	/	56	64	/	52	82	/	41	97	/	116	0					
PM	4:00 PM	1	9	0	0	19	4	9	12	8	0	14	1	77	0	0	0	0	0
	4:15 PM	2	7	0	1	17	3	12	23	9	0	10	4	88	0	0	0	0	0
	4:30 PM	2	10	1	2	6	2	9	14	7	1	8	3	65	0	0	0	0	0
	4:45 PM	3	9	1	1	9	1	14	14	14	0	11	3	80	0	0	0	0	0
	5:00 PM	5	12	1	1	14	1	11	15	5	1	27	10	103	0	0	0	0	0
	5:15 PM	4	5	0	2	12	2	10	18	1	2	9	3	68	0	0	3	0	3
	5:30 PM	1	8	0	3	6	3	8	14	10	0	9	4	66	0	0	0	0	0
	5:45 PM	1	5	1	0	9	1	3	12	9	1	14	3	59	0	0	2	1	3
	VOLUMES	19	65	4	10	92	17	76	122	63	5	102	31	612	0	0	5	1	6
	APPROACH %	22%	74%	5%	8%	77%	14%	29%	46%	24%	4%	73%	22%						
	APP/DEPART	88	/	172	119	/	160	266	/	137	139	/	143	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	12	38	3	5	46	7	46	66	35	2	56	20	336	0	0	0	0	
	APPROACH %	23%	72%	6%	9%	79%	12%	31%	45%	24%	3%	72%	26%						
	PEAK HR FACTOR		0.736			0.690			0.835			0.513		0.816					
	APP/DEPART	53	/	104	58	/	83	147	/	74	78	/	75	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	1	2	1	4	0	1	2	1	4	0	0	0	0	0
	7:15 AM	0	1	2	0	3	0	0	2	0	2	0	1	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	1	2	4	7	0	1	2	4	7	0	0	0	0	0
	8:00 AM	0	1	1	3	5	0	0	0	2	2	0	1	1	1	3
	8:15 AM	1	0	2	0	3	1	0	2	0	3	0	0	0	0	0
	8:30 AM	0	3	3	0	6	0	3	3	0	6	0	0	0	0	0
	8:45 AM	8	3	7	3	21	8	1	5	3	17	0	2	2	0	4
	TOTAL	9	10	19	11	49	9	6	16	10	41	0	4	3	1	8
	BEGIN PEAK HR			7:00 AM			0	2	6	5	13					
PM	4:00 PM	1	2	4	0	7	1	2	4	0	7	0	0	0	0	0
	4:15 PM	0	2	3	1	6	0	2	3	0	5	0	0	0	1	1
	4:30 PM	3	1	1	4	9	3	1	1	3	8	0	0	0	1	1
	4:45 PM	1	1	1	1	4	0	0	1	1	2	1	1	0	0	2
	5:00 PM	0	1	1	3	5	0	1	1	0	2	0	0	0	3	3
	5:15 PM	1	1	1	1	4	0	0	0	0	0	1	1	1	1	4
	5:30 PM	3	2	0	3	8	3	2	0	3	8	0	0	0	0	0
	5:45 PM	1	1	3	3	8	1	1	2	2	6	0	0	1	1	2
	TOTAL	10	11	14	16	51	8	9	12	9	38	2	2	2	7	13
	BEGIN PEAK HR			4:15 PM			3	4	6	4	17					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Orange St
EAST & WEST: 6th St

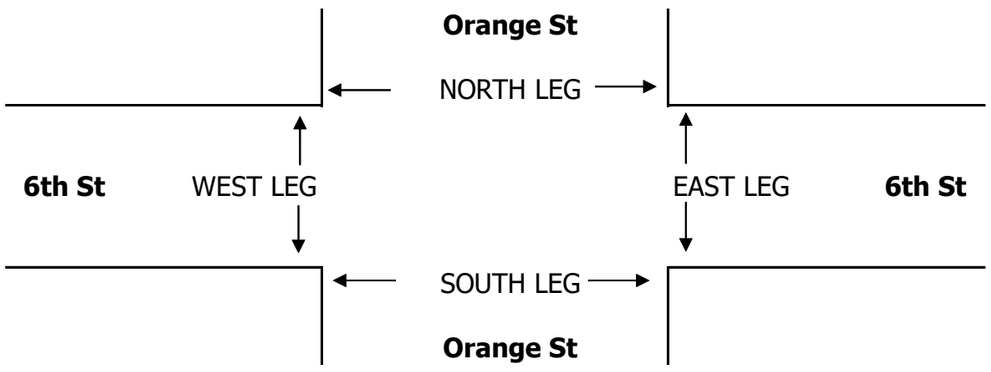
PROJECT #: SC4743
LOCATION #: 28
CONTROL: STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND Orange St			SOUTHBOUND Orange St			EASTBOUND 6th St			WESTBOUND 6th St				U-TURNS				
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 1	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	4	1	2	1	9	0	2	7	2	1	4	2	35	0	0	0	0	0
	7:15 AM	3	1	4	3	14	2	2	3	1	3	3	2	41	0	0	0	0	0
	7:30 AM	2	2	5	4	11	2	1	5	1	1	2	4	40	0	0	0	0	0
	7:45 AM	4	0	4	1	4	1	2	3	4	2	2	2	29	0	0	1	0	1
	8:00 AM	5	1	6	2	4	1	2	2	2	5	3	0	33	0	0	0	0	0
	8:15 AM	3	1	5	1	5	0	0	3	3	5	2	1	29	0	0	0	0	0
	8:30 AM	3	2	4	1	8	1	1	4	6	5	3	1	39	0	0	0	0	0
	8:45 AM	4	1	5	1	5	1	3	3	5	7	2	1	38	0	0	0	0	0
	VOLUMES	28	9	35	14	60	8	13	30	24	29	21	13	285	0	0	1	0	1
	APPROACH %	39%	13%	49%	17%	73%	10%	19%	44%	35%	46%	33%	21%						
	APP/DEPART	72	/	35	82	/	113	68	/	79	63	/	58	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	13	4	15	9	38	5	7	18	8	7	11	10	146	0	0	1	0	
	APPROACH %	41%	13%	47%	17%	73%	10%	21%	53%	24%	25%	39%	36%						
	PEAK HR FACTOR		0.889			0.684			0.773			0.875		0.890					
	APP/DEPART	32	/	21	52	/	53	34	/	42	28	/	30	0					
PM	4:00 PM	7	5	3	2	26	3	4	4	9	1	5	3	72	0	0	0	0	0
	4:15 PM	12	6	3	5	13	4	3	6	7	4	3	0	66	4	0	0	0	4
	4:30 PM	12	6	1	2	13	1	6	13	8	2	8	0	72	0	0	0	0	0
	4:45 PM	5	12	7	3	16	2	3	4	7	3	7	1	70	0	0	0	0	0
	5:00 PM	9	10	5	2	18	1	5	14	6	1	8	2	81	0	0	0	0	0
	5:15 PM	14	8	5	2	10	3	3	7	4	2	8	2	68	0	0	0	0	0
	5:30 PM	12	9	3	2	14	5	4	13	4	1	5	1	73	0	0	0	1	1
	5:45 PM	5	7	1	1	11	2	2	12	7	4	5	0	57	0	0	1	0	1
	VOLUMES	76	63	28	19	121	21	30	73	52	18	49	9	565	4	0	1	1	6
	APPROACH %	44%	37%	16%	12%	75%	13%	19%	47%	33%	23%	64%	12%						
	APP/DEPART	171	/	102	161	/	195	156	/	121	77	/	147	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	40	39	20	9	58	11	15	38	21	7	28	6	293	0	0	0	1	
	APPROACH %	40%	39%	20%	12%	74%	14%	20%	51%	28%	17%	67%	14%						
	PEAK HR FACTOR		0.917			0.886			0.685			0.875		0.904					
	APP/DEPART	99	/	60	78	/	86	74	/	68	42	/	79	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	1	1	1	4	7	1	1	1	4	7	0	0	0	0	0
	7:15 AM	2	2	1	10	15	2	2	1	10	15	0	0	0	0	0
	7:30 AM	0	5	2	10	17	0	5	2	10	17	0	0	0	0	0
	7:45 AM	5	2	1	14	22	5	2	1	14	22	0	0	0	0	0
	8:00 AM	1	6	1	9	17	1	6	1	8	16	0	0	0	1	1
	8:15 AM	1	2	2	8	13	1	1	2	8	12	0	1	0	0	1
	8:30 AM	3	2	3	7	15	3	2	3	7	15	0	0	0	0	0
	8:45 AM	1	4	8	14	27	1	4	7	14	26	0	0	1	0	1
	TOTAL	14	24	19	76	133	14	23	18	75	130	0	1	1	1	3
	BEGIN PEAK HR	7:00 AM					8	10	5	38	61					
PM	4:00 PM	1	13	1	7	22	1	12	1	6	20	0	1	0	1	2
	4:15 PM	1	11	2	3	17	1	11	2	3	17	0	0	0	0	0
	4:30 PM	1	3	0	5	9	1	3	0	4	8	0	0	0	1	1
	4:45 PM	0	7	2	4	13	0	7	1	4	12	0	0	1	0	1
	5:00 PM	0	10	6	7	23	0	10	6	7	23	0	0	0	0	0
	5:15 PM	3	2	0	5	10	3	2	0	4	9	0	0	0	1	1
	5:30 PM	4	10	6	13	33	4	10	6	12	32	0	0	0	1	1
	5:45 PM	9	5	1	18	33	9	4	1	18	32	0	1	0	0	1
	TOTAL	19	61	18	62	160	19	59	17	58	153	0	2	1	4	7
	BEGIN PEAK HR	4:45 PM					7	29	13	27	76					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

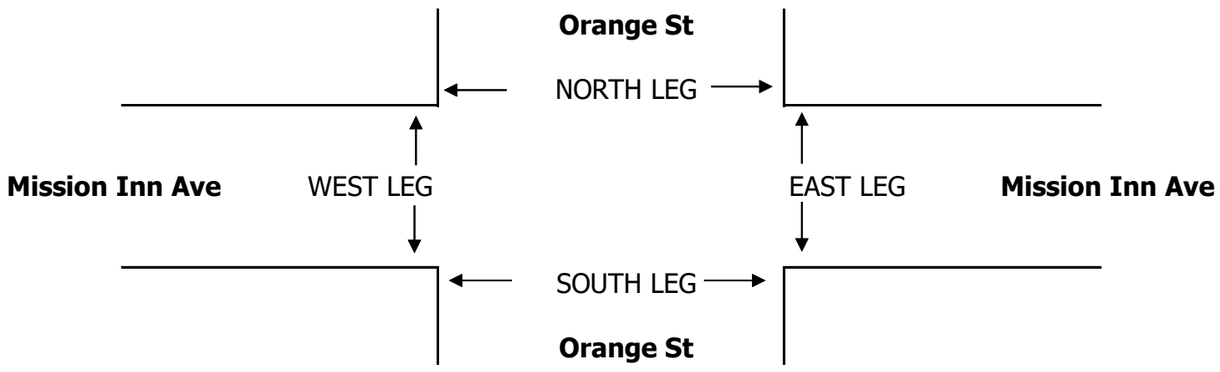
DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Orange St	LOCATION #:	29
	EAST & WEST:	Mission Inn Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Orange St			SOUTHBOUND Orange St			EASTBOUND Mission Inn Ave			WESTBOUND Mission Inn Ave				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	1	0	1	1	0	1	1	0	1	1	0		0	0	0	0	
AM																		
7:00 AM	1	3	0	4	5	1	4	49	7	33	52	1	160	0	0	0	0	0
7:15 AM	5	3	2	0	5	9	4	54	4	49	82	8	225	0	0	0	0	0
7:30 AM	2	2	1	4	7	5	7	67	6	35	81	3	220	0	0	0	0	0
7:45 AM	3	3	3	5	5	1	1	66	10	59	89	6	251	0	0	0	0	0
8:00 AM	4	3	4	2	7	14	2	54	8	34	86	6	224	0	0	0	0	0
8:15 AM	1	2	1	4	4	9	0	38	2	34	75	6	176	0	0	0	0	0
8:30 AM	5	2	6	2	3	10	6	46	6	28	73	5	192	0	0	0	0	0
8:45 AM	4	4	0	7	2	9	5	58	10	18	79	5	201	0	0	0	0	0
VOLUMES	25	22	17	28	38	58	29	432	53	290	617	40	1,649	0	0	0	0	0
APPROACH %	39%	34%	27%	23%	31%	47%	6%	84%	10%	31%	65%	4%						
APP/DEPART	64	/	91	124	/	381	514	/	477	947	/	700	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	14	11	10	11	24	29	14	241	28	177	338	23	920	0	0	0	0	
APPROACH %	40%	31%	29%	17%	38%	45%	5%	85%	10%	33%	63%	4%						
PEAK HR FACTOR		0.795			0.696			0.884			0.873		0.916					
APP/DEPART	35	/	48	64	/	229	283	/	262	538	/	381	0					
PM																		
4:00 PM	0	1	3	3	20	8	9	95	12	20	81	6	258	0	0	0	0	0
4:15 PM	1	5	4	5	13	9	12	101	8	12	80	6	256	0	0	1	0	1
4:30 PM	3	5	5	7	11	6	12	101	13	13	87	3	266	0	0	0	0	0
4:45 PM	6	10	7	3	15	10	8	79	17	17	68	9	249	0	0	0	0	0
5:00 PM	3	6	6	3	16	4	10	112	11	10	80	7	268	0	0	0	0	0
5:15 PM	0	7	5	2	8	6	12	77	11	13	89	7	237	0	0	0	0	0
5:30 PM	5	3	3	0	9	6	13	86	7	17	85	9	243	0	0	0	0	0
5:45 PM	4	5	7	5	11	9	11	79	18	19	90	6	264	0	0	0	0	0
VOLUMES	22	42	40	28	103	58	87	730	97	121	660	53	2,042	0	0	1	0	1
APPROACH %	21%	40%	38%	15%	54%	31%	10%	80%	11%	15%	79%	6%						
APP/DEPART	104	/	182	189	/	321	915	/	798	834	/	741	0					
BEGIN PEAK HR		4:15 PM																
VOLUMES	13	26	22	18	55	29	42	393	49	52	315	25	1,040	0	0	1	0	
APPROACH %	21%	43%	36%	18%	54%	28%	9%	81%	10%	13%	80%	6%						
PEAK HR FACTOR		0.663			0.911			0.912			0.951		0.970					
APP/DEPART	61	/	93	102	/	156	485	/	433	392	/	358	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	1	3	1	6	1	0	3	1	5	0	1	0	0	1
	7:30 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	7:45 AM	2	1	0	5	8	1	1	0	5	7	1	0	0	0	1
	8:00 AM	4	1	5	1	11	4	1	4	1	10	0	0	1	0	1
	8:15 AM	7	5	2	0	14	6	4	2	0	12	1	1	0	0	2
	8:30 AM	4	2	4	1	11	4	2	3	1	10	0	0	1	0	1
	8:45 AM	15	3	3	2	23	15	2	3	2	22	0	1	0	0	1
	TOTAL	34	13	17	11	75	32	10	15	11	68	2	3	2	0	7
	BEGIN PEAK HR	7:15 AM					7	2	7	8	24					
PM	4:00 PM	16	11	4	8	39	16	11	4	8	39	0	0	0	0	0
	4:15 PM	7	10	2	4	23	7	9	2	3	21	0	1	0	1	2
	4:30 PM	22	21	7	12	62	22	19	7	11	59	0	2	0	1	3
	4:45 PM	34	10	1	26	71	34	9	1	25	69	0	1	0	1	2
	5:00 PM	26	9	6	8	49	25	8	6	7	46	1	1	0	1	3
	5:15 PM	17	7	7	8	39	15	5	7	6	33	2	2	0	2	6
	5:30 PM	17	17	8	13	55	17	17	8	13	55	0	0	0	0	0
	5:45 PM	18	18	18	11	65	18	18	18	8	62	0	0	0	3	3
	TOTAL	157	103	53	90	403	154	96	53	81	384	3	7	0	9	19
	BEGIN PEAK HR	4:15 PM					88	45	16	46	195					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Orange St
EAST & WEST: University Ave

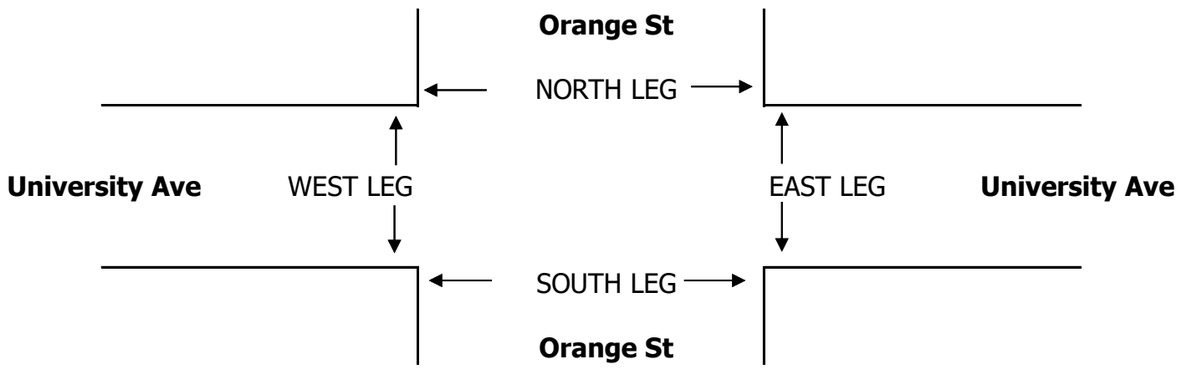
PROJECT #: SC4743
LOCATION #: 30
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Orange St			SOUTHBOUND Orange St			EASTBOUND University Ave			WESTBOUND University Ave				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0.5	ST 1.5	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	0	35	5	0	45	5	24	75	5	194	0	0	0	0	0
	7:15 AM	0	0	0	3	45	7	1	66	7	29	69	7	234	0	0	0	0	0
	7:30 AM	0	0	0	3	27	10	4	63	8	24	64	2	205	0	0	0	0	0
	7:45 AM	0	0	0	3	45	15	4	100	9	36	91	6	309	0	0	0	0	0
	8:00 AM	0	0	0	1	33	6	3	86	13	31	96	9	278	0	0	0	0	0
	8:15 AM	0	0	0	2	32	4	2	50	11	22	77	4	204	0	0	0	0	0
	8:30 AM	0	0	0	2	25	4	3	67	4	17	65	7	194	0	0	0	0	0
	8:45 AM	0	0	0	4	18	4	2	74	11	19	82	6	220	0	0	0	0	0
	VOLUMES	0	0	0	18	260	55	19	551	68	202	619	46	1,838	0	0	0	0	0
	APPROACH %	0%	0%	0%	5%	78%	17%	3%	86%	11%	23%	71%	5%						
	APP/DEPART	0	/	65	333	/	530	638	/	569	867	/	674	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	10	150	38	12	315	37	120	320	24	1,026	0	0	0	0	
	APPROACH %	0%	0%	0%	5%	76%	19%	3%	87%	10%	26%	69%	5%						
	PEAK HR FACTOR		0.000			0.786			0.805			0.853		0.830					
	APP/DEPART	0	/	36	198	/	307	364	/	325	464	/	358	0					
PM	4:00 PM	0	0	0	12	40	11	2	155	16	6	110	3	355	0	1	0	0	1
	4:15 PM	0	0	0	6	16	10	2	161	8	9	112	9	333	0	0	0	0	0
	4:30 PM	0	0	0	8	19	8	6	195	15	16	110	9	386	0	0	0	0	0
	4:45 PM	0	0	0	8	24	9	11	122	14	15	100	6	309	0	0	0	0	0
	5:00 PM	0	0	0	9	25	12	4	143	11	5	98	7	314	0	0	1	1	2
	5:15 PM	0	0	0	7	10	9	6	174	10	10	110	2	338	0	0	0	0	0
	5:30 PM	0	0	0	12	16	8	10	145	5	9	120	6	331	0	0	0	1	1
	5:45 PM	0	0	0	10	15	14	8	118	10	16	124	10	325	0	0	0	0	0
	VOLUMES	0	0	0	72	165	81	49	1,213	89	86	884	52	2,695	0	1	1	2	4
	APPROACH %	0%	0%	0%	23%	52%	25%	4%	90%	7%	8%	86%	5%						
	APP/DEPART	0	/	102	319	/	340	1,352	/	1,287	1,024	/	966	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	34	99	38	21	633	53	46	432	27	1,384	0	1	0	0	
	APPROACH %	0%	0%	0%	20%	58%	22%	3%	90%	7%	9%	86%	5%						
	PEAK HR FACTOR		0.000			0.672			0.818			0.935		0.896					
	APP/DEPART	0	/	49	172	/	198	707	/	667	505	/	470	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	3	0	1	1	5	3	0	1	1	5	0	0	0	0	0
	7:15 AM	5	2	1	0	8	4	2	1	0	7	1	0	0	0	1
	7:30 AM	2	6	1	3	12	2	5	1	3	11	0	1	0	0	1
	7:45 AM	7	2	5	2	16	7	2	5	2	16	0	0	0	0	0
	8:00 AM	2	5	1	0	8	2	5	1	0	8	0	0	0	0	0
	8:15 AM	4	3	7	3	17	4	3	6	3	16	0	0	1	0	1
	8:30 AM	5	6	8	0	19	5	6	8	0	19	0	0	0	0	0
	8:45 AM	9	3	4	4	20	8	2	4	4	18	1	1	0	0	2
	TOTAL	37	27	28	13	105	35	25	27	13	100	2	2	1	0	5
	BEGIN PEAK HR	7:15 AM					15	14	8	5	42					
PM	4:00 PM	10	11	6	0	27	10	9	6	0	25	0	2	0	0	2
	4:15 PM	6	9	0	5	20	5	8	0	4	17	1	1	0	1	3
	4:30 PM	15	19	4	20	58	14	18	3	19	54	1	1	1	1	4
	4:45 PM	18	12	4	7	41	17	12	4	7	40	1	0	0	0	1
	5:00 PM	10	9	8	8	35	9	9	7	8	33	1	0	1	0	2
	5:15 PM	16	2	2	5	25	15	2	2	4	23	1	0	0	1	2
	5:30 PM	17	22	3	9	51	17	20	3	9	49	0	2	0	0	2
	5:45 PM	13	24	2	5	44	13	22	1	5	41	0	2	1	0	3
	TOTAL	105	108	29	59	301	100	100	26	56	282	5	8	3	3	19
	BEGIN PEAK HR	4:00 PM					46	47	13	30	136					

INTERSECTION TURNING MOVEMENT COUNTS

T012524

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Orange St
EAST & WEST: 10th St

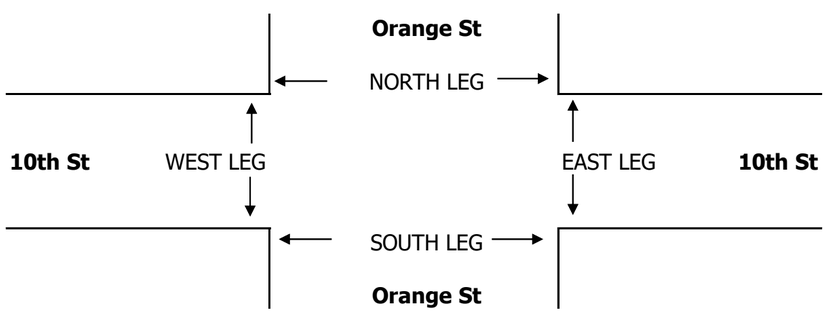
PROJECT #: SC4743
LOCATION #: 31
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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		NORTHBOUND Orange St			SOUTHBOUND Orange St			EASTBOUND 10th St			WESTBOUND 10th St				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0.5	ST 1.5	SR 1	EL X	ET 1	ER 0	WL 1	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	6	14	7	0	22	2	10	9	0	70	0	0	0	0	0
	7:15 AM	0	0	0	10	23	13	0	34	2	7	20	0	109	0	0	0	0	0
	7:30 AM	0	0	0	3	21	8	0	33	11	11	14	0	101	0	0	0	0	0
	7:45 AM	0	0	0	13	28	19	0	34	9	6	17	0	126	0	0	0	0	0
	8:00 AM	0	0	0	5	25	15	0	25	9	13	18	0	110	0	0	0	0	0
	8:15 AM	0	0	0	10	14	13	0	38	15	3	13	0	106	0	0	0	0	0
	8:30 AM	0	0	0	10	15	13	0	27	14	8	13	0	100	0	0	0	0	0
	8:45 AM	0	0	0	3	15	5	0	28	14	8	13	0	86	0	0	0	0	0
	VOLUMES	0	0	0	60	155	93	0	241	76	66	117	0	808	0	0	0	0	0
	APPROACH %	0%	0%	0%	19%	50%	30%	0%	76%	24%	36%	64%	0%						
	APP/DEPART	0	/	0	308	/	297	317	/	301	183	/	210	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	31	97	55	0	126	31	37	69	0	446	0	0	0	0	
	APPROACH %	0%	0%	0%	17%	53%	30%	0%	80%	20%	35%	65%	0%						
	PEAK HR FACTOR		0.000			0.763			0.892			0.855		0.885					
	APP/DEPART	0	/	0	183	/	165	157	/	157	106	/	124	0					
PM	4:00 PM	0	0	0	6	13	6	0	49	11	5	16	0	106	0	0	0	0	0
	4:15 PM	0	0	0	10	13	8	0	49	3	1	12	0	96	0	0	0	0	0
	4:30 PM	0	0	0	14	14	9	0	46	3	2	10	0	98	0	0	0	0	0
	4:45 PM	0	0	0	9	15	8	0	39	5	2	12	0	90	0	0	0	0	0
	5:00 PM	0	0	0	12	19	12	0	67	5	2	19	0	136	0	0	0	0	0
	5:15 PM	0	0	0	7	11	7	0	42	1	4	9	0	81	0	0	0	0	0
	5:30 PM	0	0	0	11	8	6	0	27	0	3	12	0	67	0	0	0	0	0
	5:45 PM	0	0	0	12	7	7	0	23	0	1	4	0	54	0	0	0	0	0
	VOLUMES	0	0	0	81	100	63	0	342	28	20	94	0	728	0	0	0	0	0
	APPROACH %	0%	0%	0%	33%	41%	26%	0%	92%	8%	18%	82%	0%						
	APP/DEPART	0	/	0	244	/	148	370	/	423	114	/	157	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	0	0	45	61	37	0	201	16	7	53	0	420	0	0	0	0	
	APPROACH %	0%	0%	0%	31%	43%	26%	0%	93%	7%	12%	88%	0%						
	PEAK HR FACTOR		0.000			0.831			0.753			0.714		0.772					
	APP/DEPART	0	/	0	143	/	84	217	/	246	60	/	90	0					



NOTE:
PEDESTRIANS COMBINED ALL LEGS
SCRAMBLED - SCRAMBLED PHASE
N/S - N/S ILLEGAL
E/W - E/W ILLEGAL

		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS					PEDESTRIANS COMBINED			
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL	SCRAMBLED	N/S	E/W	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	19
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	20
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	2	0	20
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	0	28
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	3	0	35
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	1	0	50
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	2	2	41
	8:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	33	1	0	34
	TOTAL	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	236	9	2	247
	BEGIN PEAK HR			7:15 AM			0	0	0	0	0									
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	24
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	10
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	1	0	25
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	16
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	21
	5:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	8	1	1	10
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	1	0	13
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3
	TOTAL	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	116	4	2	122
	BEGIN PEAK HR			4:15 PM			0	0	0	0	0									

INTERSECTION TURNING MOVEMENT COUNTS

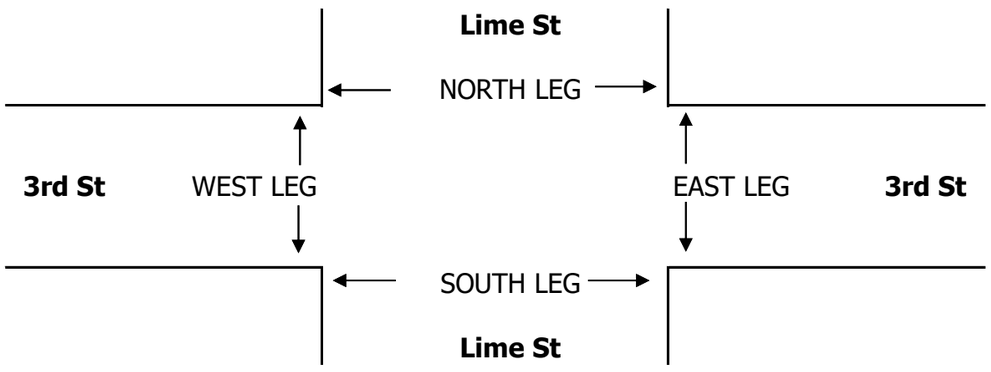
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Lime St	LOCATION #:	32
	EAST & WEST:	3rd St	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Lime St			SOUTHBOUND Lime St			EASTBOUND 3rd St			WESTBOUND 3rd St				U-TURNS				
	LANES:	NL 1	NT 0	NR 1	SL X	ST X	SR 1	EL 0	ET 2	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	13	0	5	0	0	1	0	46	9	15	47	0	136	0	0	0	0	0
	7:15 AM	15	0	7	0	0	0	0	64	23	10	49	0	168	0	0	0	0	0
	7:30 AM	16	0	5	0	0	1	0	58	20	14	58	0	172	0	0	0	0	0
	7:45 AM	18	0	5	0	0	2	0	85	23	17	60	0	210	0	0	0	0	0
	8:00 AM	23	0	10	0	0	1	0	84	29	6	44	0	197	0	0	0	1	1
	8:15 AM	27	0	10	0	0	1	0	65	14	12	66	0	195	0	0	0	0	0
	8:30 AM	24	0	15	0	0	2	0	57	17	14	74	0	203	0	0	0	0	0
	8:45 AM	19	0	8	0	0	1	0	79	21	18	66	0	212	0	0	0	0	0
	VOLUMES	155	0	65	0	0	9	0	538	156	106	464	0	1,494	0	0	0	1	1
	APPROACH %	70%	0%	30%	0%	0%	100%	0%	78%	22%	19%	81%	0%						
	APP/DEPART	220	/	0	9	/	262	694	/	604	571	/	628	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	93	0	43	0	0	5	0	285	81	50	250	0	808	0	0	0	1	
	APPROACH %	68%	0%	32%	0%	0%	100%	0%	78%	22%	17%	83%	0%						
	PEAK HR FACTOR		0.872			0.625			0.810			0.855		0.953					
	APP/DEPART	136	/	0	5	/	131	366	/	329	301	/	348	0					
PM	4:00 PM	35	0	32	0	0	1	0	241	20	22	84	0	435	0	0	0	0	0
	4:15 PM	34	0	14	0	0	2	0	255	25	22	106	0	458	0	0	0	1	1
	4:30 PM	33	0	28	0	0	3	0	221	20	38	94	0	437	0	0	0	0	0
	4:45 PM	32	0	11	0	0	2	0	260	19	19	82	0	425	0	0	0	0	0
	5:00 PM	45	0	15	0	0	0	0	224	17	29	107	0	437	0	0	0	0	0
	5:15 PM	49	0	13	0	0	2	0	240	18	25	76	0	423	0	0	0	0	0
	5:30 PM	40	0	10	0	0	1	0	277	15	20	75	0	438	0	0	0	0	0
	5:45 PM	29	0	14	0	0	2	0	200	11	19	73	0	348	0	0	0	0	0
	VOLUMES	297	0	137	0	0	13	0	1,918	145	194	697	0	3,402	0	0	0	1	1
	APPROACH %	68%	0%	32%	0%	0%	100%	0%	93%	7%	22%	78%	0%						
	APP/DEPART	434	/	0	13	/	339	2,063	/	2,056	892	/	1,007	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	144	0	68	0	0	7	0	960	81	108	389	0	1,758	0	0	0	1	
	APPROACH %	68%	0%	32%	0%	0%	100%	0%	92%	8%	22%	78%	0%						
	PEAK HR FACTOR		0.869			0.583			0.929			0.915		0.958					
	APP/DEPART	212	/	0	7	/	189	1,041	/	1,029	498	/	540	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	2	1	0	4	0	1	1	0	2	1	1	0	0	2
	7:30 AM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	7:45 AM	3	3	2	0	8	2	2	2	0	6	1	1	0	0	2
	8:00 AM	0	2	1	0	3	0	2	1	0	3	0	0	0	0	0
	8:15 AM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	8:30 AM	3	1	0	0	4	2	0	0	0	2	1	1	0	0	2
	8:45 AM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	TOTAL	10	10	5	0	25	7	7	5	0	19	3	3	0	0	6
	BEGIN PEAK HR	8:00 AM					4	4	1	0	9					
PM	4:00 PM	2	1	1	0	4	1	1	1	0	3	1	0	0	0	1
	4:15 PM	3	3	1	0	7	2	2	0	0	4	1	1	1	0	3
	4:30 PM	2	2	0	0	4	0	2	0	0	2	2	0	0	0	2
	4:45 PM	2	5	0	0	7	1	3	0	0	4	1	2	0	0	3
	5:00 PM	1	2	0	0	3	1	0	0	0	1	0	2	0	0	2
	5:15 PM	4	0	0	0	4	2	0	0	0	2	2	0	0	0	2
	5:30 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	5:45 PM	2	5	1	0	8	1	0	1	0	2	1	5	0	0	6
	TOTAL	16	20	3	0	39	8	10	2	0	20	8	10	1	0	19
	BEGIN PEAK HR	4:15 PM					4	7	0	0	11					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Lime St
EAST & WEST: 4th St

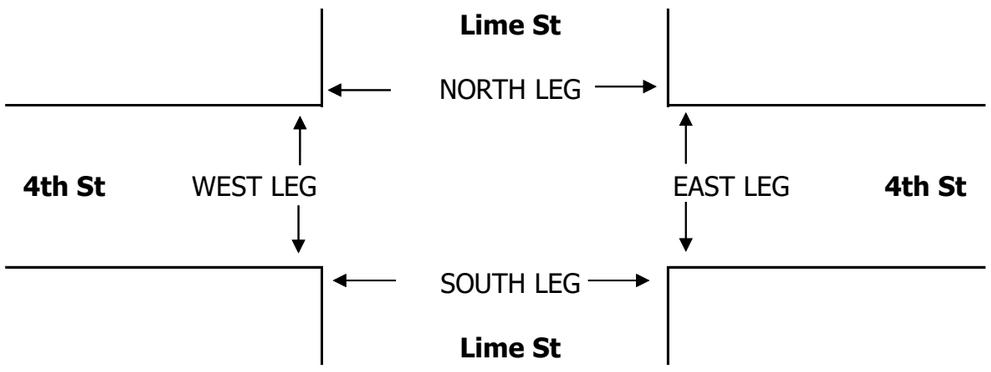
PROJECT #: SC4743
LOCATION #: 33
CONTROL: STOP E/W

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Lime St			SOUTHBOUND Lime St			EASTBOUND 4th St			WESTBOUND 4th St				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	21	0	0	21	2	0	0	4	0	0	0	49	0	0	0	0	0
	7:15 AM	2	18	0	0	34	0	0	0	1	1	0	0	56	0	0	0	0	0
	7:30 AM	0	21	1	1	30	0	1	0	1	0	0	1	56	0	0	0	0	0
	7:45 AM	3	23	0	0	41	0	0	0	5	2	0	0	74	1	0	0	0	1
	8:00 AM	0	31	2	0	35	0	0	0	1	1	0	1	71	0	0	0	0	0
	8:15 AM	4	40	1	1	25	0	0	0	2	0	1	1	75	0	0	0	0	0
	8:30 AM	1	37	1	0	30	1	0	0	0	0	0	0	70	0	0	0	0	0
	8:45 AM	0	22	0	0	38	2	0	0	1	4	0	2	69	1	0	0	0	1
	VOLUMES	11	213	5	2	254	5	1	0	15	8	1	5	522	2	0	0	0	2
	APPROACH %	5%	92%	2%	1%	97%	2%	6%	0%	94%	57%	7%	36%						
	APP/DEPART	231	/	219	261	/	279	16	/	7	14	/	17	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	8	131	4	1	131	1	0	0	8	3	1	2	291	1	0	0	0	
	APPROACH %	6%	91%	3%	1%	98%	1%	0%	0%	100%	50%	17%	33%						
	PEAK HR FACTOR		0.800			0.811			0.400			0.750		0.970					
	APP/DEPART	144	/	133	133	/	143	8	/	5	6	/	10	0					
PM	4:00 PM	1	63	1	2	38	1	0	0	4	1	0	0	111	1	1	0	0	2
	4:15 PM	1	51	0	0	48	0	0	0	3	0	0	0	103	0	0	0	0	0
	4:30 PM	1	57	1	1	50	0	2	0	5	1	0	1	119	0	0	0	0	0
	4:45 PM	0	39	0	0	38	1	0	0	4	1	0	0	83	0	0	0	0	0
	5:00 PM	0	68	0	0	44	1	0	0	1	1	0	1	116	0	2	0	0	2
	5:15 PM	2	58	0	1	41	0	1	0	3	0	0	0	106	1	0	0	0	1
	5:30 PM	0	51	0	0	36	0	0	0	0	3	0	0	90	0	0	0	0	0
	5:45 PM	3	44	1	0	26	0	0	0	2	0	0	0	76	1	0	0	0	1
	VOLUMES	8	431	3	4	321	3	3	0	22	7	0	2	810	3	3	0	0	6
	APPROACH %	2%	97%	1%	1%	97%	1%	12%	0%	88%	78%	0%	22%						
	APP/DEPART	445	/	439	331	/	353	25	/	7	9	/	11	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	3	222	1	2	173	2	3	0	13	3	0	2	427	1	2	0	0	
	APPROACH %	1%	98%	0%	1%	97%	1%	19%	0%	81%	60%	0%	40%						
	PEAK HR FACTOR		0.835			0.877			0.571			0.625		0.897					
	APP/DEPART	227	/	229	179	/	190	16	/	3	5	/	5	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	7:30 AM	0	1	3	0	4	0	1	3	0	4	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	TOTAL	0	1	4	2	7	0	1	4	2	7	0	0	0	0	0
	BEGIN PEAK HR			7:45 AM			0	0	0	0	0					
PM	4:00 PM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	4:15 PM	0	0	5	2	7	0	0	4	2	6	0	0	1	0	1
	4:30 PM	1	0	2	1	4	1	0	2	1	4	0	0	0	0	0
	4:45 PM	1	1	2	1	5	1	0	2	0	3	0	1	0	1	2
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	1	2	3	0	0	1	1	2	0	0	0	1	1
	TOTAL	3	1	11	7	22	3	0	10	5	18	0	1	1	2	4
	BEGIN PEAK HR			4:30 PM			2	0	5	1	8					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: Lime St
EAST & WEST: 5th St

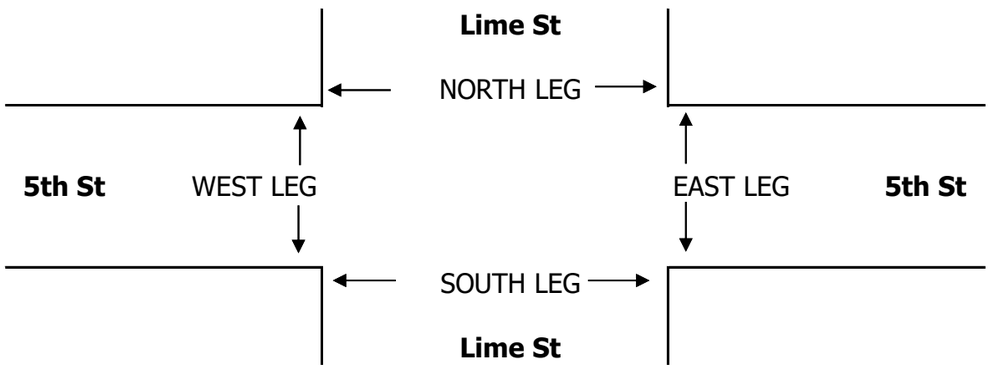
PROJECT #: SC4743
LOCATION #: 34
CONTROL: STOP E/W

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Lime St			SOUTHBOUND Lime St			EASTBOUND 5th St			WESTBOUND 5th St				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	11	17	1	1	20	2	0	0	4	0	0	1	57	0	0	0	0	0
	7:15 AM	17	17	0	1	35	1	1	0	10	1	0	1	84	0	0	0	0	0
	7:30 AM	14	21	0	1	32	0	0	0	6	1	0	0	75	0	0	0	0	0
	7:45 AM	23	29	2	0	46	3	1	2	13	3	0	0	122	0	0	0	0	0
	8:00 AM	8	35	3	0	36	2	1	0	8	6	1	0	100	0	0	0	0	0
	8:15 AM	12	38	3	3	24	0	1	2	12	4	0	1	100	0	0	0	0	0
	8:30 AM	14	37	8	3	25	1	0	1	4	1	0	1	95	0	0	0	0	0
	8:45 AM	10	24	8	2	43	0	0	2	13	2	0	1	105	0	0	0	0	0
	VOLUMES	109	218	25	11	261	9	4	7	70	18	1	5	738	0	0	0	0	0
	APPROACH %	31%	62%	7%	4%	93%	3%	5%	9%	86%	75%	4%	21%						
	APP/DEPART	352	/	227	281	/	349	81	/	43	24	/	119	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	57	139	16	6	131	6	3	5	37	14	1	2	417	0	0	0	0	
	APPROACH %	27%	66%	8%	4%	92%	4%	7%	11%	82%	82%	6%	12%						
	PEAK HR FACTOR		0.898			0.730			0.703			0.607		0.855					
	APP/DEPART	212	/	144	143	/	182	45	/	27	17	/	64	0					
PM	4:00 PM	7	56	2	1	43	0	0	0	14	14	3	5	145	0	0	0	0	0
	4:15 PM	7	43	5	0	47	3	5	0	21	3	3	2	139	0	0	0	0	0
	4:30 PM	5	51	1	1	53	1	4	1	10	5	0	4	136	0	0	0	0	0
	4:45 PM	13	39	3	0	41	0	1	1	13	4	0	4	119	1	0	0	0	1
	5:00 PM	15	60	1	0	43	1	0	2	10	8	0	2	142	0	0	0	0	0
	5:15 PM	5	62	2	1	44	2	2	1	18	3	0	0	140	0	0	0	0	0
	5:30 PM	12	49	1	0	36	3	0	0	15	6	1	2	125	0	0	0	0	0
	5:45 PM	10	47	1	1	30	3	2	0	13	2	0	0	109	0	0	0	0	0
	VOLUMES	74	407	16	4	337	13	14	5	114	45	7	19	1,056	1	0	0	0	1
	APPROACH %	15%	82%	3%	1%	95%	4%	11%	4%	86%	63%	10%	27%						
	APP/DEPART	498	/	440	354	/	497	133	/	25	71	/	94	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	32	189	11	2	184	4	10	2	58	26	6	15	540	1	0	0	0	
	APPROACH %	14%	81%	5%	1%	97%	2%	14%	3%	83%	55%	13%	32%						
	PEAK HR FACTOR		0.896			0.864			0.673			0.534		0.931					
	APP/DEPART	233	/	214	190	/	269	70	/	15	47	/	42	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	2	2	0	0	0	1	1	0	0	0	1	1
	7:15 AM	1	0	0	3	4	0	0	0	1	1	1	0	0	2	3
	7:30 AM	0	0	2	1	3	0	0	2	1	3	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	TOTAL	1	0	3	6	10	0	0	3	3	6	1	0	0	3	4
	BEGIN PEAK HR	7:45 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	4:15 PM	1	0	3	2	6	1	0	2	2	5	0	0	1	0	1
	4:30 PM	0	0	3	1	4	0	0	3	1	4	0	0	0	0	0
	4:45 PM	1	1	1	0	3	0	1	1	0	2	1	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	5:30 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	5:45 PM	1	1	3	0	5	1	1	3	0	5	0	0	0	0	0
	TOTAL	3	2	12	4	21	2	2	11	4	19	1	0	1	0	2
	BEGIN PEAK HR	4:00 PM					1	1	6	4	12					

INTERSECTION TURNING MOVEMENT COUNTS

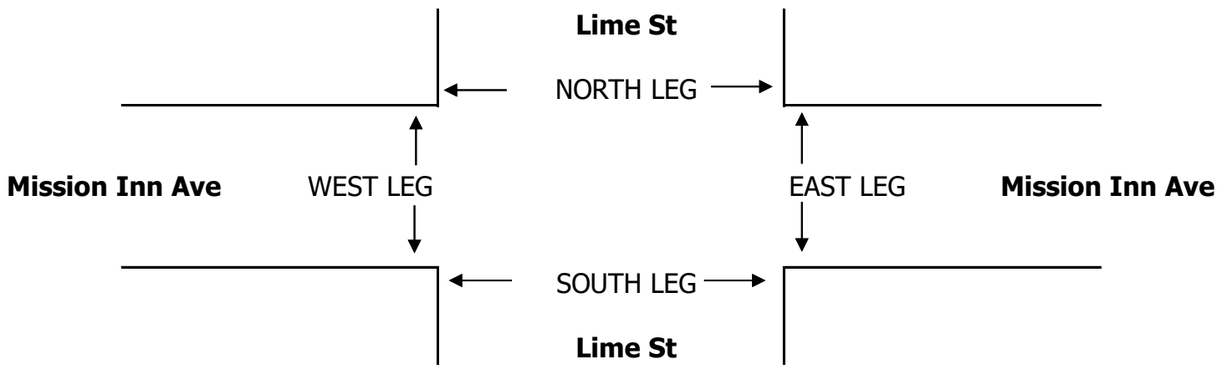
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Lime St	LOCATION #:	35
	EAST & WEST:	Mission Inn Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Lime St			SOUTHBOUND Lime St			EASTBOUND Mission Inn Ave			WESTBOUND Mission Inn Ave				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	16	7	3	27	0	0	43	8	69	88	18	280	0	0	0	0	0
	7:15 AM	1	17	3	5	36	7	3	44	13	87	135	34	385	0	0	0	0	0
	7:30 AM	0	25	7	1	45	3	1	58	10	70	117	23	360	0	0	0	0	0
	7:45 AM	5	41	9	11	62	11	3	53	10	91	142	46	484	0	0	0	0	0
	8:00 AM	5	25	7	11	49	4	1	52	13	63	113	31	374	0	0	0	0	0
	8:15 AM	5	34	7	3	42	6	2	28	14	47	112	45	345	0	0	0	0	0
	8:30 AM	3	33	5	7	32	7	0	34	21	54	97	39	332	0	0	1	0	1
	8:45 AM	3	22	4	11	53	7	1	37	17	42	96	57	350	0	0	0	0	0
	VOLUMES	23	213	49	52	346	45	11	349	106	523	900	293	2,911	0	0	1	0	1
	APPROACH %	8%	75%	17%	12%	78%	10%	2%	75%	23%	30%	52%	17%						
	APP/DEPART	285	/	517	443	/	975	467	/	450	1,716	/	969	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	11	108	26	28	192	25	8	207	46	311	507	134	1,603	0	0	0	0	
	APPROACH %	8%	74%	18%	11%	78%	10%	3%	79%	18%	33%	53%	14%						
	PEAK HR FACTOR		0.659			0.729			0.946			0.853		0.828					
	APP/DEPART	145	/	250	245	/	549	261	/	261	952	/	543	0					
PM	4:00 PM	10	42	19	28	59	4	12	72	23	36	94	40	439	0	0	0	0	0
	4:15 PM	2	34	7	21	61	6	6	79	31	26	86	28	387	0	0	0	0	0
	4:30 PM	4	46	26	15	75	14	3	90	17	46	90	30	456	0	0	0	0	0
	4:45 PM	7	40	22	15	71	2	3	76	20	28	87	43	414	0	0	0	0	0
	5:00 PM	12	47	40	13	63	5	0	109	32	30	79	43	473	0	0	0	0	0
	5:15 PM	15	50	24	12	67	6	5	80	17	36	99	39	450	0	0	0	0	0
	5:30 PM	8	55	12	17	49	11	4	79	18	38	93	31	415	0	0	1	0	1
	5:45 PM	7	37	14	10	42	6	2	64	21	35	99	41	378	0	0	0	0	0
	VOLUMES	65	351	164	131	487	54	35	649	179	275	727	295	3,413	0	0	1	0	1
	APPROACH %	11%	61%	28%	19%	72%	8%	4%	75%	21%	21%	56%	23%						
	APP/DEPART	580	/	681	672	/	941	864	/	944	1,297	/	847	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	38	183	112	55	276	27	11	355	86	140	355	155	1,793	0	0	0	0	
	APPROACH %	11%	55%	34%	15%	77%	8%	2%	79%	19%	22%	55%	24%						
	PEAK HR FACTOR		0.841			0.861			0.801			0.934		0.948					
	APP/DEPART	333	/	349	358	/	502	452	/	522	650	/	420	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
	7:45 AM	0	1	0	3	4	0	1	0	3	4	0	0	0	0	0
	8:00 AM	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
	8:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:30 AM	2	1	0	0	3	2	1	0	0	3	0	0	0	0	0
	8:45 AM	4	0	0	0	4	4	0	0	0	4	0	0	0	0	0
	TOTAL	6	5	2	4	17	6	4	2	4	16	0	1	0	0	1
	BEGIN PEAK HR	7:15 AM					0	3	2	3	8					
PM	4:00 PM	7	1	1	1	10	6	1	1	0	8	1	0	0	1	2
	4:15 PM	1	2	1	4	8	1	1	0	4	6	0	1	1	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	8	6	2	1	17	8	5	2	1	16	0	1	0	0	1
	5:00 PM	1	3	0	1	5	1	1	0	1	3	0	2	0	0	2
	5:15 PM	11	1	0	0	12	10	0	0	0	10	1	1	0	0	2
	5:30 PM	3	6	1	3	13	3	6	1	3	13	0	0	0	0	0
	5:45 PM	3	2	4	1	10	3	2	4	1	10	0	0	0	0	0
	TOTAL	34	21	9	11	75	32	16	8	10	66	2	5	1	1	9
	BEGIN PEAK HR	4:30 PM					19	6	2	2	29					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

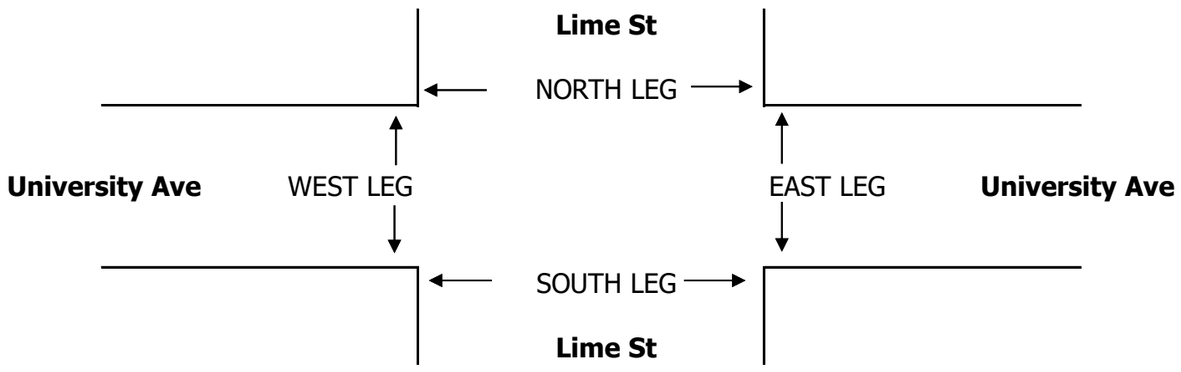
DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Lime St	LOCATION #:	36
	EAST & WEST:	University Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Lime St			SOUTHBOUND Lime St			EASTBOUND University Ave			WESTBOUND University Ave				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 1	WL 2	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	7	12	9	89	5	2	36	12	56	103	15	347	0	0	0	0	0
	7:15 AM	2	7	11	11	128	5	0	45	28	66	99	16	418	0	0	0	0	0
	7:30 AM	3	18	37	8	93	3	0	50	26	62	85	15	400	0	0	0	0	0
	7:45 AM	4	27	31	18	142	10	0	77	36	85	121	28	579	0	0	0	0	0
	8:00 AM	5	15	18	19	109	8	2	61	23	69	129	21	479	0	0	0	0	0
	8:15 AM	3	22	16	3	98	5	2	54	14	69	90	22	398	0	0	0	0	0
	8:30 AM	3	17	23	18	73	9	4	50	19	66	80	19	381	0	0	0	0	0
	8:45 AM	3	19	22	9	101	10	0	73	16	61	96	14	424	0	0	0	0	0
	VOLUMES	24	132	170	95	833	55	10	446	174	534	803	150	3,426	0	0	0	0	0
	APPROACH %	7%	40%	52%	10%	85%	6%	2%	71%	28%	36%	54%	10%						
	APP/DEPART	326	/	292	983	/	1,541	630	/	711	1,487	/	882	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	14	67	97	56	472	26	2	233	113	282	434	80	1,876	0	0	0	0	
	APPROACH %	8%	38%	54%	10%	85%	5%	1%	67%	32%	35%	55%	10%						
	PEAK HR FACTOR		0.718			0.815			0.770			0.850		0.810					
	APP/DEPART	178	/	149	554	/	867	348	/	386	796	/	474	0					
PM	4:00 PM	7	49	72	26	94	11	2	152	30	62	92	22	619	0	0	0	0	0
	4:15 PM	10	20	45	24	72	7	1	149	29	47	115	20	539	0	0	0	0	0
	4:30 PM	10	64	77	30	117	12	4	193	27	49	99	14	696	0	0	0	0	0
	4:45 PM	5	42	80	26	69	12	1	148	20	43	116	17	579	0	0	0	0	0
	5:00 PM	8	86	146	29	99	8	1	136	20	58	90	19	700	0	0	0	0	0
	5:15 PM	3	55	71	17	85	8	2	198	26	52	115	25	657	0	0	0	0	0
	5:30 PM	5	44	73	33	64	14	2	140	26	50	100	28	579	0	0	0	0	0
	5:45 PM	8	41	52	25	59	16	1	134	18	64	135	17	570	0	0	0	0	0
	VOLUMES	56	401	616	210	659	88	14	1,250	196	425	862	162	4,939	0	0	0	0	0
	APPROACH %	5%	37%	57%	22%	69%	9%	1%	86%	13%	29%	59%	11%						
	APP/DEPART	1,073	/	577	957	/	1,280	1,460	/	2,076	1,449	/	1,006	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	26	247	374	102	370	40	8	675	93	202	420	75	2,632	0	0	0	0	
	APPROACH %	4%	38%	58%	20%	72%	8%	1%	87%	12%	29%	60%	11%						
	PEAK HR FACTOR		0.674			0.805			0.858			0.908		0.940					
	APP/DEPART	647	/	330	512	/	665	776	/	1,151	697	/	486	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	7:15 AM	1	2	0	0	3	0	1	0	0	1	1	1	0	0	2
	7:30 AM	1	3	0	0	4	1	2	0	0	3	0	1	0	0	1
	7:45 AM	3	4	4	0	11	3	4	4	0	11	0	0	0	0	0
	8:00 AM	2	2	1	0	5	2	2	1	0	5	0	0	0	0	0
	8:15 AM	2	3	1	1	7	1	3	1	1	6	1	0	0	0	1
	8:30 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	8:45 AM	3	4	0	1	8	1	4	0	1	6	2	0	0	0	2
	TOTAL	12	22	6	2	42	8	19	6	2	35	4	3	0	0	7
	BEGIN PEAK HR			7:15 AM			6	9	5	0	20					
PM	4:00 PM	1	4	0	0	5	1	2	0	0	3	0	2	0	0	2
	4:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	4:30 PM	3	4	0	0	7	2	4	0	0	6	1	0	0	0	1
	4:45 PM	3	2	1	0	6	3	2	1	0	6	0	0	0	0	0
	5:00 PM	2	4	0	0	6	2	3	0	0	5	0	1	0	0	1
	5:15 PM	3	1	2	1	7	0	0	2	0	2	3	1	0	1	5
	5:30 PM	0	6	0	3	9	0	4	0	3	7	0	2	0	0	2
	5:45 PM	4	12	0	0	16	3	10	0	0	13	1	2	0	0	3
	TOTAL	17	33	3	4	57	12	25	3	3	43	5	8	0	1	14
	BEGIN PEAK HR			4:30 PM			7	9	3	0	19					

INTERSECTION TURNING MOVEMENT COUNTS

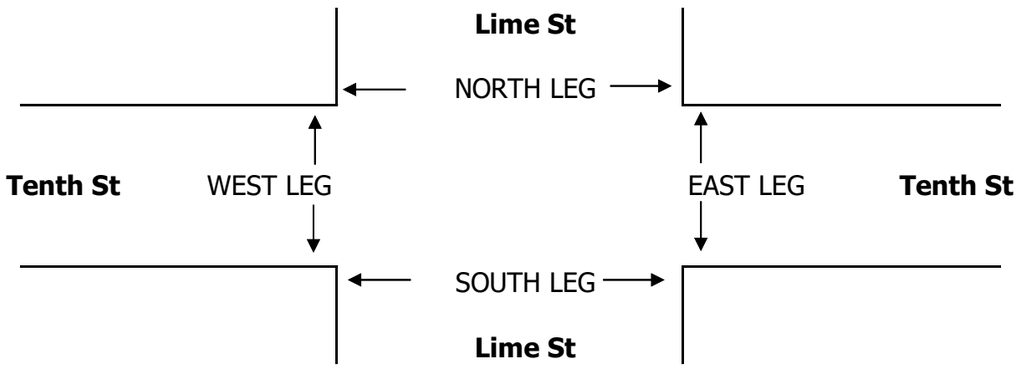
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	Lime St	LOCATION #:	37
	EAST & WEST:	Tenth St	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Lime St			SOUTHBOUND Lime St			EASTBOUND Tenth St			WESTBOUND SR-91 WB On-Ramp				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 2	ST 2	SR 0	EL 1	ET 1	ER 1	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	6	40	0	62	53	15	2	18	6	0	0	0	202	0	0	0	0	0
	7:15 AM	10	26	0	76	87	21	4	25	7	0	0	0	256	0	0	0	0	0
	7:30 AM	13	67	3	69	62	24	4	21	11	0	0	0	274	0	0	0	0	0
	7:45 AM	11	66	0	96	94	29	4	26	7	0	0	0	333	0	0	0	0	0
	8:00 AM	10	52	2	75	58	35	2	15	2	0	0	0	251	0	0	0	0	0
	8:15 AM	5	43	1	78	47	31	8	22	8	0	0	0	243	0	0	0	0	0
	8:30 AM	5	49	2	86	46	15	7	22	6	0	0	0	238	0	0	0	0	0
	8:45 AM	9	42	1	89	41	23	6	15	10	0	0	0	236	0	0	0	0	0
	VOLUMES	69	385	9	631	488	193	37	164	57	0	0	0	2,033	0	0	0	0	0
	APPROACH %	15%	83%	2%	48%	37%	15%	14%	64%	22%	0%	0%	0%						
	APP/DEPART	463	/	422	1,312	/	545	258	/	804	0	/	262	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	44	211	5	316	301	109	14	87	27	0	0	0	1,114	0	0	0	0	
	APPROACH %	17%	81%	2%	44%	41%	15%	11%	68%	21%	0%	0%	0%						
	PEAK HR FACTOR		0.783			0.829			0.865			0.000		0.836					
	APP/DEPART	260	/	225	726	/	328	128	/	408	0	/	153	0					
PM	4:00 PM	7	68	9	128	50	13	13	48	15	0	0	0	351	0	0	0	0	0
	4:15 PM	3	57	4	126	56	5	9	50	12	0	0	0	322	0	0	0	0	0
	4:30 PM	9	89	17	119	84	7	18	59	7	0	0	0	409	0	0	0	0	0
	4:45 PM	3	89	10	118	59	9	12	48	13	0	0	0	361	0	0	0	0	0
	5:00 PM	6	134	23	120	98	5	32	68	26	0	0	0	512	0	0	0	0	0
	5:15 PM	6	73	4	139	73	2	14	42	12	0	0	0	365	0	0	0	0	0
	5:30 PM	2	66	6	82	63	3	10	28	35	0	0	0	295	1	0	0	0	1
	5:45 PM	1	60	6	97	59	3	9	29	5	0	0	0	269	0	0	0	0	0
	VOLUMES	37	636	79	929	542	47	117	372	125	0	0	0	2,885	1	0	0	0	1
	APPROACH %	5%	84%	10%	61%	36%	3%	19%	61%	20%	0%	0%	0%						
	APP/DEPART	753	/	753	1,518	/	668	614	/	1,380	0	/	84	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	24	385	54	496	314	23	76	217	58	0	0	0	1,647	0	0	0	0	
	APPROACH %	5%	83%	12%	60%	38%	3%	22%	62%	17%	0%	0%	0%						
	PEAK HR FACTOR		0.710			0.934			0.696			0.000		0.804					
	APP/DEPART	463	/	461	833	/	372	351	/	767	0	/	47	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

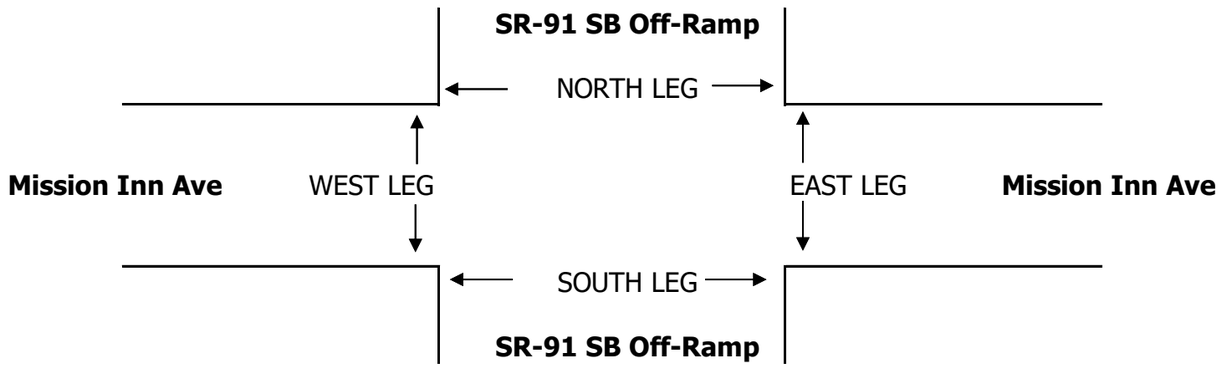
DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	SR-91 SB Off-Ramp	LOCATION #:	38
	EAST & WEST:	Mission Inn Ave	CONTROL:	SIGNAL

NOTES:

Queue WB AM

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-91 SB Off-Ramp			SOUTHBOUND SR-91 SB Off-Ramp			EASTBOUND Mission Inn Ave			WESTBOUND Mission Inn Ave				U-TURNS				
	LANES:	NL 1	NT X	NR 0	SL 1	ST X	SR 2	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	35	0	157	0	50	0	0	24	0	266	0	0	0	0	0
	7:15 AM	0	0	1	22	0	224	0	53	0	0	32	0	332	0	0	0	0	0
	7:30 AM	0	0	0	29	0	184	0	71	0	0	20	0	304	0	0	0	0	0
	7:45 AM	0	0	0	37	0	244	0	70	0	0	41	0	392	0	0	0	0	0
	8:00 AM	0	0	0	36	0	175	0	66	0	0	33	0	310	0	0	0	0	0
	8:15 AM	0	0	0	32	0	174	0	38	0	0	29	0	273	0	0	0	0	0
	8:30 AM	0	0	0	44	0	157	0	43	0	0	34	0	278	0	0	0	0	0
	8:45 AM	0	0	0	33	0	153	0	57	0	0	36	0	279	0	0	0	0	0
	VOLUMES	0	0	1	268	0	1,468	0	448	0	0	249	0	2,434	0	0	0	0	0
	APPROACH %	0%	0%	100%	15%	0%	85%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	1	/	0	1,736	/	0	448	/	717	249	/	1,717	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	1	124	0	827	0	260	0	0	126	0	1,338	0	0	0	0	
	APPROACH %	0%	0%	100%	13%	0%	87%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.250			0.846			0.915			0.768		0.853					
	APP/DEPART	1	/	0	951	/	0	260	/	385	126	/	953	0					
PM	4:00 PM	0	0	0	36	0	123	0	122	0	0	47	0	328	0	0	0	0	0
	4:15 PM	0	0	0	35	0	94	0	108	0	0	46	0	283	0	0	0	0	0
	4:30 PM	0	0	0	30	0	122	0	130	0	0	45	0	327	0	0	0	0	0
	4:45 PM	0	0	0	46	0	107	0	113	0	0	51	0	317	0	0	0	0	0
	5:00 PM	0	0	0	35	0	97	0	150	0	0	55	0	337	0	0	0	0	0
	5:15 PM	0	0	0	44	0	120	0	129	0	0	54	0	347	0	0	0	0	0
	5:30 PM	0	0	0	43	0	125	0	108	0	0	37	0	313	0	0	0	0	0
	5:45 PM	0	0	0	25	0	142	0	82	0	0	35	0	284	0	0	0	0	0
	VOLUMES	0	0	0	294	0	930	0	942	0	0	370	0	2,536	0	0	0	0	0
	APPROACH %	0%	0%	0%	24%	0%	76%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	1,224	/	0	942	/	1,236	370	/	1,300	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	155	0	446	0	522	0	0	205	0	1,328	0	0	0	0	
	APPROACH %	0%	0%	0%	26%	0%	74%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.916			0.870			0.932		0.957					
	APP/DEPART	0	/	0	601	/	0	522	/	677	205	/	651	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BEGIN PEAK HR	7:15 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BEGIN PEAK HR	4:30 PM					0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jun 6, 24

LOCATION: Riverside
NORTH & SOUTH: SR-91 NB On-Ramp
EAST & WEST: Mission Inn Ave

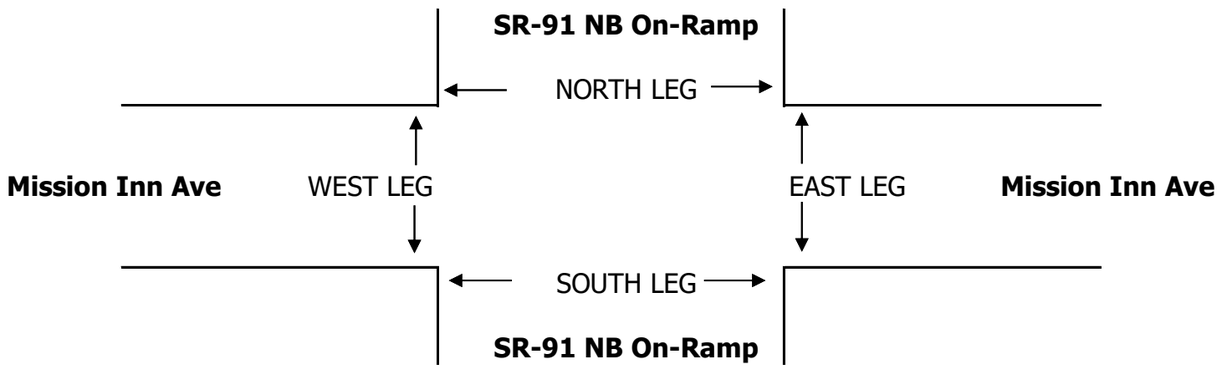
PROJECT #: SC4743
LOCATION #: 39
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND SR-91 NB On-Ramp			SOUTHBOUND SR-91 NB On-Ramp			EASTBOUND Mission Inn Ave			WESTBOUND Mission Inn Ave				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 0.5	SL X	ST X	SR X	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	13	37	7	0	0	0	43	42	0	0	11	15	168	0	0	0	0	0
	7:15 AM	15	34	8	0	0	0	39	37	0	0	17	20	170	0	0	0	0	0
	7:30 AM	9	46	11	0	0	0	52	47	0	0	12	31	208	0	0	0	0	0
	7:45 AM	26	40	11	0	0	0	62	45	0	0	15	22	221	0	0	0	0	0
	8:00 AM	19	42	6	0	0	0	63	39	0	0	14	11	194	0	0	0	0	0
	8:15 AM	20	43	15	0	0	0	36	34	0	0	9	25	182	0	0	0	0	0
	8:30 AM	16	30	4	0	0	0	34	53	0	0	18	12	167	0	0	0	0	0
	8:45 AM	25	34	9	0	0	0	44	45	0	0	12	7	176	0	0	0	0	0
	VOLUMES	143	306	71	0	0	0	373	342	0	0	108	143	1,486	0	0	0	0	0
	APPROACH %	28%	59%	14%	0%	0%	0%	52%	48%	0%	0%	43%	57%						
	APP/DEPART	520	/	822	0	/	0	715	/	413	251	/	251	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	74	171	43	0	0	0	213	165	0	0	50	89	805	0	0	0	0	
	APPROACH %	26%	59%	15%	0%	0%	0%	56%	44%	0%	0%	36%	64%						
	PEAK HR FACTOR		0.923			0.000			0.883			0.808		0.911					
	APP/DEPART	288	/	473	0	/	0	378	/	208	139	/	124	0					
PM	4:00 PM	21	61	15	0	0	0	82	76	0	0	26	22	303	0	0	0	0	0
	4:15 PM	23	56	12	0	0	0	71	72	0	0	24	30	288	0	0	0	0	0
	4:30 PM	12	48	8	0	0	0	71	88	0	0	33	30	290	0	0	0	0	0
	4:45 PM	26	66	9	0	0	0	91	68	0	0	25	35	320	0	0	0	0	0
	5:00 PM	22	97	9	0	0	0	112	73	0	0	33	47	393	0	0	0	0	0
	5:15 PM	27	80	19	0	0	0	85	88	0	0	27	31	357	0	0	0	0	0
	5:30 PM	17	60	13	0	0	0	70	79	0	0	20	26	285	0	0	0	0	0
	5:45 PM	20	74	7	0	0	0	51	56	0	0	16	27	251	0	0	0	0	0
	VOLUMES	168	542	92	0	0	0	633	600	0	0	204	248	2,487	0	0	0	0	0
	APPROACH %	21%	68%	11%	0%	0%	0%	51%	49%	0%	0%	45%	55%						
	APP/DEPART	802	/	1,423	0	/	0	1,233	/	692	452	/	372	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	87	291	45	0	0	0	359	317	0	0	118	143	1,360	0	0	0	0	
	APPROACH %	21%	69%	11%	0%	0%	0%	53%	47%	0%	0%	45%	55%						
	PEAK HR FACTOR		0.826			0.000			0.914			0.816		0.865					
	APP/DEPART	423	/	793	0	/	0	676	/	362	261	/	205	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BEGIN PEAK HR	7:30 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BEGIN PEAK HR	4:30 PM					0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

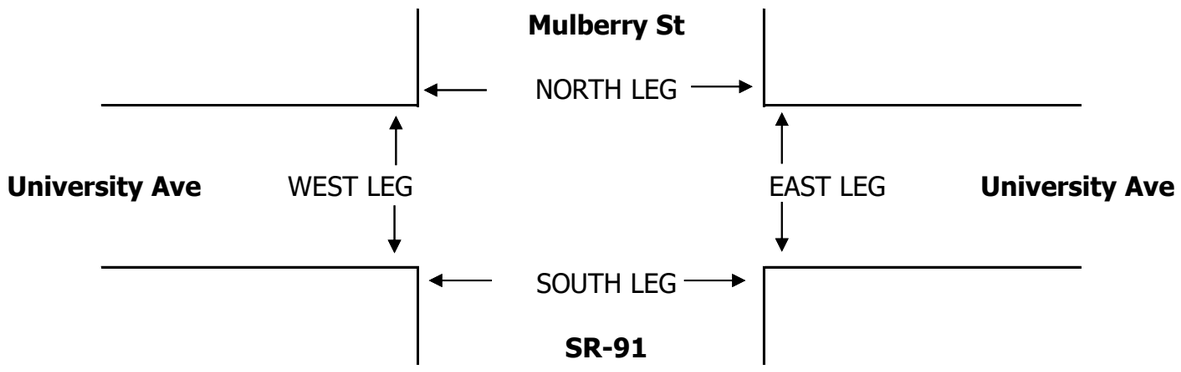
DATE:				
Thu, Jun 6, 24	LOCATION:	Riverside	PROJECT #:	SC4743
	NORTH & SOUTH:	SR-91-Mulberry St	LOCATION #:	40
	EAST & WEST:	University Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND SR-91			SOUTHBOUND Mulberry St			EASTBOUND University Ave			WESTBOUND University Ave				U-TURNS				
	LANES:	NL 1.5	NT 0.5	NR 1	SL X	ST X	SR X	EL 2	ET 2	ER X	WL X	WT 2	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	83	15	38	0	0	0	14	43	0	0	95	28	316	0	0	0	0	0
	7:15 AM	78	21	51	0	0	0	16	52	0	0	92	27	337	0	0	0	0	0
	7:30 AM	70	17	44	0	0	0	25	68	0	0	98	26	348	0	0	0	0	0
	7:45 AM	110	27	58	0	0	0	22	99	0	0	122	21	459	0	0	0	0	0
	8:00 AM	80	23	60	0	0	0	21	77	0	0	146	26	433	0	0	0	0	0
	8:15 AM	67	26	55	0	0	0	22	51	0	0	104	30	355	0	0	0	0	0
	8:30 AM	74	18	58	0	0	0	15	81	0	0	96	19	361	0	0	0	0	0
	8:45 AM	76	29	50	0	0	0	13	90	0	0	95	23	376	0	0	0	0	0
	VOLUMES	638	176	414	0	0	0	148	561	0	0	848	200	2,985	0	0	0	0	0
	APPROACH %	52%	14%	34%	0%	0%	0%	21%	79%	0%	0%	81%	19%						
	APP/DEPART	1,228	/	524	0	/	0	709	/	975	1,048	/	1,486	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	331	94	231	0	0	0	80	308	0	0	468	96	1,608	0	0	0	0	
	APPROACH %	50%	14%	35%	0%	0%	0%	21%	79%	0%	0%	83%	17%						
	PEAK HR FACTOR		0.841			0.000			0.802			0.820		0.876					
	APP/DEPART	656	/	270	0	/	0	388	/	539	564	/	799	0					
PM	4:00 PM	57	25	84	0	0	0	55	201	0	0	137	21	580	0	0	0	0	0
	4:15 PM	68	26	81	0	0	0	43	177	0	0	103	16	514	0	0	0	0	0
	4:30 PM	56	19	75	0	0	0	38	260	0	0	111	22	581	0	0	0	0	0
	4:45 PM	74	24	73	0	0	0	48	207	0	0	85	21	532	0	0	0	0	0
	5:00 PM	54	27	72	0	0	0	90	214	0	0	122	22	601	0	0	0	0	0
	5:15 PM	67	38	106	0	0	0	45	239	0	0	115	34	644	0	0	0	0	0
	5:30 PM	63	25	92	0	0	0	51	194	0	0	138	23	586	0	0	0	0	0
	5:45 PM	80	23	109	0	0	0	44	167	0	0	114	26	563	0	0	0	0	0
	VOLUMES	519	207	692	0	0	0	414	1,659	0	0	925	185	4,601	0	0	0	0	0
	APPROACH %	37%	15%	49%	0%	0%	0%	20%	80%	0%	0%	83%	17%						
	APP/DEPART	1,418	/	806	0	/	0	2,073	/	2,351	1,110	/	1,444	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	264	113	379	0	0	0	230	814	0	0	489	105	2,394	0	0	0	0	
	APPROACH %	35%	15%	50%	0%	0%	0%	22%	78%	0%	0%	82%	18%						
	PEAK HR FACTOR		0.892			0.000			0.859			0.922		0.929					
	APP/DEPART	756	/	448	0	/	0	1,044	/	1,193	594	/	753	0					



		ALL PED + BIKE & SCOOTER					PEDESTRIAN CROSSINGS					BICYCLE & SCOOTER CROSSINGS				
		N LEG	S LEG	E LEG	W LEG	TOTAL	N LEG	S LEG	E LEG	W LEG	TOTAL	NL	SL	EL	WL	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BEGIN PEAK HR	7:45 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BEGIN PEAK HR	5:00 PM					0	0	0	0	0					

Appendix I

Level of Service Analysis Worksheets

Appendix I-1

Existing Conditions Analysis

Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\1 Existing AM.pdf

Scenario 1 Existing AM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	NB Left	0.588	20.4	C
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	EB Right	0.583	24.5	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	EB Left	0.213	11.0	B
4	Main St @ First St	Signalized	HCM 7th Edition	EB Left	0.146	10.6	B
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.008	9.7	A
6	Main St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.321	22.4	C
7	Market St @ First St	Signalized	HCM 7th Edition	WB Left	0.256	8.3	A
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.006	15.5	C
9	Market St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.386	16.0	B
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	EB Left	0.062	20.7	C
11	Market St @ Fifth St	Signalized	HCM 7th Edition	WB Right	0.292	9.2	A
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	EB Right	0.022	11.4	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	SB Left	0.681	22.5	C
14	Market St @ University Ave	Signalized	HCM 7th Edition	SB Left	0.464	23.2	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Right	0.287	3.1	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	WB Left	0.257	7.2	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	EB Thru	0.062	39.5	E
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Thru	0.216	6.1	A

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	WB Thru	0.037	33.2	D
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	EB Left	0.420	30.2	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.270	12.7	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.336	21.5	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.232	7.6	A
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.001	9.2	A
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	NB Left	0.128	7.9	A
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	NB Left	0.056	7.7	A
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.277	7.7	A
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.241	10.1	B
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Right	0.153	10.3	B
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.198	10.7	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Thru	0.002	10.9	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.038	13.8	B
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.466	24.7	C
34	Lime St @ University Ave	Signalized	HCM 7th Edition	EB Left	0.402	28.2	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Left	0.260	16.6	B
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	SB Right	0.478	13.9	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	NB Thru	0.359	17.8	B
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.342	16.6	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	135	326	0	0	733	143	0	0	0	46	78	322
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	135	326	0	0	733	143	0	0	0	46	78	322
Peak Hour Factor	0.8950	0.8950	0.9500	0.9500	0.8950	0.8950	0.9500	0.9500	0.9500	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	91	0	0	205	40	0	0	0	13	22	90
Total Analysis Volume [veh/h]	151	364	0	0	819	160	0	0	0	51	87	360
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15	29	0	0	14	0	0	0	0	0	26	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	55	55	55	55		55	55
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	6	30	20	20		15	15
g / C, Green / Cycle	0.12	0.55	0.36	0.36		0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.08	0.10	0.26	0.28		0.08	0.23
s, saturation flow rate [veh/h]	1781	3560	1870	1768		1836	1589
c, Capacity [veh/h]	209	1948	668	631		491	425
d1, Uniform Delay [s]	23.41	6.28	15.40	15.72		15.96	19.08
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	4.68	0.21	6.99	9.03		0.31	5.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.19	0.73	0.78		0.28	0.85
d, Delay for Lane Group [s/veh]	28.10	6.50	22.39	24.75		16.27	24.42
Lane Group LOS	C	A	C	C		B	C
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	1.99	0.83	5.73	6.11		1.25	4.40
50th-Percentile Queue Length [ft/ln]	49.67	20.70	143.24	152.71		31.23	109.88
95th-Percentile Queue Length [veh/ln]	3.58	1.49	9.66	10.16		2.25	7.83
95th-Percentile Queue Length [ft/ln]	89.41	37.27	241.38	254.05		56.21	195.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.10	6.50	0.00	0.00	23.34	24.75	0.00	0.00	0.00	16.27	16.27	24.42
Movement LOS	C	A			C	C				B	B	C
d_A, Approach Delay [s/veh]	12.83			23.57			0.00			22.16		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	20.44											
Intersection LOS	C											
Intersection V/C	0.588											

Emissions

Vehicle Miles Traveled [mph]	8.98	21.65	18.12	18.12		5.06	13.21
Stops [stops/h]	130.06	108.41	375.02	399.84		81.75	287.68
Fuel consumption [US gal/h]	2.18	2.12	5.74	6.16		1.26	4.46
CO [g/h]	152.66	148.33	401.35	430.82		88.40	311.48
NOx [g/h]	29.70	28.86	78.09	83.82		17.20	60.60
VOC [g/h]	35.38	34.38	93.02	99.85		20.49	72.19

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.787	2.105
Crosswalk LOS	F	F	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	869	324	0	760
d_b, Bicycle Delay [s]	8.79	19.32	27.50	10.57
l_b,int, Bicycle LOS Score for Intersection	1.984	2.367	4.132	2.381
Bicycle LOS	A	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	328	219	455	319	0	133	3	198	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	328	219	455	319	0	133	3	198	0	0	0
Peak Hour Factor	0.9500	0.8880	0.8880	0.8880	0.8880	0.9500	0.8880	0.8880	0.8880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	92	62	128	90	0	37	1	56	0	0	0
Total Analysis Volume [veh/h]	0	369	247	512	359	0	150	3	223	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	35	53	0	0	22	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	75	75	75	75	75	75	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	24	24	24	52	13	13	
g / C, Green / Cycle	0.33	0.33	0.32	0.70	0.17	0.17	
(v / s)_i Volume / Saturation Flow Rate	0.10	0.16	0.29	0.10	0.09	0.14	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1783	1589	
c, Capacity [veh/h]	1160	518	562	2474	302	269	
d1, Uniform Delay [s]	19.02	20.18	24.64	3.88	28.31	30.11	
k, delay calibration	0.50	0.50	0.23	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.72	3.13	11.56	0.12	1.32	6.47	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.32	0.48	0.91	0.15	0.51	0.83	
d, Delay for Lane Group [s/veh]	19.74	23.31	36.21	4.01	29.63	36.58	
Lane Group LOS	B	C	D	A	C	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	2.36	3.64	9.82	0.69	2.49	4.17	
50th-Percentile Queue Length [ft/ln]	59.12	91.11	245.44	17.22	62.21	104.22	
95th-Percentile Queue Length [veh/ln]	4.26	6.56	14.96	1.24	4.48	7.50	
95th-Percentile Queue Length [ft/ln]	106.41	164.00	373.90	31.00	111.97	187.60	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.74	23.31	36.21	4.01	0.00	29.63	29.63	36.58	0.00	0.00	0.00
Movement LOS		B	C	D	A		C	C	D			
d_A, Approach Delay [s/veh]	21.17			22.94			33.75			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	24.54											
Intersection LOS	C											
Intersection V/C	0.583											

Emissions

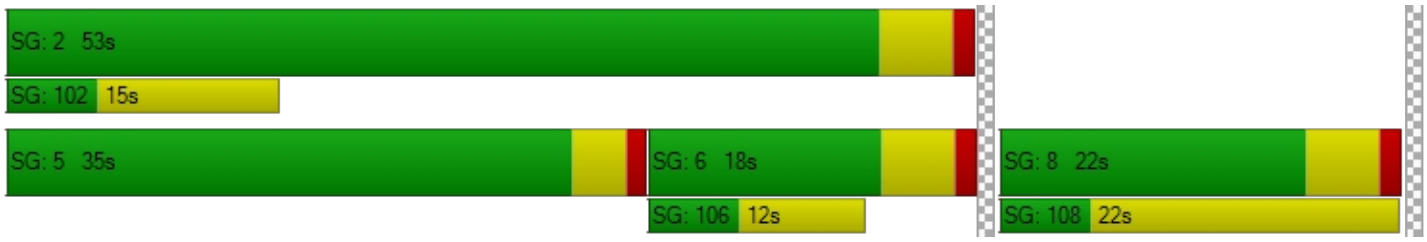
Vehicle Miles Traveled [mph]	50.32	33.68	30.46	21.36	4.67	6.80	
Stops [stops/h]	227.01	174.93	471.24	66.13	119.44	200.10	
Fuel consumption [US gal/h]	5.11	3.77	8.48	1.60	2.00	3.42	
CO [g/h]	357.03	263.62	592.57	112.14	139.71	239.35	
NOx [g/h]	69.46	51.29	115.29	21.82	27.18	46.57	
VOC [g/h]	82.74	61.10	137.33	25.99	32.38	55.47	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	0.00	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.565	0.000	2.075	2.079
Crosswalk LOS	B	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	344	1277	451	0
d_b, Bicycle Delay [s]	25.71	4.90	22.50	37.50
l_b,int, Bicycle LOS Score for Intersection	2.068	2.278	1.870	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.213

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	311	23	97	289	8	21	53	12	56	31	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	311	23	97	289	8	21	53	12	56	31	96
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	86	6	27	79	2	6	15	3	15	9	26
Total Analysis Volume [veh/h]	7	342	25	107	318	9	23	58	13	62	34	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	23	0	11	23	0	0	21	0	0	21	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	55	55	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	37	27	27	37	32	32	8	8	8	8
g / C, Green / Cycle	0.67	0.50	0.50	0.67	0.59	0.59	0.15	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.10	0.09	0.09	0.09	0.02	0.04	0.05	0.08
s, saturation flow rate [veh/h]	1106	1870	1826	1173	1870	1852	1248	1811	1329	1650
c, Capacity [veh/h]	899	927	906	930	1095	1084	174	276	235	251
d1, Uniform Delay [s]	3.02	7.75	7.76	3.25	5.18	5.18	26.13	20.56	24.49	21.59
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.48	0.50	0.25	0.29	0.29	0.34	0.49	0.59	1.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.20	0.20	0.12	0.15	0.15	0.13	0.26	0.26	0.56
d, Delay for Lane Group [s/veh]	3.03	8.24	8.26	3.50	5.47	5.48	26.47	21.05	25.08	23.51
Lane Group LOS	A	A	A	A	A	A	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.01	1.07	1.06	0.28	0.67	0.67	0.30	0.80	0.78	1.71
50th-Percentile Queue Length [ft/ln]	0.36	26.68	26.39	7.09	16.72	16.63	7.49	19.93	19.52	42.69
95th-Percentile Queue Length [veh/ln]	0.03	1.92	1.90	0.51	1.20	1.20	0.54	1.44	1.41	3.07
95th-Percentile Queue Length [ft/ln]	0.65	48.03	47.50	12.76	30.09	29.94	13.49	35.88	35.14	76.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.03	8.25	8.26	3.50	5.47	5.48	26.47	21.05	21.05	25.08	23.51	23.51
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.15			4.99			22.37			23.99		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.02											
Intersection LOS	B											
Intersection V/C	0.213											

Emissions

Vehicle Miles Traveled [mph]	3.11	82.09	80.88	14.59	22.37	22.22	0.65	2.01	1.74	3.93
Stops [stops/h]	0.94	69.85	69.09	18.56	43.77	43.54	19.62	52.18	51.11	111.77
Fuel consumption [US gal/h]	0.13	3.96	3.91	0.77	1.36	1.36	0.23	0.59	0.59	1.28
CO [g/h]	9.08	277.11	273.21	53.96	95.38	94.79	15.97	41.57	41.30	89.14
NOx [g/h]	1.77	53.92	53.16	10.50	18.56	18.44	3.11	8.09	8.03	17.34
VOC [g/h]	2.10	64.22	63.32	12.51	22.10	21.97	3.70	9.63	9.57	20.66

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	2.538	2.514	1.961	2.103
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	651	651	596	596
d_b, Bicycle Delay [s]	12.51	12.51	13.55	13.55
l_b,int, Bicycle LOS Score for Intersection	1.868	1.918	1.715	1.893
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.146

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	225	9	3	235	45	79	40	30	25	26	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	225	9	3	235	45	79	40	30	25	26	12
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	60	2	1	63	12	21	11	8	7	7	3
Total Analysis Volume [veh/h]	5	240	10	3	251	48	84	43	32	27	28	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	39	39	44	39	39	7	7	7
g / C, Green / Cycle	0.73	0.66	0.66	0.73	0.65	0.65	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.00	0.07	0.07	0.00	0.08	0.08	0.06	0.04	0.06
s, saturation flow rate [veh/h]	1122	1870	1844	1165	1870	1768	1366	1739	1178
c, Capacity [veh/h]	947	1224	1207	984	1217	1151	167	193	214
d1, Uniform Delay [s]	2.29	3.84	3.84	2.27	3.98	3.99	25.61	24.79	24.80
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.17	0.17	0.01	0.21	0.23	2.35	1.28	0.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.10	0.10	0.00	0.12	0.13	0.50	0.39	0.32
d, Delay for Lane Group [s/veh]	2.30	4.01	4.02	2.28	4.19	4.22	27.96	26.07	25.64
Lane Group LOS	A	A	A	A	A	A	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.01	0.41	0.41	0.01	0.51	0.50	1.21	1.02	0.91
50th-Percentile Queue Length [ft/ln]	0.19	10.24	10.20	0.14	12.86	12.61	30.34	25.59	22.77
95th-Percentile Queue Length [veh/ln]	0.01	0.74	0.73	0.01	0.93	0.91	2.18	1.84	1.64
95th-Percentile Queue Length [ft/ln]	0.34	18.44	18.37	0.26	23.14	22.70	54.61	46.05	40.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.30	4.01	4.02	2.28	4.20	4.22	27.96	26.07	26.07	25.64	25.64	25.64
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	3.98			4.19			27.07			25.64		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.62											
Intersection LOS	B											
Intersection V/C	0.146											

Emissions

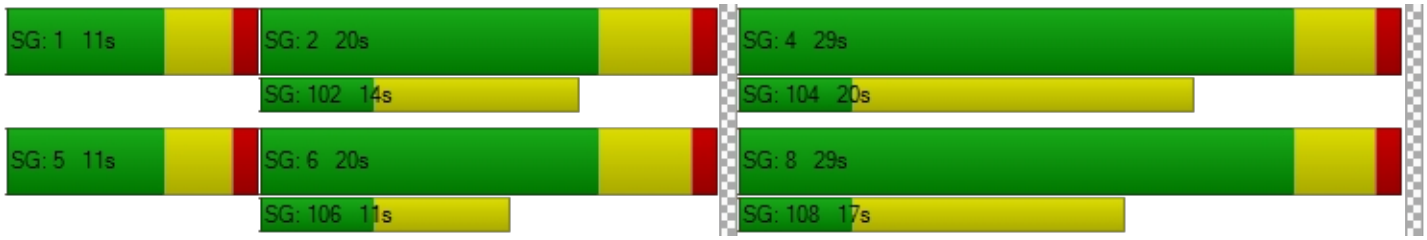
Vehicle Miles Traveled [mph]	0.38	9.46	9.40	1.33	67.37	65.40	6.95	6.21	1.92
Stops [stops/h]	0.46	24.58	24.49	0.35	30.86	30.27	72.81	61.40	54.65
Fuel consumption [US gal/h]	0.02	0.65	0.64	0.05	2.93	2.85	1.07	0.91	0.65
CO [g/h]	1.41	45.29	45.04	3.83	204.78	199.01	74.78	63.79	45.50
NOx [g/h]	0.27	8.81	8.76	0.74	39.84	38.72	14.55	12.41	8.85
VOC [g/h]	0.33	10.50	10.44	0.89	47.46	46.12	17.33	14.78	10.54

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.447	2.545	1.991	1.749
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	497	497	813	813
d_b, Bicycle Delay [s]	16.95	16.95	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	1.984	2.023	2.036	1.886
Bicycle LOS	A	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	28	1	3	287	6	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	1	3	287	6	8
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	0	1	77	2	2
Total Analysis Volume [veh/h]	30	1	3	308	6	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.28	0.00	9.69	8.46
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.14	0.00	1.23	1.23
d_A, Approach Delay [s/veh]	0.00		0.07		8.95	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.321

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	2	1	4	169	10	118	141	247	51	83	160	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	4	169	10	118	141	247	51	83	160	80
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	45	3	31	37	65	13	22	42	21
Total Analysis Volume [veh/h]	2	1	4	179	11	125	149	261	54	88	169	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	19	0	12	20	0	15	28	0	11	24	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	4.55	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	36	25	35	35	30	26	16	26	15
g / C, Green / Cycle	0.51	0.35	0.50	0.50	0.43	0.36	0.23	0.36	0.21
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.07	0.08	0.09	0.12	0.19	0.08	0.16
s, saturation flow rate [veh/h]	1169	1475	1358	1213	1431	1213	1634	1154	1589
c, Capacity [veh/h]	533	517	814	772	618	440	368	395	337
d1, Uniform Delay [s]	12.47	14.80	9.43	10.83	12.37	16.49	26.03	16.24	25.84
k, delay calibration	0.50	0.50	0.50	0.23	0.50	0.23	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.03	0.27	0.16	0.74	0.98	5.77	0.28	3.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.01	0.11	0.13	0.20	0.34	0.86	0.22	0.75
d, Delay for Lane Group [s/veh]	12.48	14.84	9.70	10.99	13.11	17.47	31.79	16.52	29.25
Lane Group LOS	B	B	A	B	B	B	C	B	C
Critical Lane Group	No	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.02	0.06	0.69	0.84	1.21	1.68	5.34	0.91	4.08
50th-Percentile Queue Length [ft/ln]	0.41	1.43	17.17	20.90	30.28	41.91	133.59	22.83	101.91
95th-Percentile Queue Length [veh/ln]	0.03	0.10	1.24	1.50	2.18	3.02	9.13	1.64	7.34
95th-Percentile Queue Length [ft/ln]	0.74	2.57	30.90	37.62	54.50	75.43	228.36	41.10	183.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.48	14.84	14.84	10.35	10.99	13.11	17.47	31.79	31.79	16.52	29.25	29.25
Movement LOS	B	B	B	B	B	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	14.16			11.47			27.20			25.97		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	22.35											
Intersection LOS	C											
Intersection V/C	0.321											

Emissions

Vehicle Miles Traveled [mph]	0.05	0.12	6.68	7.69	9.45	12.51	26.45	6.74	19.45
Stops [stops/h]	0.85	2.93	35.32	43.00	62.29	86.21	274.81	46.97	209.65
Fuel consumption [US gal/h]	0.01	0.03	0.69	0.84	1.16	1.52	4.65	0.83	3.47
CO [g/h]	0.62	1.79	48.54	58.97	81.23	106.33	324.70	58.21	242.59
NOx [g/h]	0.12	0.35	9.44	11.47	15.80	20.69	63.18	11.32	47.20
VOC [g/h]	0.14	0.42	11.25	13.67	18.82	24.64	75.25	13.49	56.22

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.171	2.327	2.179	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	429	740	666	551
d_b, Bicycle Delay [s]	21.61	13.89	15.58	18.36
l_b,int, Bicycle LOS Score for Intersection	1.786	2.294	2.540	2.338
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.256

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	319	45	29	671	5	11	75	17	32	30	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	319	45	29	671	5	11	75	17	32	30	12
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	88	12	8	184	1	3	21	5	9	8	3
Total Analysis Volume [veh/h]	7	350	49	32	737	5	12	82	19	35	33	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	25	0	11	25	0	0	24	0	0	24	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	37	37	44	39	39	6	6	6	6
g / C, Green / Cycle	0.73	0.62	0.62	0.73	0.65	0.65	0.10	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.03	0.03	0.20	0.20	0.01	0.06	0.03	0.03
s, saturation flow rate [veh/h]	787	3560	1589	1075	1870	1866	1360	1810	1293	1781
c, Capacity [veh/h]	676	2189	977	908	1215	1212	196	185	156	182
d1, Uniform Delay [s]	2.55	4.93	4.59	2.32	4.59	4.59	26.96	25.60	29.14	24.81
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.16	0.10	0.07	0.65	0.65	0.13	2.48	0.72	0.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.16	0.05	0.04	0.31	0.31	0.06	0.54	0.22	0.25
d, Delay for Lane Group [s/veh]	2.55	5.09	4.69	2.39	5.24	5.24	27.09	28.08	29.86	25.53
Lane Group LOS	A	A	A	A	A	A	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.01	0.64	0.18	0.06	1.37	1.36	0.17	1.44	0.52	0.62
50th-Percentile Queue Length [ft/ln]	0.23	16.04	4.53	1.38	34.17	34.11	4.14	36.12	12.97	15.44
95th-Percentile Queue Length [veh/ln]	0.02	1.15	0.33	0.10	2.46	2.46	0.30	2.60	0.93	1.11
95th-Percentile Queue Length [ft/ln]	0.41	28.87	8.15	2.49	61.51	61.40	7.44	65.01	23.34	27.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.55	5.09	4.69	2.39	5.24	5.24	27.09	28.08	28.08	29.86	25.53	25.53
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	5.00			5.13			27.97			27.40		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	8.28											
Intersection LOS	A											
Intersection V/C	0.256											

Emissions

Vehicle Miles Traveled [mph]	0.52	26.13	3.66	1.06	12.27	12.24	0.28	2.33	2.90	3.81
Stops [stops/h]	0.55	76.98	10.87	3.32	82.02	81.86	9.93	86.69	31.13	37.06
Fuel consumption [US gal/h]	0.03	2.05	0.28	0.09	1.64	1.64	0.12	1.01	0.46	0.55
CO [g/h]	1.94	143.63	19.89	6.01	114.74	114.51	8.16	70.90	32.31	38.61
NOx [g/h]	0.38	27.94	3.87	1.17	22.32	22.28	1.59	13.79	6.29	7.51
VOC [g/h]	0.45	33.29	4.61	1.39	26.59	26.54	1.89	16.43	7.49	8.95

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.743	2.596	1.970	2.017
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	653	653	647	647
d_b, Bicycle Delay [s]	13.60	13.60	13.74	13.74
l_b,int, Bicycle LOS Score for Intersection	2.109	2.413	1.960	1.908
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	2	371	713	4	2	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	371	713	4	2	4
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	99	191	1	1	1
Total Analysis Volume [veh/h]	2	398	764	4	2	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	9.29	0.00	0.00	0.00	15.47	10.95
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.18	0.00	0.00	0.00	0.93	0.93
d_A, Approach Delay [s/veh]	0.05		0.00		12.46	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.386

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	282	264	80	622	17	26	92	12	167	39	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	282	264	80	622	17	26	92	12	167	39	67
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	75	70	21	165	4	7	24	3	44	10	18
Total Analysis Volume [veh/h]	1	298	279	85	658	18	28	97	13	177	41	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	11	27	0	12	24	0	13	25	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	46	36	36	46	42	42	19	6	19	12	12
g / C, Green / Cycle	0.61	0.48	0.48	0.61	0.55	0.55	0.26	0.09	0.26	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.00	0.18	0.20	0.09	0.20	0.20	0.02	0.07	0.13	0.02	0.05
s, saturation flow rate [veh/h]	551	1683	1431	898	1683	1667	1274	1649	1403	1683	1431
c, Capacity [veh/h]	466	812	691	584	931	922	444	144	432	269	229
d1, Uniform Delay [s]	6.42	12.19	12.47	6.81	9.38	9.39	21.16	33.47	23.50	27.12	27.84
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	1.28	1.76	0.52	1.11	1.12	0.06	8.13	0.62	0.26	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.37	0.40	0.15	0.36	0.36	0.06	0.76	0.41	0.15	0.31
d, Delay for Lane Group [s/veh]	6.42	13.47	14.22	7.34	10.49	10.50	21.22	41.60	24.12	27.38	28.60
Lane Group LOS	A	B	B	A	B	B	C	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.01	3.06	2.99	0.51	2.82	2.79	0.37	2.23	2.59	0.63	1.14
50th-Percentile Queue Length [ft/ln]	0.13	76.49	74.73	12.86	70.39	69.84	9.18	55.73	64.72	15.84	28.51
95th-Percentile Queue Length [veh/ln]	0.01	5.51	5.38	0.93	5.07	5.03	0.66	4.01	4.66	1.14	2.05
95th-Percentile Queue Length [ft/ln]	0.23	137.68	134.51	23.14	126.71	125.71	16.53	100.31	116.49	28.51	51.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.42	13.47	14.22	7.34	10.50	10.50	21.22	41.60	41.60	24.12	27.38	28.60
Movement LOS	A	B	B	A	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	13.82			10.14			37.47			25.69		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	16.03											
Intersection LOS	B											
Intersection V/C	0.386											

Emissions

Vehicle Miles Traveled [mph]	0.04	11.75	11.00	6.43	25.69	25.46	0.72	2.82	14.86	3.44	5.96
Stops [stops/h]	0.25	146.86	143.48	24.68	135.15	134.09	17.63	107.00	124.26	30.41	54.74
Fuel consumption [US gal/h]	0.00	2.37	2.31	0.60	2.97	2.95	0.25	1.64	2.17	0.54	0.96
CO [g/h]	0.33	165.63	161.19	41.93	207.80	206.10	17.33	114.53	151.49	37.62	67.18
NOx [g/h]	0.06	32.23	31.36	8.16	40.43	40.10	3.37	22.28	29.47	7.32	13.07
VOC [g/h]	0.08	38.39	37.36	9.72	48.16	47.77	4.02	26.54	35.11	8.72	15.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.645	2.601	1.998	2.367
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	584	576	515	541
d_b, Bicycle Delay [s]	18.80	19.01	20.68	19.95
l_b,int, Bicycle LOS Score for Intersection	2.251	2.402	2.002	2.251
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	20.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	537	4	14	770	4	14	0	11	2	0	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	537	4	14	770	4	14	0	11	2	0	26
Peak Hour Factor	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	145	1	4	207	1	4	0	3	1	0	7
Total Analysis Volume [veh/h]	8	578	4	15	829	4	15	0	12	2	0	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.02	0.01	0.00	0.06	0.00	0.02	0.01	0.00	0.04
d_M, Delay for Movement [s/veh]	9.57	0.00	0.00	8.70	0.00	0.00	20.74	20.78	12.13	17.15	20.11	10.37
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.05	0.00	0.00	0.27	0.27	0.27	0.15	0.15	0.15
95th-Percentile Queue Length [ft/ln]	0.76	0.00	0.00	1.16	0.00	0.00	6.66	6.66	6.66	3.63	3.63	3.63
d_A, Approach Delay [s/veh]	0.13			0.15			16.91			10.82		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	0.66											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.292

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	485	25	43	737	6	13	10	20	16	5	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	485	25	43	737	6	13	10	20	16	5	50
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	134	7	12	203	2	4	3	6	4	1	14
Total Analysis Volume [veh/h]	11	535	28	47	813	7	14	11	22	18	6	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	38	0	11	38	0	11	25	0	11	25	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	64	55	55	64	58	58	11	5	11	5	5
g / C, Green / Cycle	0.75	0.65	0.65	0.75	0.69	0.69	0.13	0.06	0.13	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.06	0.24	0.24	0.01	0.02	0.01	0.00	0.04
s, saturation flow rate [veh/h]	657	1683	1654	851	1683	1678	1345	1506	1380	1683	1431
c, Capacity [veh/h]	547	1091	1072	699	1152	1149	303	89	288	108	92
d1, Uniform Delay [s]	3.23	6.32	6.32	3.02	5.59	5.59	32.08	38.48	32.18	37.35	38.70
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.58	0.59	0.19	0.86	0.87	0.06	2.57	0.09	0.21	6.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.26	0.26	0.07	0.36	0.36	0.05	0.37	0.06	0.06	0.60
d, Delay for Lane Group [s/veh]	3.24	6.89	6.91	3.20	6.46	6.46	32.15	41.05	32.27	37.56	44.81
Lane Group LOS	A	A	A	A	A	A	C	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.03	1.94	1.91	0.17	2.62	2.61	0.26	0.72	0.33	0.12	1.27
50th-Percentile Queue Length [ft/ln]	0.82	48.41	47.82	4.23	65.42	65.24	6.41	18.10	8.28	3.09	31.71
95th-Percentile Queue Length [veh/ln]	0.06	3.49	3.44	0.30	4.71	4.70	0.46	1.30	0.60	0.22	2.28
95th-Percentile Queue Length [ft/ln]	1.47	87.14	86.07	7.61	117.75	117.44	11.54	32.58	14.90	5.56	57.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.24	6.90	6.91	3.20	6.46	6.46	32.15	41.05	41.05	32.27	37.56	44.81
Movement LOS	A	A	A	A	A	A	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	6.83			6.28			38.40			41.40		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	9.22											
Intersection LOS	A											
Intersection V/C	0.292											

Emissions

Vehicle Miles Traveled [mph]	0.82	21.14	20.83	3.58	31.29	31.19	0.37	0.87	1.52	0.51	4.64
Stops [stops/h]	1.38	82.02	81.01	7.16	110.82	110.53	10.86	30.66	14.02	5.23	53.72
Fuel consumption [US gal/h]	0.05	1.82	1.80	0.22	2.57	2.56	0.15	0.43	0.24	0.09	0.92
CO [g/h]	3.42	127.25	125.57	15.45	179.33	178.83	10.47	30.22	16.80	6.20	64.06
NOx [g/h]	0.67	24.76	24.43	3.01	34.89	34.79	2.04	5.88	3.27	1.21	12.46
VOC [g/h]	0.79	29.49	29.10	3.58	41.56	41.45	2.43	7.00	3.89	1.44	14.85

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.625	2.635	1.969	2.208
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	774	774	480	480
d_b, Bicycle Delay [s]	15.97	15.97	24.55	24.55
l_b,int, Bicycle LOS Score for Intersection	2.248	2.489	1.852	1.904
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	504	12	5	742	15	0	0	12	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	504	12	5	742	15	0	0	12	0	0	14
Peak Hour Factor	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.9500	0.9500	0.8940	0.9500	0.9500	0.8940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	141	3	1	207	4	0	0	3	0	0	4
Total Analysis Volume [veh/h]	12	564	13	6	830	17	0	0	13	0	0	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	9.65	0.00	0.00	8.65	0.00	0.00	0.00	0.00	11.36	0.00	0.00	10.20
Movement LOS	A	A	A	A	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
95th-Percentile Queue Length [ft/ln]	1.16	0.00	0.00	0.46	0.00	0.00	0.00	0.00	1.72	0.00	0.00	1.73
d_A, Approach Delay [s/veh]	0.20			0.06			11.36			10.20		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.33											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.681

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	345	33	29	665	59	143	191	138	114	17	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	345	33	29	665	59	143	191	138	114	17	41
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	96	9	8	185	16	40	53	38	32	5	11
Total Analysis Volume [veh/h]	63	383	37	32	739	66	159	212	153	127	19	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21	31	0	19	29	0	18	18	0	12	12	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	5	39	39	4	38	38	23	12	12	23	11
g / C, Green / Cycle	0.07	0.49	0.49	0.05	0.47	0.47	0.28	0.15	0.15	0.29	0.14
(v / s)_i Volume / Saturation Flow Rate	0.04	0.13	0.13	0.02	0.24	0.24	0.11	0.13	0.11	0.16	0.04
s, saturation flow rate [veh/h]	1603	1683	1632	1603	1683	1635	1383	1683	1431	789	1496
c, Capacity [veh/h]	109	826	801	75	790	768	474	256	218	403	206
d1, Uniform Delay [s]	36.15	11.86	11.87	37.09	14.86	14.86	22.80	32.90	32.20	22.53	31.11
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.17	0.11	0.11	0.14	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.72	0.75	0.78	3.81	2.41	2.48	0.64	6.73	4.11	0.59	0.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.26	0.26	0.43	0.52	0.52	0.34	0.83	0.70	0.32	0.32
d, Delay for Lane Group [s/veh]	40.87	12.61	12.65	40.90	17.26	17.34	23.44	39.63	36.31	23.12	31.99
Lane Group LOS	D	B	B	D	B	B	C	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.30	2.16	2.12	0.67	5.19	5.06	2.34	4.29	2.94	1.87	1.17
50th-Percentile Queue Length [ft/ln]	32.47	53.99	52.95	16.76	129.73	126.50	58.52	107.36	73.58	46.83	29.28
95th-Percentile Queue Length [veh/ln]	2.34	3.89	3.81	1.21	8.92	8.75	4.21	7.69	5.30	3.37	2.11
95th-Percentile Queue Length [ft/ln]	58.45	97.18	95.30	30.16	223.12	218.72	105.34	192.32	132.44	84.29	52.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.87	12.63	12.65	40.90	17.30	17.34	23.44	39.63	36.31	23.12	31.99	31.99
Movement LOS	D	B	B	D	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	16.32			18.20			33.75			26.12		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	22.50											
Intersection LOS	C											
Intersection V/C	0.681											

Emissions

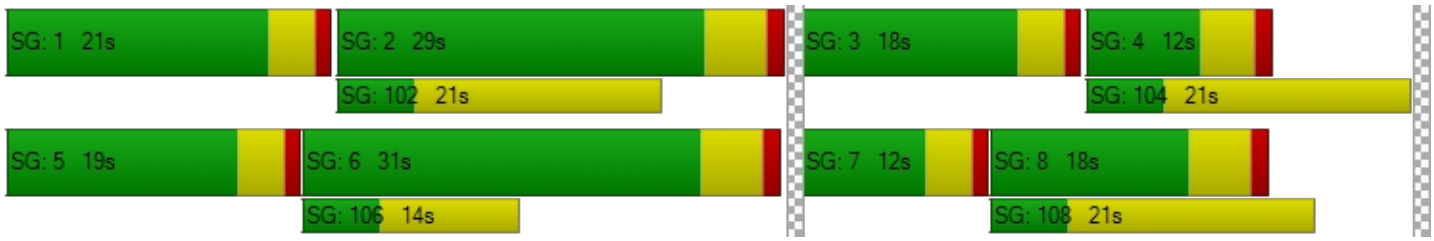
Vehicle Miles Traveled [mph]	4.97	16.77	16.39	2.54	32.46	31.55	36.44	48.58	35.06	20.35	10.42
Stops [stops/h]	58.45	97.18	95.30	30.16	233.51	227.70	105.34	193.24	132.44	84.29	52.70
Fuel consumption [US gal/h]	1.15	1.92	1.88	0.59	4.43	4.32	2.94	5.01	3.46	1.84	1.09
CO [g/h]	80.60	133.88	131.13	41.25	309.48	301.62	205.47	350.54	242.05	128.34	76.45
NOx [g/h]	15.68	26.05	25.51	8.03	60.21	58.68	39.98	68.20	47.10	24.97	14.87
VOC [g/h]	18.68	31.03	30.39	9.56	71.72	69.90	47.62	81.24	56.10	29.74	17.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.665	2.655	2.448	2.064
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	648	598	323	185
d_b, Bicycle Delay [s]	18.29	19.67	28.14	32.94
l_b,int, Bicycle LOS Score for Intersection	2.172	2.465	2.639	2.091
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	341	54	60	774	49	31	249	71	46	235	76
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	341	54	60	774	49	31	249	71	46	235	76
Peak Hour Factor	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	101	16	18	230	15	9	74	21	14	70	23
Total Analysis Volume [veh/h]	39	405	64	71	920	58	37	296	84	55	279	90
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	31	0	19	39	0	11	19	0	11	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	4	40	40	6	42	42	4	12	12	5	13	13
g / C, Green / Cycle	0.05	0.50	0.50	0.07	0.52	0.52	0.05	0.15	0.15	0.06	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.13	0.04	0.04	0.29	0.04	0.02	0.12	0.12	0.03	0.11	0.12
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1558	1603	1683	1546
c, Capacity [veh/h]	82	1596	713	114	1661	741	80	246	227	100	269	247
d1, Uniform Delay [s]	36.90	11.53	10.54	36.10	13.02	9.68	36.98	33.01	33.11	36.43	31.84	31.95
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.19	0.38	0.25	5.42	1.34	0.21	4.17	5.76	6.92	4.71	3.41	4.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.25	0.09	0.62	0.55	0.08	0.46	0.79	0.81	0.55	0.71	0.73
d, Delay for Lane Group [s/veh]	41.09	11.91	10.79	41.52	14.36	9.88	41.15	38.76	40.03	41.14	35.25	35.99
Lane Group LOS	D	B	B	D	B	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.81	1.94	0.59	1.48	5.20	0.50	0.78	3.94	3.82	1.17	3.68	3.52
50th-Percentile Queue Length [ft/ln]	20.36	48.56	14.65	36.89	130.04	12.52	19.58	98.57	95.40	29.15	92.07	88.03
95th-Percentile Queue Length [veh/ln]	1.47	3.50	1.06	2.66	8.94	0.90	1.41	7.10	6.87	2.10	6.63	6.34
95th-Percentile Queue Length [ft/ln]	36.65	87.40	26.38	66.40	223.55	22.54	35.24	177.43	171.73	52.48	165.73	158.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.09	11.91	10.79	41.52	14.36	9.88	41.15	39.19	40.03	41.14	35.49	35.99
Movement LOS	D	B	B	D	B	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	14.01			15.95			39.54			36.33		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	23.25											
Intersection LOS	C											
Intersection V/C	0.464											

Emissions

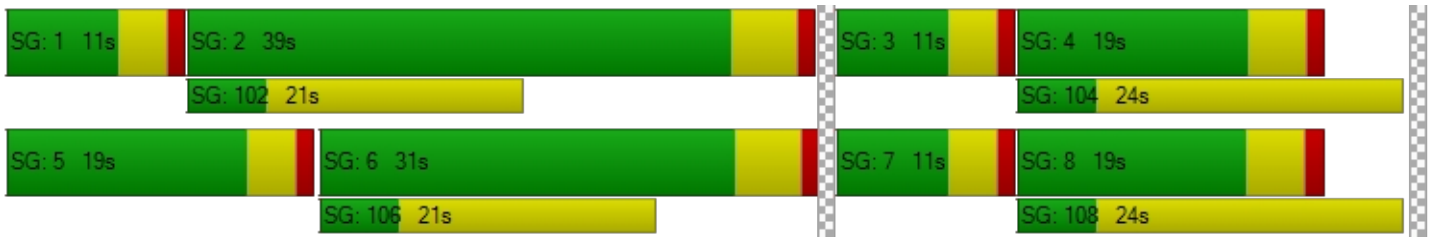
Vehicle Miles Traveled [mph]	3.13	32.50	5.14	5.61	72.64	4.58	8.41	44.34	42.07	8.95	30.89	29.13
Stops [stops/h]	36.65	174.81	26.38	66.40	468.15	22.54	35.24	177.43	171.73	52.48	165.73	158.45
Fuel consumption [US gal/h]	0.72	3.54	0.53	1.31	8.98	0.46	0.85	4.34	4.19	1.06	3.39	3.23
CO [g/h]	50.40	247.11	37.38	91.77	627.60	32.20	59.48	303.63	292.72	74.38	236.77	225.75
NOx [g/h]	9.81	48.08	7.27	17.85	122.11	6.27	11.57	59.08	56.95	14.47	46.07	43.92
VOC [g/h]	11.68	57.27	8.66	21.27	145.45	7.46	13.79	70.37	67.84	17.24	54.87	52.32

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.746	2.748	2.450	2.434
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	648	848	358	360
d_b, Bicycle Delay [s]	18.29	13.28	26.98	26.90
l_b,int, Bicycle LOS Score for Intersection	2.193	2.639	2.118	2.124
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	3.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.287

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	408	38	86	803	6	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	408	38	86	803	6	19
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	123	11	26	243	2	6
Total Analysis Volume [veh/h]	493	46	104	971	7	23
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	20	0	11	31	99	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	105	105	116	116	5	5
g / C, Green / Cycle	0.81	0.81	0.89	0.89	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.14	0.15	0.11	0.27	0.00	0.01
s, saturation flow rate [veh/h]	1870	1815	936	3560	1781	1589
c, Capacity [veh/h]	1505	1461	878	3163	66	59
d1, Uniform Delay [s]	2.89	2.90	0.99	1.11	60.52	61.17
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	0.28	0.28	0.25	0.70	4.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.18	0.12	0.31	0.11	0.39
d, Delay for Lane Group [s/veh]	3.15	3.18	1.27	1.36	61.22	65.36
Lane Group LOS	A	A	A	A	E	E
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.34	1.35	0.17	0.71	0.24	0.82
50th-Percentile Queue Length [ft/ln]	33.46	33.72	4.15	17.69	5.97	20.46
95th-Percentile Queue Length [veh/ln]	2.41	2.43	0.30	1.27	0.43	1.47
95th-Percentile Queue Length [ft/ln]	60.23	60.69	7.47	31.85	10.74	36.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.16	3.18	1.27	1.36	61.22	65.36
Movement LOS	A	A	A	A	E	E
d_A, Approach Delay [s/veh]	3.16		1.36		64.39	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	3.10					
Intersection LOS	A					
Intersection V/C	0.287					

Emissions

Vehicle Miles Traveled [mph]	19.94	19.94	8.35	77.92	1.15	3.79
Stops [stops/h]	37.06	37.35	4.59	39.20	6.61	22.67
Fuel consumption [US gal/h]	1.21	1.22	0.38	3.53	0.16	0.56
CO [g/h]	84.67	84.95	26.52	247.05	11.49	39.38
NOx [g/h]	16.47	16.53	5.16	48.07	2.24	7.66
VOC [g/h]	19.62	19.69	6.15	57.26	2.66	9.13

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.31	0.00	56.31
l_p,int, Pedestrian LOS Score for Intersectio	2.581	0.000	2.129
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	229	398	1452
d_b, Bicycle Delay [s]	50.95	41.68	4.87
l_b,int, Bicycle LOS Score for Intersection	2.219	2.661	1.774
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	7.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.257

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	414	31	112	647	34	11	32	12	21	20	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	414	31	112	647	34	11	32	12	21	20	21
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	120	9	33	188	10	3	9	3	6	6	6
Total Analysis Volume [veh/h]	16	482	36	130	753	40	13	37	14	24	23	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	28	0	12	29	0	0	30	0	0	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	55	44	44	55	49	49	5	5
g / C, Green / Cycle	0.78	0.63	0.63	0.78	0.70	0.70	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.02	0.14	0.14	0.13	0.21	0.21	0.04	0.04
s, saturation flow rate [veh/h]	762	1870	1825	1022	1870	1837	1795	1745
c, Capacity [veh/h]	684	1185	1156	891	1306	1283	200	203
d1, Uniform Delay [s]	2.00	5.46	5.47	1.99	4.05	4.05	30.91	31.04
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.43	0.44	0.34	0.61	0.62	0.91	1.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.22	0.22	0.15	0.31	0.31	0.32	0.35
d, Delay for Lane Group [s/veh]	2.02	5.89	5.91	2.33	4.66	4.67	31.82	32.07
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.02	1.35	1.33	0.24	1.61	1.58	1.05	1.17
50th-Percentile Queue Length [ft/ln]	0.50	33.87	33.33	5.95	40.18	39.57	26.28	29.32
95th-Percentile Queue Length [veh/ln]	0.04	2.44	2.40	0.43	2.89	2.85	1.89	2.11
95th-Percentile Queue Length [ft/ln]	0.91	60.97	60.00	10.71	72.32	71.23	47.31	52.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.02	5.90	5.91	2.33	4.66	4.67	31.82	31.82	31.82	32.07	32.07	32.07
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	5.79			4.33			31.82			32.07		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	7.16											
Intersection LOS	A											
Intersection V/C	0.257											

Emissions

Vehicle Miles Traveled [mph]	1.21	19.73	19.35	9.62	29.59	29.07	1.67	11.85
Stops [stops/h]	1.04	69.68	68.57	12.24	82.66	81.40	54.07	60.31
Fuel consumption [US gal/h]	0.06	1.59	1.56	0.52	2.13	2.09	0.78	1.28
CO [g/h]	4.22	111.12	109.16	36.37	148.80	146.35	54.65	89.79
NOx [g/h]	0.82	21.62	21.24	7.08	28.95	28.47	10.63	17.47
VOC [g/h]	0.98	25.75	25.30	8.43	34.49	33.92	12.66	20.81

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.624	2.635	1.790	1.960
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	654	683	723	723
d_b, Bicycle Delay [s]	15.85	15.18	14.27	14.27
l_b,int, Bicycle LOS Score for Intersection	2.215	2.535	1.880	1.891
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	39.5
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	444	38	35	642	20	4	6	12	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	444	38	35	642	20	4	6	12	8	3	18
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	134	11	11	194	6	1	2	4	2	1	5
Total Analysis Volume [veh/h]	24	536	46	42	774	24	5	7	14	10	4	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.04	0.01	0.00	0.04	0.06	0.02	0.07	0.04	0.03
d_M, Delay for Movement [s/veh]	9.52	0.00	0.00	8.80	0.00	0.00	36.25	39.49	13.47	31.54	38.59	12.17
Movement LOS	A	A	A	A	A	A	E	E	B	D	E	B
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.13	0.00	0.00	0.42	0.42	0.42	0.46	0.46	0.46
95th-Percentile Queue Length [ft/ln]	2.26	0.00	0.00	3.33	0.00	0.00	10.57	10.57	10.57	11.44	11.44	11.44
d_A, Approach Delay [s/veh]	0.38			0.44			24.86			20.49		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.31											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.216

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	39	484	45	93	511	25	10	12	10	10	9	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	484	45	93	511	25	10	12	10	10	9	17
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	140	13	27	148	7	3	3	3	3	3	5
Total Analysis Volume [veh/h]	45	560	52	108	591	29	12	14	12	12	10	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	59	0	0	59	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	76	65	65	76	67	67	5	5	5
g / C, Green / Cycle	0.84	0.72	0.72	0.84	0.74	0.74	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17	0.17	0.12	0.17	0.17	0.03	0.01	0.01
s, saturation flow rate [veh/h]	891	1870	1815	919	1870	1839	1096	1804	1589
c, Capacity [veh/h]	821	1353	1313	842	1390	1368	109	155	82
d1, Uniform Delay [s]	1.34	4.12	4.12	1.42	3.55	3.55	42.02	40.95	40.99
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.40	0.41	0.31	0.37	0.38	1.89	0.41	1.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.23	0.23	0.13	0.22	0.22	0.35	0.14	0.24
d, Delay for Lane Group [s/veh]	1.36	4.52	4.53	1.73	3.93	3.94	43.91	41.37	42.51
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.05	1.56	1.52	0.17	1.38	1.36	0.89	0.49	0.46
50th-Percentile Queue Length [ft/ln]	1.15	38.90	38.01	4.31	34.43	33.97	22.33	12.17	11.53
95th-Percentile Queue Length [veh/ln]	0.08	2.80	2.74	0.31	2.48	2.45	1.61	0.88	0.83
95th-Percentile Queue Length [ft/ln]	2.07	70.02	68.41	7.76	61.97	61.14	40.19	21.91	20.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.36	4.52	4.53	1.73	3.93	3.94	43.91	43.91	43.91	41.37	41.37	42.51
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	4.31			3.60			43.91			41.91		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.06											
Intersection LOS	A											
Intersection V/C	0.216											

Emissions

Vehicle Miles Traveled [mph]	3.38	23.28	22.66	8.12	23.48	23.12	1.12	0.66	0.60
Stops [stops/h]	1.84	62.24	60.81	6.90	55.09	54.35	35.72	19.47	18.45
Fuel consumption [US gal/h]	0.16	1.64	1.60	0.40	1.56	1.54	0.53	0.29	0.27
CO [g/h]	10.84	114.67	111.82	27.92	108.98	107.39	36.82	20.23	18.92
NOx [g/h]	2.11	22.31	21.76	5.43	21.20	20.89	7.16	3.94	3.68
VOC [g/h]	2.51	26.58	25.91	6.47	25.26	24.89	8.53	4.69	4.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.608	2.619	1.815	2.115
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	331	331	1209	1209
d_b, Bicycle Delay [s]	31.33	31.33	7.04	7.04
l_b,int, Bicycle LOS Score for Intersection	2.316	2.375	1.837	1.843
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	33.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	544	26	30	474	18	0	3	8	4	4	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	544	26	30	474	18	0	3	8	4	4	24
Peak Hour Factor	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	161	8	9	140	5	0	1	2	1	1	7
Total Analysis Volume [veh/h]	30	645	31	36	562	21	0	4	9	5	5	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.04	0.01	0.00	0.00	0.03	0.01	0.03	0.04	0.04
d_M, Delay for Movement [s/veh]	8.76	0.00	0.00	9.11	0.00	0.00	27.80	32.55	10.64	29.52	33.17	11.81
Movement LOS	A	A	A	A	A	A	D	D	B	D	D	B
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.12	0.00	0.00	0.13	0.13	0.13	0.37	0.37	0.37
95th-Percentile Queue Length [ft/ln]	2.35	0.00	0.00	3.08	0.00	0.00	3.34	3.34	3.34	9.37	9.37	9.37
d_A, Approach Delay [s/veh]	0.37			0.53			17.38			16.95		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.06											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	30.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.420

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	388	149	74	337	60	83	439	33	176	547	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	388	149	74	337	60	83	439	33	176	547	128
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	106	41	20	92	16	23	120	9	48	150	35
Total Analysis Volume [veh/h]	45	425	163	81	369	66	91	481	36	193	599	140
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	11	27	0	13	26	0	21	34	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	5	34	34	6	36	36	6	15	15	11	20	20
g / C, Green / Cycle	0.05	0.40	0.40	0.07	0.42	0.42	0.07	0.18	0.18	0.13	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.10	0.05	0.10	0.04	0.05	0.14	0.14	0.11	0.20	0.20
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1825	1781	1870	1749
c, Capacity [veh/h]	97	1426	637	125	1496	668	130	338	329	233	445	416
d1, Uniform Delay [s]	38.99	17.34	17.01	38.48	15.94	14.91	38.47	33.17	33.19	36.01	31.00	31.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.44	0.53	0.97	5.48	0.39	0.30	6.55	3.80	3.94	7.36	4.89	5.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.30	0.26	0.65	0.25	0.10	0.70	0.77	0.78	0.83	0.86	0.86
d, Delay for Lane Group [s/veh]	42.44	17.87	17.98	43.96	16.33	15.20	45.02	36.97	37.13	43.37	35.89	36.21
Lane Group LOS	D	B	B	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.97	2.71	2.13	1.79	2.26	0.78	2.04	5.29	5.19	4.25	7.75	7.28
50th-Percentile Queue Length [ft/ln]	24.24	67.82	53.34	44.74	56.41	19.56	50.96	132.18	129.80	106.17	193.63	182.04
95th-Percentile Queue Length [veh/ln]	1.75	4.88	3.84	3.22	4.06	1.41	3.67	9.06	8.93	7.63	12.31	11.71
95th-Percentile Queue Length [ft/ln]	43.63	122.07	96.01	80.53	101.53	35.20	91.72	226.46	223.22	190.66	307.73	292.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.44	17.87	17.98	43.96	16.33	15.20	45.02	37.04	37.13	43.37	36.00	36.21
Movement LOS	D	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	19.65			20.53			38.24			37.56		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	30.23											
Intersection LOS	C											
Intersection V/C	0.420											

Emissions

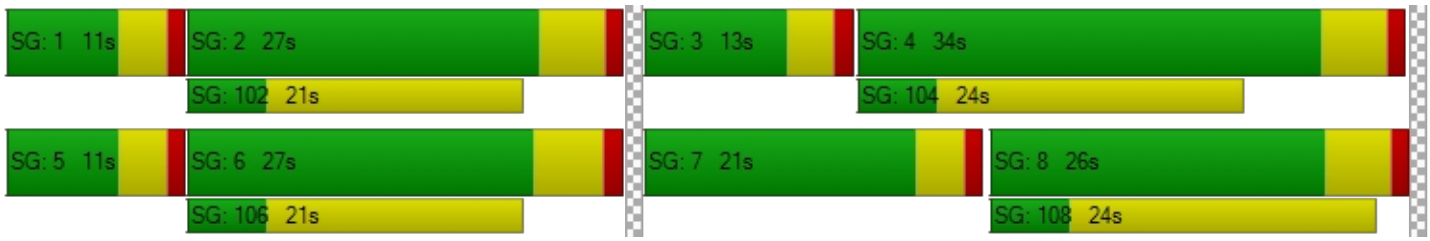
Vehicle Miles Traveled [mph]	1.70	16.06	6.16	6.20	28.24	5.05	3.57	10.26	10.04	7.16	14.17	13.25
Stops [stops/h]	41.06	229.77	90.36	75.80	191.12	33.13	86.33	223.94	219.89	179.86	328.02	308.40
Fuel consumption [US gal/h]	0.85	4.38	1.70	1.53	3.74	0.65	1.62	4.04	3.97	3.33	5.80	5.46
CO [g/h]	59.62	306.04	119.17	107.01	261.45	45.15	113.18	282.42	277.45	232.70	405.11	381.39
NOx [g/h]	11.60	59.54	23.19	20.82	50.87	8.78	22.02	54.95	53.98	45.28	78.82	74.20
VOC [g/h]	13.82	70.93	27.62	24.80	60.59	10.46	26.23	65.45	64.30	53.93	93.89	88.39

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.718	2.674	2.598	2.676
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	508	515	492	680
d_b, Bicycle Delay [s]	23.64	23.42	24.17	18.51
l_b,int, Bicycle LOS Score for Intersection	2.296	2.200	2.276	2.543
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.270

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	35	52	5	35	5	8	382	117	52	204	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	35	52	5	35	5	8	382	117	52	204	7
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	11	16	2	11	2	2	115	35	16	62	2
Total Analysis Volume [veh/h]	89	42	63	6	42	6	10	462	141	63	247	8
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	13	0	0	13	0	35	41	0	11	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	8	8	8	8	1	38	38	5	42	42
g / C, Green / Cycle	0.12	0.12	0.12	0.13	0.02	0.59	0.59	0.07	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.07	0.02	0.04	0.03	0.01	0.17	0.17	0.04	0.07	0.07
s, saturation flow rate [veh/h]	1357	1870	1589	1593	1781	1870	1723	1781	1870	1849
c, Capacity [veh/h]	153	218	185	182	35	1106	1019	131	1207	1194
d1, Uniform Delay [s]	28.12	25.94	26.41	25.69	31.42	6.51	6.52	28.93	4.39	4.39
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.49	0.42	1.08	0.90	4.42	0.64	0.70	2.75	0.18	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.19	0.34	0.30	0.29	0.28	0.29	0.48	0.11	0.11
d, Delay for Lane Group [s/veh]	31.61	26.37	27.48	26.59	35.84	7.15	7.22	31.68	4.56	4.57
Lane Group LOS	C	C	C	C	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.41	0.58	0.90	0.78	0.19	1.80	1.70	0.99	0.51	0.51
50th-Percentile Queue Length [ft/ln]	35.32	14.40	22.40	19.40	4.74	45.10	42.49	24.73	12.82	12.76
95th-Percentile Queue Length [veh/ln]	2.54	1.04	1.61	1.40	0.34	3.25	3.06	1.78	0.92	0.92
95th-Percentile Queue Length [ft/ln]	63.58	25.93	40.31	34.92	8.54	81.17	76.48	44.52	23.08	22.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.61	26.37	27.48	26.59	26.59	26.59	35.84	7.17	7.22	31.68	4.57	4.57
Movement LOS	C	C	C	C	C	C	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	29.14			26.59			7.65			9.94		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	12.67											
Intersection LOS	B											
Intersection V/C	0.270											

Emissions

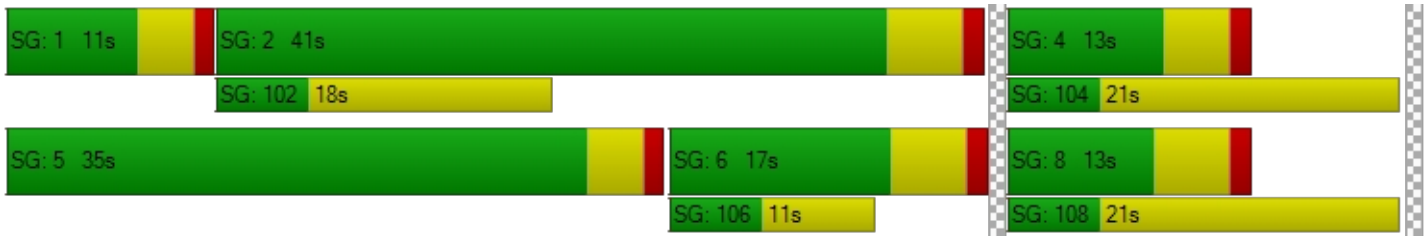
Vehicle Miles Traveled [mph]	7.25	3.42	5.13	1.48	0.32	9.86	9.18	14.44	29.31	29.13
Stops [stops/h]	78.25	31.91	49.62	42.98	10.51	99.90	94.13	54.79	28.40	28.28
Fuel consumption [US gal/h]	1.44	0.60	0.92	0.52	0.16	1.58	1.49	1.37	1.45	1.44
CO [g/h]	100.47	41.65	64.39	36.62	11.46	110.53	103.83	95.66	101.32	100.74
NOx [g/h]	19.55	8.10	12.53	7.12	2.23	21.51	20.20	18.61	19.71	19.60
VOC [g/h]	23.29	9.65	14.92	8.49	2.66	25.62	24.06	22.17	23.48	23.35

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.241	1.746	2.629	2.552
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	243	258	1105	366
d_b, Bicycle Delay [s]	25.08	24.64	6.51	21.69
l_b,int, Bicycle LOS Score for Intersection	2.094	1.863	2.280	2.036
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.336

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	148	58	21	197	4	1	222	180	42	126	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	148	58	21	197	4	1	222	180	42	126	19
Peak Hour Factor	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	44	17	6	59	1	0	66	54	13	38	6
Total Analysis Volume [veh/h]	81	177	69	25	236	5	1	266	216	50	151	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	18	0	11	18	0	27	35	0	11	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	21	14	14	21	12	0	35	35	5	40	40
g / C, Green / Cycle	0.28	0.19	0.19	0.28	0.15	0.00	0.46	0.46	0.06	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.04	0.02	0.13	0.00	0.14	0.14	0.03	0.05	0.05
s, saturation flow rate [veh/h]	1372	1870	1589	1282	1863	1781	1870	1601	1781	1870	1786
c, Capacity [veh/h]	389	358	304	410	286	8	865	741	108	988	944
d1, Uniform Delay [s]	20.82	27.07	25.62	19.82	30.85	37.20	12.53	12.61	34.04	8.75	8.76
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	1.06	0.37	0.06	6.61	7.47	0.87	1.07	3.06	0.18	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.49	0.23	0.06	0.84	0.13	0.29	0.31	0.46	0.09	0.09
d, Delay for Lane Group [s/veh]	21.08	28.13	26.00	19.88	37.47	44.66	13.40	13.68	37.11	8.93	8.95
Lane Group LOS	C	C	C	B	D	D	B	B	D	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.03	2.79	1.02	0.31	4.55	0.03	2.53	2.29	0.95	0.69	0.68
50th-Percentile Queue Length [ft/ln]	25.79	69.73	25.55	7.67	113.64	0.83	63.21	57.34	23.76	17.14	16.90
95th-Percentile Queue Length [veh/ln]	1.86	5.02	1.84	0.55	8.04	0.06	4.55	4.13	1.71	1.23	1.22
95th-Percentile Queue Length [ft/ln]	46.43	125.51	45.99	13.81	201.05	1.50	113.78	103.21	42.77	30.86	30.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.08	28.13	26.00	19.88	37.47	37.47	44.66	13.41	13.68	37.11	8.94	8.95
Movement LOS	C	C	C	B	D	D	D	B	B	D	A	A
d_A, Approach Delay [s/veh]	25.93			35.81			13.59			15.23		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	21.53											
Intersection LOS	C											
Intersection V/C	0.336											

Emissions

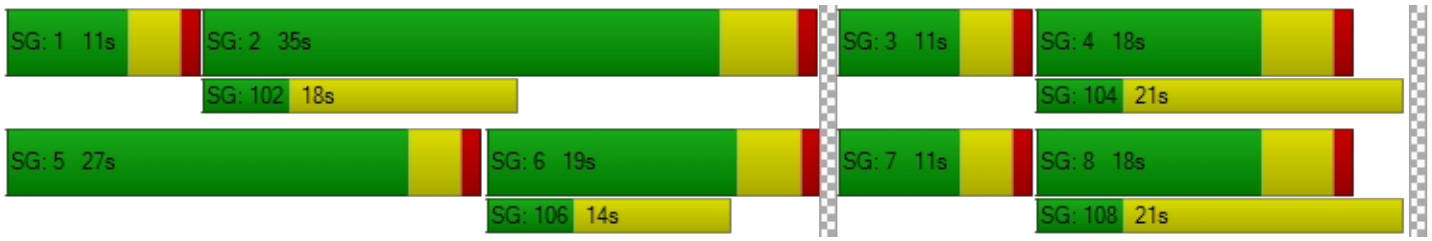
Vehicle Miles Traveled [mph]	2.88	6.30	2.46	2.04	19.63	0.03	7.25	6.45	11.37	19.97	19.60
Stops [stops/h]	49.52	133.88	49.05	14.73	218.19	1.60	121.37	110.09	45.62	32.92	32.45
Fuel consumption [US gal/h]	0.83	2.26	0.83	0.29	4.23	0.03	2.15	1.94	1.10	1.16	1.14
CO [g/h]	58.01	157.99	57.85	20.24	295.45	1.81	150.15	135.85	76.73	81.34	79.90
NOx [g/h]	11.29	30.74	11.26	3.94	57.48	0.35	29.21	26.43	14.93	15.82	15.54
VOC [g/h]	13.44	36.62	13.41	4.69	68.47	0.42	34.80	31.48	17.78	18.85	18.52

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.359	2.110	2.500	2.414
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	344	344	789	381
d_b, Bicycle Delay [s]	25.71	25.71	13.74	24.56
l_b,int, Bicycle LOS Score for Intersection	2.314	2.213	2.172	1.959
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	7.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.232

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	0	7	0	0	12	0	345	40	21	290	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	0	7	0	0	12	0	345	40	21	290	44
Peak Hour Factor	0.9340	0.9500	0.9340	0.9500	0.9500	0.9340	0.9500	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	0	2	0	0	3	0	92	11	6	78	12
Total Analysis Volume [veh/h]	51	0	7	0	0	13	0	369	43	22	310	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	0	0	0	0	24	0	28	0	11	39	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	5	5	2	48	48	54	54
g / C, Green / Cycle	0.07	0.07	0.02	0.64	0.64	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.03	0.00	0.01	0.11	0.11	0.02	0.20
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1804	1042	1828
c, Capacity [veh/h]	117	104	38	1191	1149	842	1325
d1, Uniform Delay [s]	33.70	32.88	36.02	5.56	5.58	3.00	3.53
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.54	0.27	5.18	0.32	0.34	0.01	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.07	0.34	0.17	0.18	0.03	0.27
d, Delay for Lane Group [s/veh]	36.24	33.15	41.20	5.87	5.93	3.01	4.03
Lane Group LOS	D	C	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.97	0.13	0.29	1.18	1.19	0.07	1.44
50th-Percentile Queue Length [ft/ln]	24.13	3.15	7.17	29.55	29.79	1.64	35.92
95th-Percentile Queue Length [veh/ln]	1.74	0.23	0.52	2.13	2.15	0.12	2.59
95th-Percentile Queue Length [ft/ln]	43.43	5.67	12.91	53.19	53.63	2.96	64.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.24	0.00	33.15	0.00	0.00	41.20	0.00	5.90	5.93	3.01	4.03	4.03
Movement LOS	D		C			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	35.87			41.20			5.90			3.97		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	7.60											
Intersection LOS	A											
Intersection V/C	0.232											

Emissions

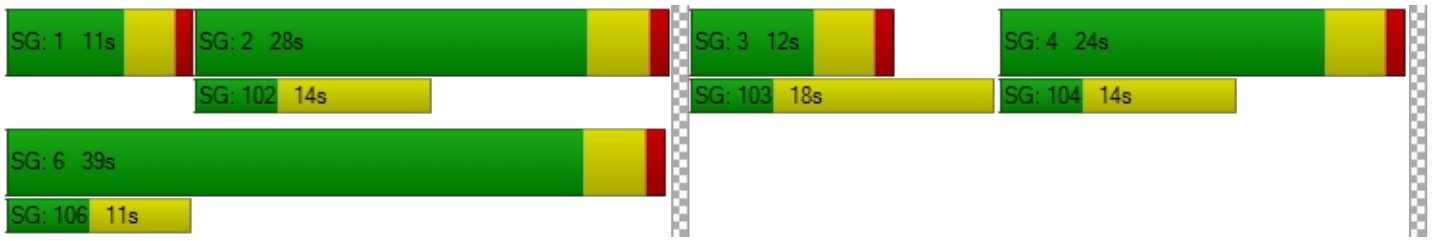
Vehicle Miles Traveled [mph]	3.82	0.52	0.32	15.77	15.77	3.32	53.85
Stops [stops/h]	46.33	6.04	13.77	56.74	57.20	3.16	68.98
Fuel consumption [US gal/h]	0.73	0.09	0.18	1.21	1.21	0.17	2.89
CO [g/h]	50.73	6.57	12.31	84.51	84.84	11.71	202.03
NOx [g/h]	9.87	1.28	2.39	16.44	16.51	2.28	39.31
VOC [g/h]	11.76	1.52	2.85	19.59	19.66	2.71	46.82

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	1.987	1.732	2.188	2.308
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	197	517	621	915
d_b, Bicycle Delay [s]	30.47	20.61	17.82	11.04
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.114	2.399
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	51	4	4	65	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	4	4	65	1	2
Peak Hour Factor	0.8890	0.8890	0.8890	0.8890	0.8890	0.8890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	1	1	18	0	1
Total Analysis Volume [veh/h]	57	4	4	73	1	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.24	8.59
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.20	0.00	0.24	0.24
d_A, Approach Delay [s/veh]	0.00		0.38		8.81	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.40					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	7.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.128

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	6	2	10	37	17	40	29	13	2	85	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	6	2	10	37	17	40	29	13	2	85	10
Peak Hour Factor	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	2	1	3	10	5	11	8	4	1	24	3
Total Analysis Volume [veh/h]	16	7	2	11	42	19	45	33	15	2	96	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	646	734	652	750	839	854
Degree of Utilization, x	0.02	0.01	0.02	0.08	0.11	0.13

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.08	0.04	0.05	0.26	0.37	0.44
95th-Percentile Queue Length [ft]	1.90	0.93	1.29	6.62	9.31	10.93
Approach Delay [s/veh]	8.14		7.99		7.82	7.83
Approach LOS	A		A		A	A
Intersection Delay [s/veh]	7.89					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.056

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	4	15	9	38	5	7	18	8	7	11	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	4	15	9	38	5	7	18	8	7	11	10
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	4	3	11	1	2	5	2	2	3	3
Total Analysis Volume [veh/h]	15	4	17	10	43	6	8	20	9	8	12	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	674	843	688	761	894	772	780
Degree of Utilization, x	0.02	0.02	0.01	0.06	0.01	0.05	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.07	0.08	0.04	0.18	0.02	0.15	0.12
95th-Percentile Queue Length [ft]	1.70	1.91	1.11	4.48	0.51	3.77	3.10
Approach Delay [s/veh]	7.53		7.67			7.90	7.80
Approach LOS	A		A			A	A
Intersection Delay [s/veh]	7.72						
Intersection LOS	A						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.277

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	11	10	11	24	29	14	241	28	177	338	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	11	10	11	24	29	14	241	28	177	338	23
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	3	3	3	7	8	4	66	8	48	92	6
Total Analysis Volume [veh/h]	15	12	11	12	26	32	15	263	31	193	369	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	26	0	0	26	0	11	23	0	11	23	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	5	5	5	5	46	35	46	40
g / C, Green / Cycle	0.08	0.08	0.08	0.08	0.77	0.59	0.77	0.67
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.01	0.04	0.02	0.18	0.18	0.24
s, saturation flow rate [veh/h]	1210	1552	1249	1534	947	1652	1096	1664
c, Capacity [veh/h]	145	128	173	127	792	967	912	1117
d1, Uniform Delay [s]	29.11	25.63	27.78	26.25	2.11	6.27	2.28	4.25
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.66	0.17	2.57	0.04	0.81	0.53	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.18	0.07	0.46	0.02	0.30	0.21	0.35
d, Delay for Lane Group [s/veh]	29.42	26.30	27.95	28.82	2.15	7.08	2.80	5.13
Lane Group LOS	C	C	C	C	A	A	A	A
Critical Lane Group	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.22	0.32	0.17	0.85	0.03	1.73	0.41	1.72
50th-Percentile Queue Length [ft/ln]	5.50	7.97	4.24	21.33	0.72	43.28	10.23	42.95
95th-Percentile Queue Length [veh/ln]	0.40	0.57	0.31	1.54	0.05	3.12	0.74	3.09
95th-Percentile Queue Length [ft/ln]	9.91	14.35	7.63	38.39	1.29	77.91	18.41	77.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.42	26.30	26.30	27.95	28.82	28.82	2.15	7.08	7.08	2.80	5.13	5.13
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	27.53			28.67			6.84			4.37		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	7.70											
Intersection LOS	A											
Intersection V/C	0.277											

Emissions

Vehicle Miles Traveled [mph]	1.21	1.86	0.94	4.57	2.40	47.11	28.88	58.95
Stops [stops/h]	13.21	19.14	10.17	51.19	1.72	103.88	24.55	103.07
Fuel consumption [US gal/h]	0.20	0.28	0.15	0.74	0.12	2.94	1.50	3.46
CO [g/h]	13.63	19.58	10.47	51.86	8.48	205.57	105.06	241.71
NOx [g/h]	2.65	3.81	2.04	10.09	1.65	40.00	20.44	47.03
VOC [g/h]	3.16	4.54	2.43	12.02	1.96	47.64	24.35	56.02

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.340	1.969	2.139	2.306
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	713	713	613	613
d_b, Bicycle Delay [s]	12.42	12.42	14.42	14.42
l_b,int, Bicycle LOS Score for Intersection	1.837	1.890	2.284	2.743
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.241

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	10	150	38	12	315	37	120	320	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	10	150	38	12	315	37	120	320	24
Peak Hour Factor	0.9500	0.9500	0.9500	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	3	45	11	4	95	11	36	96	7
Total Analysis Volume [veh/h]	0	0	0	12	181	46	14	380	45	145	386	29
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	30	0	11	19	0	11	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		7	7	44	33	33	44	38	38
g / C, Green / Cycle		0.12	0.12	0.73	0.56	0.56	0.73	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.07	0.07	0.02	0.13	0.13	0.14	0.12	0.13
s, saturation flow rate [veh/h]		1675	1575	932	1683	1622	1007	1683	1642
c, Capacity [veh/h]		196	184	796	937	903	842	1074	1048
d1, Uniform Delay [s]		25.22	25.29	2.34	6.76	6.77	2.62	4.49	4.49
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.39	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.16	3.68	0.04	0.57	0.60	0.35	0.41	0.42
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.62	0.64	0.02	0.23	0.23	0.17	0.20	0.20
d, Delay for Lane Group [s/veh]		28.38	28.97	2.38	7.33	7.37	2.97	4.89	4.91
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.75	1.73	0.03	1.31	1.29	0.37	0.92	0.91
50th-Percentile Queue Length [ft/ln]		43.73	43.18	0.87	32.78	32.13	9.32	23.06	22.69
95th-Percentile Queue Length [veh/ln]		3.15	3.11	0.06	2.36	2.31	0.67	1.66	1.63
95th-Percentile Queue Length [ft/ln]		78.72	77.73	1.56	59.00	57.83	16.78	41.51	40.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.38	28.62	28.97	2.38	7.35	7.37	2.97	4.90	4.91
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			28.67			7.19			4.40		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.08											
Intersection LOS	B											
Intersection V/C	0.241											

Emissions

Vehicle Miles Traveled [mph]		9.79	9.53	2.28	35.02	34.12	21.76	31.46	30.83
Stops [stops/h]		104.96	103.64	2.08	78.67	77.11	22.37	55.35	54.46
Fuel consumption [US gal/h]		1.54	1.52	0.12	2.20	2.14	1.15	1.84	1.80
CO [g/h]		107.83	106.33	8.19	153.62	149.91	80.55	128.33	125.87
NOx [g/h]		20.98	20.69	1.59	29.89	29.17	15.67	24.97	24.49
VOC [g/h]		24.99	24.64	1.90	35.60	34.74	18.67	29.74	29.17

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.163	2.011	2.422	2.435
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	847	480	480
d_b, Bicycle Delay [s]	30.00	9.98	17.33	17.33
l_b,int, Bicycle LOS Score for Intersection	4.132	1.971	2.136	2.236
Bicycle LOS	D	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.153

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	97	55	0	126	31	37	69	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	31	97	55	0	126	31	37	69	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.8850	0.8850	0.8850	0.9500	0.8850	0.8850	0.8850	0.8850	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	9	27	16	0	36	9	10	19	0
Total Analysis Volume [veh/h]	0	0	0	35	110	62	0	142	35	42	78	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	24	0	0	26	0	0	26	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		7	7	7	34	34	34
g / C, Green / Cycle		0.13	0.13	0.13	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate		0.04	0.04	0.04	0.11	0.04	0.05
s, saturation flow rate [veh/h]		1643	1683	1431	1626	1086	1683
c, Capacity [veh/h]		224	229	195	1102	778	1141
d1, Uniform Delay [s]		19.52	19.50	19.50	2.91	4.51	2.72
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.83	0.79	0.93	0.31	0.13	0.12
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.32	0.32	0.32	0.16	0.05	0.07
d, Delay for Lane Group [s/veh]		20.34	20.29	20.43	3.22	4.64	2.84
Lane Group LOS		C	C	C	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.76	0.76	0.66	0.41	0.15	0.16
50th-Percentile Queue Length [ft/ln]		18.96	19.09	16.44	10.14	3.85	4.11
95th-Percentile Queue Length [veh/ln]		1.37	1.37	1.18	0.73	0.28	0.30
95th-Percentile Queue Length [ft/ln]		34.13	34.35	29.59	18.26	6.92	7.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.34	20.31	20.43	0.00	3.22	3.22	4.64	2.84	0.00
Movement LOS				C	C	C		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			20.35			3.22			3.47		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.32											
Intersection LOS	B											
Intersection V/C	0.153											

Emissions

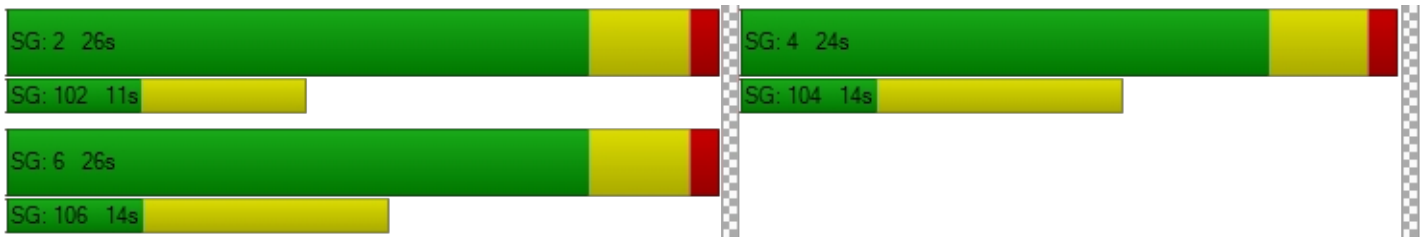
Vehicle Miles Traveled [mph]		5.44	5.49	4.67	29.55	6.14	11.41
Stops [stops/h]		54.61	54.97	47.34	29.21	11.08	11.84
Fuel consumption [US gal/h]		0.75	0.76	0.65	1.49	0.35	0.58
CO [g/h]		52.63	53.02	45.41	104.44	24.73	40.55
NOx [g/h]		10.24	10.32	8.83	20.32	4.81	7.89
VOC [g/h]		12.20	12.29	10.52	24.20	5.73	9.40

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.836	1.967	1.840	2.007
Crosswalk LOS	A	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	776	852	852
d_b, Bicycle Delay [s]	25.00	9.36	8.24	8.24
l_b,int, Bicycle LOS Score for Intersection	4.132	1.945	2.066	1.972
Bicycle LOS	D	A	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.198

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	93	0	43	0	0	5	0	285	81	50	250	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	0	43	0	0	5	0	285	81	50	250	0
Peak Hour Factor	0.9530	0.9500	0.9530	0.9500	0.9500	0.9530	0.9500	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	0	11	0	0	1	0	75	21	13	66	0
Total Analysis Volume [veh/h]	98	0	45	0	0	5	0	299	85	52	262	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	14	0	0	0	0	25	0	25	0	11	36	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	7	7	1	46	46	54	54
g / C, Green / Cycle	0.09	0.09	0.01	0.61	0.61	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.06	0.03	0.00	0.10	0.11	0.05	0.14
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1734	1095	1870
c, Capacity [veh/h]	158	141	18	1135	1053	874	1351
d1, Uniform Delay [s]	32.94	32.03	36.77	6.45	6.51	3.12	3.36
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.90	1.28	8.17	0.32	0.38	0.03	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.32	0.28	0.17	0.18	0.06	0.19
d, Delay for Lane Group [s/veh]	36.83	33.31	44.95	6.77	6.89	3.15	3.68
Lane Group LOS	D	C	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.82	0.79	0.13	1.23	1.25	0.16	1.00
50th-Percentile Queue Length [ft/ln]	45.44	19.63	3.27	30.75	31.25	4.02	24.89
95th-Percentile Queue Length [veh/ln]	3.27	1.41	0.24	2.21	2.25	0.29	1.79
95th-Percentile Queue Length [ft/ln]	81.79	35.34	5.89	55.35	56.24	7.23	44.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.83	0.00	33.31	0.00	0.00	44.95	0.00	6.81	6.89	3.15	3.68	3.68
Movement LOS	D		C			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	35.73			44.95			6.83			3.59		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	10.74											
Intersection LOS	B											
Intersection V/C	0.198											

Emissions

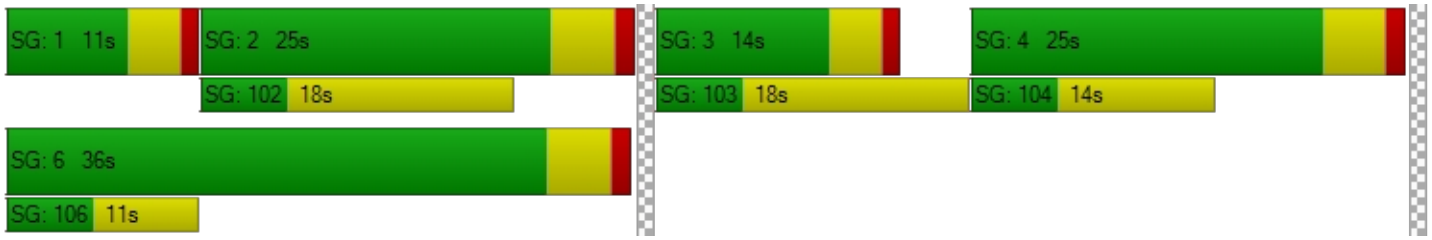
Vehicle Miles Traveled [mph]	7.40	3.40	0.13	28.96	28.96	1.76	8.88
Stops [stops/h]	87.24	37.70	6.28	59.04	59.99	7.72	47.79
Fuel consumption [US gal/h]	1.67	0.72	0.08	1.78	1.79	0.15	0.83
CO [g/h]	116.94	50.20	5.30	124.63	125.32	10.38	57.72
NOx [g/h]	22.75	9.77	1.03	24.25	24.38	2.02	11.23
VOC [g/h]	27.10	11.63	1.23	28.88	29.04	2.41	13.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.250	1.709	2.176	2.284
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	267	544	541	835
d_b, Bicycle Delay [s]	28.17	19.87	19.95	12.73
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.091	2.292
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	131	4	1	131	1	0	0	8	3	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	131	4	1	131	1	0	0	8	3	1	2
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	34	1	0	34	0	0	0	2	1	0	1
Total Analysis Volume [veh/h]	8	135	4	1	135	1	0	0	8	3	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.50	0.00	0.00	7.50	0.00	0.00	10.11	10.90	8.70	10.15	10.90	8.71
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.33	0.17	0.00	0.04	0.02	0.00	0.62	0.62	0.62	0.60	0.60	0.60
d_A, Approach Delay [s/veh]	0.41			0.05			8.70			9.80		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.66											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.038

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	139	16	6	131	6	3	5	37	14	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	139	16	6	131	6	3	5	37	14	1	2
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	41	5	2	38	2	1	1	11	4	0	1
Total Analysis Volume [veh/h]	67	163	19	7	153	7	4	6	43	16	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.05	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	7.59	0.00	0.00	13.07	13.30	9.41	13.82	13.23	9.48
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.12	0.12	0.12	0.01	0.01	0.01	0.23	0.23	0.23	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	2.96	2.96	2.96	0.30	0.30	0.30	5.64	5.64	5.64	3.29	3.29	3.29
d_A, Approach Delay [s/veh]	2.05			0.32			10.13			13.33		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.77											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	24.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.466

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	108	26	28	192	25	8	207	46	311	507	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	108	26	28	192	25	8	207	46	311	507	134
Peak Hour Factor	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	33	8	8	58	8	2	63	14	94	153	40
Total Analysis Volume [veh/h]	1	130	31	34	232	30	10	250	56	376	612	162
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	13	0	11	13	0	28	26	0	30	28	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	16	8	8	16	11	11	1	30	30	21	49	49
g / C, Green / Cycle	0.20	0.10	0.10	0.20	0.14	0.14	0.02	0.37	0.37	0.26	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.02	0.03	0.08	0.08	0.01	0.09	0.10	0.23	0.36	0.11
s, saturation flow rate [veh/h]	1090	1683	1431	1286	1683	1617	1603	1683	1579	1603	1683	1431
c, Capacity [veh/h]	266	166	141	298	240	231	31	631	592	415	1031	876
d1, Uniform Delay [s]	26.14	35.21	33.21	26.69	31.90	31.95	38.69	17.24	17.29	28.72	9.44	6.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.24	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	7.80	0.77	0.17	1.96	2.13	5.65	0.93	1.03	15.04	2.52	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.78	0.22	0.11	0.55	0.56	0.32	0.25	0.25	0.91	0.59	0.18
d, Delay for Lane Group [s/veh]	26.15	43.01	33.98	26.86	33.86	34.08	44.33	18.17	18.32	43.76	11.96	7.24
Lane Group LOS	C	D	C	C	C	C	D	B	B	D	B	A
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.02	2.74	0.57	0.53	2.42	2.38	0.24	2.09	2.04	8.41	6.20	1.15
50th-Percentile Queue Length [ft/ln]	0.38	68.58	14.16	13.18	60.50	59.55	6.05	52.27	50.90	210.20	155.10	28.87
95th-Percentile Queue Length [veh/ln]	0.03	4.94	1.02	0.95	4.36	4.29	0.44	3.76	3.66	13.16	10.29	2.08
95th-Percentile Queue Length [ft/ln]	0.68	123.44	25.49	23.72	108.90	107.20	10.89	94.09	91.62	329.09	257.22	51.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.15	43.01	33.98	26.86	33.95	34.08	44.33	18.23	18.32	43.76	11.96	7.24
Movement LOS	C	D	C	C	C	C	D	B	B	D	B	A
d_A, Approach Delay [s/veh]	41.18			33.15			19.07			21.69		
Approach LOS	D			C			B			C		
d_I, Intersection Delay [s/veh]	24.67											
Intersection LOS	C											
Intersection V/C	0.466											

Emissions

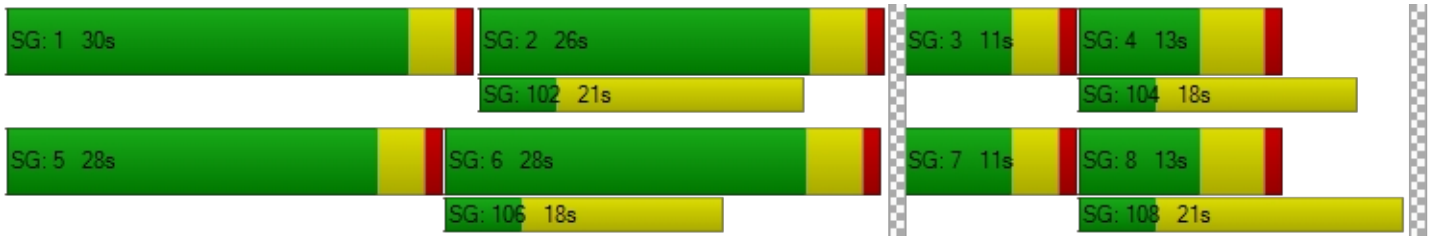
Vehicle Miles Traveled [mph]	0.08	10.57	2.52	2.66	10.36	10.15	1.50	23.30	22.49	18.56	30.21	8.00
Stops [stops/h]	0.68	123.44	25.49	23.72	108.90	107.20	10.89	94.09	91.62	378.37	279.17	51.97
Fuel consumption [US gal/h]	0.01	2.47	0.50	0.47	2.13	2.09	0.20	1.98	1.92	6.20	4.28	0.86
CO [g/h]	0.95	172.58	35.10	32.55	148.61	146.24	13.93	138.70	134.44	433.57	298.89	59.77
NOx [g/h]	0.18	33.58	6.83	6.33	28.91	28.45	2.71	26.99	26.16	84.36	58.15	11.63
VOC [g/h]	0.22	40.00	8.13	7.54	34.44	33.89	3.23	32.14	31.16	100.48	69.27	13.85

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.483	2.297	2.322	2.587
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	198	198	535	583
d_b, Bicycle Delay [s]	32.49	32.49	21.46	20.09
l_b,int, Bicycle LOS Score for Intersection	2.041	2.018	2.035	3.672
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	67	97	56	472	26	2	233	113	282	434	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	67	97	56	472	26	2	233	113	282	434	80
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	21	30	17	146	8	1	72	35	87	134	25
Total Analysis Volume [veh/h]	17	83	120	69	583	32	2	288	140	348	536	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	26	0	11	26	0	26	29	0	24	27	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	26	16	16	26	19	19	0	38	38	12	50	50
g / C, Green / Cycle	0.28	0.18	0.18	0.28	0.21	0.21	0.00	0.43	0.43	0.14	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.08	0.06	0.18	0.18	0.00	0.09	0.10	0.11	0.19	0.19
s, saturation flow rate [veh/h]	879	3204	1431	1225	1683	1652	1603	3204	1431	3113	1683	1593
c, Capacity [veh/h]	236	564	252	442	358	351	9	1362	608	431	939	888
d1, Uniform Delay [s]	24.75	31.37	33.35	24.10	34.19	34.21	44.55	16.35	16.50	37.61	10.92	10.92
k, delay calibration	0.11	0.11	0.11	0.11	0.17	0.17	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.12	1.40	0.16	9.66	9.95	11.67	0.35	0.88	3.63	1.02	1.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.15	0.48	0.16	0.87	0.87	0.22	0.21	0.23	0.81	0.35	0.35
d, Delay for Lane Group [s/veh]	24.87	31.49	34.75	24.26	43.86	44.16	56.22	16.71	17.38	41.24	11.94	12.00
Lane Group LOS	C	C	C	C	D	D	E	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.26	0.75	2.39	1.09	7.26	7.17	0.07	1.92	1.97	3.92	3.65	3.47
50th-Percentile Queue Length [ft/ln]	6.56	18.86	59.73	27.15	181.49	179.19	1.85	48.00	49.17	97.93	91.35	86.81
95th-Percentile Queue Length [veh/ln]	0.47	1.36	4.30	1.95	11.68	11.56	0.13	3.46	3.54	7.05	6.58	6.25
95th-Percentile Queue Length [ft/ln]	11.81	33.96	107.51	48.86	291.96	288.96	3.33	86.40	88.51	176.27	164.42	156.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.87	31.49	34.75	24.26	44.00	44.16	56.22	16.71	17.38	41.24	11.96	12.00
Movement LOS	C	C	C	C	D	D	E	B	B	D	B	B
d_A, Approach Delay [s/veh]	32.76			42.01			17.11			22.33		
Approach LOS	C			D			B			C		
d_I, Intersection Delay [s/veh]	28.16											
Intersection LOS	C											
Intersection V/C	0.402											

Emissions

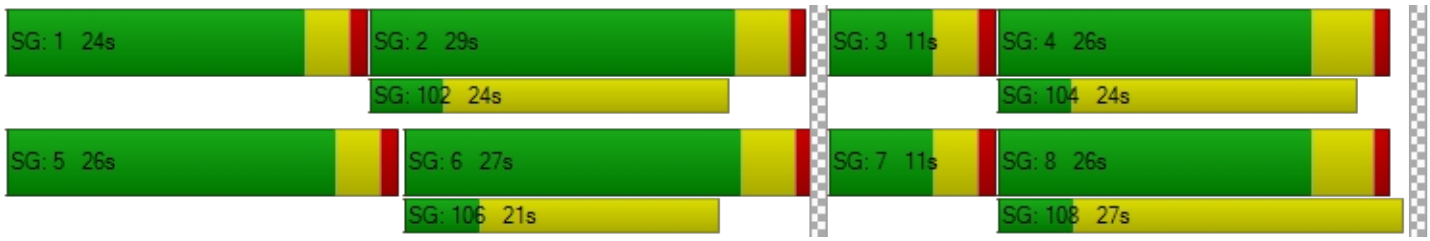
Vehicle Miles Traveled [mph]	1.32	6.44	9.31	5.61	25.21	24.79	0.30	43.23	21.01	25.12	23.55	22.29
Stops [stops/h]	10.49	60.36	95.57	43.43	290.38	286.71	2.96	153.61	78.67	313.36	146.15	138.89
Fuel consumption [US gal/h]	0.22	1.23	1.92	0.88	5.91	5.84	0.05	3.51	1.74	5.25	2.41	2.29
CO [g/h]	15.05	86.06	134.36	61.59	413.25	408.28	3.34	245.52	121.77	367.13	168.63	160.01
NOx [g/h]	2.93	16.74	26.14	11.98	80.40	79.44	0.65	47.77	23.69	71.43	32.81	31.13
VOC [g/h]	3.49	19.95	31.14	14.27	95.77	94.62	0.77	56.90	28.22	85.09	39.08	37.08

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.699	2.499	2.598	2.784
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	464	464	542	498
d_b, Bicycle Delay [s]	26.53	26.53	23.91	25.39
l_b,int, Bicycle LOS Score for Intersection	1.956	2.338	2.129	2.585
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.260

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	211	5	316	301	109	14	87	27	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	211	5	316	301	109	14	87	27	0	0	0
Peak Hour Factor	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	63	1	94	90	33	4	26	8	0	0	0
Total Analysis Volume [veh/h]	53	252	6	378	360	130	17	104	32	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	29	17	0	36	24	0	0	12	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	4	34	34	11	40	40	7	7	7	
g / C, Green / Cycle	0.07	0.52	0.52	0.16	0.62	0.62	0.10	0.10	0.10	
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.08	0.12	0.15	0.15	0.01	0.06	0.02	
s, saturation flow rate [veh/h]	1603	1683	1669	3113	1683	1533	1603	1683	1431	
c, Capacity [veh/h]	110	881	873	509	1040	947	162	170	144	
d1, Uniform Delay [s]	29.14	8.00	8.00	25.89	5.60	5.60	26.55	28.00	26.87	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.22	0.35	0.36	2.17	0.57	0.62	0.28	3.54	0.76	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.48	0.15	0.15	0.74	0.25	0.25	0.11	0.61	0.22	
d, Delay for Lane Group [s/veh]	32.36	8.35	8.36	28.05	6.16	6.22	26.83	31.53	27.63	
Lane Group LOS	C	A	A	C	A	A	C	C	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.85	0.85	0.85	2.74	1.30	1.20	0.24	1.65	0.47	
50th-Percentile Queue Length [ft/ln]	21.27	21.36	21.29	68.38	32.55	30.04	6.05	41.17	11.69	
95th-Percentile Queue Length [veh/ln]	1.53	1.54	1.53	4.92	2.34	2.16	0.44	2.96	0.84	
95th-Percentile Queue Length [ft/ln]	38.29	38.45	38.32	123.09	58.58	54.07	10.89	74.10	21.04	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.36	8.36	8.36	28.05	6.18	6.22	26.83	31.53	27.63	0.00	0.00	0.00
Movement LOS	C	A	A	C	A	A	C	C	C			
d_A, Approach Delay [s/veh]	12.45			15.71			30.20			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	16.61											
Intersection LOS	B											
Intersection V/C	0.260											

Emissions

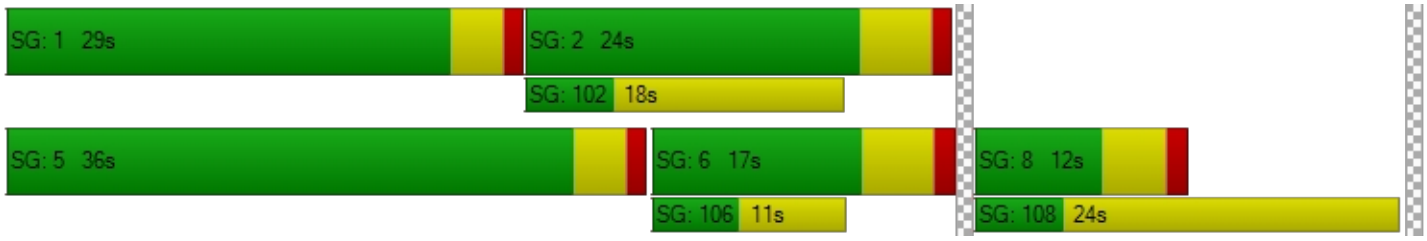
Vehicle Miles Traveled [mph]	2.10	5.13	5.10	27.76	18.82	17.16	2.49	15.21	4.68
Stops [stops/h]	47.12	47.32	47.17	302.98	72.10	66.55	13.40	91.20	25.90
Fuel consumption [US gal/h]	0.78	0.77	0.77	5.49	1.58	1.45	0.27	1.80	0.52
CO [g/h]	54.77	53.90	53.71	384.08	110.53	101.38	18.82	125.65	36.05
NOx [g/h]	10.66	10.49	10.45	74.73	21.51	19.72	3.66	24.45	7.01
VOC [g/h]	12.69	12.49	12.45	89.01	25.62	23.50	4.36	29.12	8.36

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.445	2.653	2.198	1.938
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	366	582	225	0
d_b, Bicycle Delay [s]	21.69	16.35	25.61	32.50
l_b,int, Bicycle LOS Score for Intersection	2.031	2.490	2.026	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	124	827	0	260	126	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	124	827	0	260	126	0
Peak Hour Factor	0.8530	0.8530	0.9500	0.8530	0.8530	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	242	0	76	37	0
Total Analysis Volume [veh/h]	145	970	0	305	148	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	27	0	0	23	23	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	50	50	50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	21	21	20	20
g / C, Green / Cycle	0.43	0.43	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.09	0.38	0.10	0.05
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	683	1080	1281	1281
d1, Uniform Delay [s]	9.05	13.34	9.96	9.45
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	2.99	0.44	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.90	0.24	0.12
d, Delay for Lane Group [s/veh]	9.20	16.33	10.40	9.63
Lane Group LOS	A	B	B	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.80	4.27	1.00	0.46
50th-Percentile Queue Length [ft/ln]	20.12	106.85	24.89	11.38
95th-Percentile Queue Length [veh/ln]	1.45	7.66	1.79	0.82
95th-Percentile Queue Length [ft/ln]	36.22	191.62	44.81	20.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.20	16.33	0.00	10.40	9.63	0.00
Movement LOS	A	B		B	A	
d_A, Approach Delay [s/veh]	15.40		10.40		9.63	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	13.88					
Intersection LOS	B					
Intersection V/C	0.478					

Emissions

Vehicle Miles Traveled [mph]	12.16	81.32	15.06	7.10
Stops [stops/h]	57.94	615.48	143.39	65.53
Fuel consumption [US gal/h]	1.17	10.95	2.06	0.94
CO [g/h]	81.82	765.55	143.82	66.02
NOx [g/h]	15.92	148.95	27.98	12.85
VOC [g/h]	18.96	177.42	33.33	15.30

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.419	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	920	732	732
d_b, Bicycle Delay [s]	7.29	10.05	10.05
l_b,int, Bicycle LOS Score for Intersection	1.774	2.026	1.896
Bicycle LOS	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.359

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	74	171	43	0	0	0	213	165	0	0	50	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	171	43	0	0	0	213	165	0	0	50	89
Peak Hour Factor	0.9110	0.9110	0.9110	0.9500	0.9500	0.9500	0.9110	0.9110	0.9500	0.9500	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	47	12	0	0	0	58	45	0	0	14	24
Total Analysis Volume [veh/h]	81	188	47	0	0	0	234	181	0	0	55	98
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	16	0	0	0	0	18	34	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	50	50		50	50	50	50
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	9	9		9	31	18	18
g / C, Green / Cycle	0.18	0.18		0.18	0.62	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.05	0.14		0.15	0.06	0.03	0.07
s, saturation flow rate [veh/h]	1603	1626		1603	3204	1683	1431
c, Capacity [veh/h]	289	293		288	1999	613	521
d1, Uniform Delay [s]	17.70	19.64		19.71	3.75	10.44	10.84
k, delay calibration	0.11	0.12		0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	5.66		5.53	0.09	0.29	0.80
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.80		0.81	0.09	0.09	0.19
d, Delay for Lane Group [s/veh]	18.22	25.31		25.24	3.84	10.73	11.64
Lane Group LOS	B	C		C	A	B	B
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.75	2.74		2.78	0.25	0.39	0.74
50th-Percentile Queue Length [ft/ln]	18.71	68.38		69.44	6.22	9.66	18.48
95th-Percentile Queue Length [veh/ln]	1.35	4.92		5.00	0.45	0.70	1.33
95th-Percentile Queue Length [ft/ln]	33.68	123.09		124.99	11.20	17.39	33.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.22	25.31	25.31	0.00	0.00	0.00	25.24	3.84	0.00	0.00	10.73	11.64
Movement LOS	B	C	C				C	A			B	B
d_A, Approach Delay [s/veh]	23.49			0.00			15.91			11.31		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	17.82											
Intersection LOS	B											
Intersection V/C	0.359											

Emissions

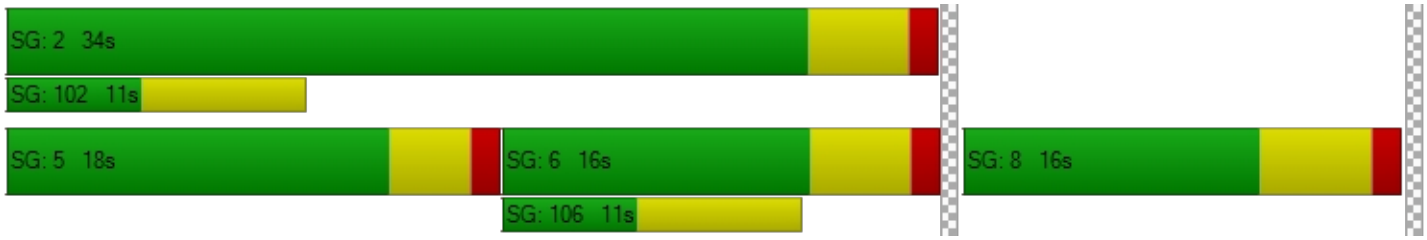
Vehicle Miles Traveled [mph]	7.06	20.47		11.23	8.68	2.01	3.59
Stops [stops/h]	53.88	196.95		199.98	35.86	27.82	53.23
Fuel consumption [US gal/h]	0.97	3.47		2.77	0.70	0.36	0.67
CO [g/h]	68.12	242.68		193.57	48.73	24.93	47.11
NOx [g/h]	13.25	47.22		37.66	9.48	4.85	9.17
VOC [g/h]	15.79	56.24		44.86	11.29	5.78	10.92

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.865	1.939	0.000	0.000
Crosswalk LOS	A	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	436	0	1172	452
d_b, Bicycle Delay [s]	15.29	25.00	4.28	14.98
l_b,int, Bicycle LOS Score for Intersection	2.295	4.132	2.116	1.900
Bicycle LOS	B	D	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	331	94	231	0	0	0	80	308	0	0	468	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	331	94	231	0	0	0	80	308	0	0	468	96
Peak Hour Factor	0.8760	0.8760	0.8760	0.9500	0.9500	0.9500	0.8760	0.8760	0.9500	0.9500	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	94	27	66	0	0	0	23	88	0	0	134	27
Total Analysis Volume [veh/h]	378	107	264	0	0	0	91	352	0	0	534	110
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	15	30	0	0	15	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	28	28	28		6	22	12	12
g / C, Green / Cycle	0.47	0.47	0.47		0.09	0.37	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.14	0.13	0.17		0.03	0.10	0.15	0.07
s, saturation flow rate [veh/h]	1781	1819	1589		3459	3560	3560	1589
c, Capacity [veh/h]	837	855	747		325	1311	710	317
d1, Uniform Delay [s]	9.74	9.73	10.10		25.29	13.29	22.63	20.66
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.87	0.84	1.31		0.46	0.11	1.64	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.29	0.35		0.28	0.27	0.75	0.35
d, Delay for Lane Group [s/veh]	10.61	10.57	11.41		25.76	13.40	24.27	21.31
Lane Group LOS	B	B	B		C	B	C	C
Critical Lane Group	No	No	Yes		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.79	1.81	2.08		0.60	1.56	3.38	1.27
50th-Percentile Queue Length [ft/ln]	44.69	45.22	51.92		15.09	39.02	84.38	31.66
95th-Percentile Queue Length [veh/ln]	3.22	3.26	3.74		1.09	2.81	6.08	2.28
95th-Percentile Queue Length [ft/ln]	80.45	81.39	93.46		27.16	70.24	151.88	56.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.59	10.57	11.41	0.00	0.00	0.00	25.76	13.40	0.00	0.00	24.27	21.31
Movement LOS	B	B	B				C	B			C	C
d_A, Approach Delay [s/veh]	10.88			0.00			15.93			23.76		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	16.62											
Intersection LOS	B											
Intersection V/C	0.342											

Emissions

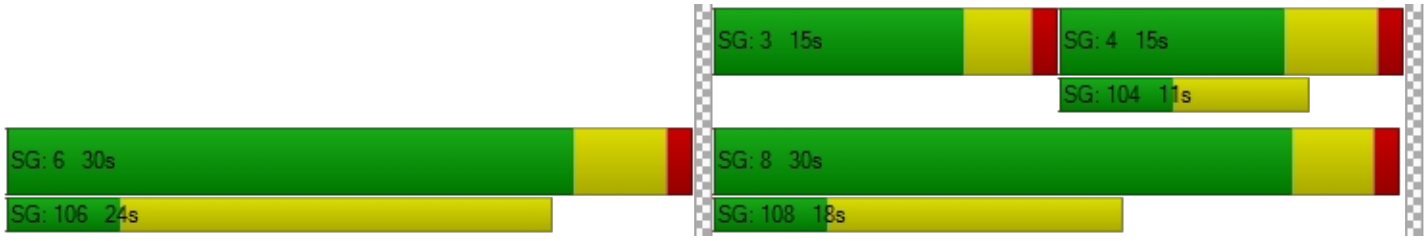
Vehicle Miles Traveled [mph]	9.42	9.56	10.33		6.57	25.41	27.01	5.56
Stops [stops/h]	107.27	108.53	124.62		72.43	187.31	405.02	75.98
Fuel consumption [US gal/h]	1.69	1.71	1.94		1.05	2.82	6.71	1.26
CO [g/h]	117.80	119.28	135.91		73.41	197.18	469.22	88.12
NOx [g/h]	22.92	23.21	26.44		14.28	38.36	91.29	17.14
VOC [g/h]	27.30	27.64	31.50		17.01	45.70	108.75	20.42

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.325	1.846	2.617	0.000
Crosswalk LOS	B	A	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	330
d_b, Bicycle Delay [s]	10.27	30.00	9.98	20.92
l_b,int, Bicycle LOS Score for Intersection	3.010	4.132	2.139	2.305
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\1 Existing PM.pdf

Scenario 2 Existing PM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	NB Left	0.624	22.3	C
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	SB Left	0.506	21.3	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	WB Left	0.328	13.8	B
4	Main St @ First St	Signalized	HCM 7th Edition	EB Right	0.234	13.5	B
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.024	13.7	B
6	Main St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.624	30.1	C
7	Market St @ First St	Signalized	HCM 7th Edition	WB Left	0.372	11.2	B
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.041	22.0	C
9	Market St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.597	21.4	C
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	EB Left	0.040	21.7	C
11	Market St @ Fifth St	Signalized	HCM 7th Edition	WB Right	0.310	9.7	A
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	WB Right	0.092	12.2	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.570	28.0	C
14	Market St @ University Ave	Signalized	HCM 7th Edition	SB Left	0.529	28.5	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Right	0.292	6.5	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	WB Right	0.283	8.6	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	WB Left	0.032	34.6	D
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Right	0.320	9.5	A

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	EB Thru	0.096	43.0	E
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	SB Left	0.478	30.7	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.360	15.7	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.405	22.3	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.385	9.6	A
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.008	9.7	A
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	NB Left	0.216	8.3	A
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	NB Left	0.112	8.3	A
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.343	10.0	B
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.302	9.0	A
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Left	0.211	9.2	A
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.414	13.3	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.005	11.4	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.066	14.3	B
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	WB Left	0.381	23.7	C
34	Lime St @ University Ave	Signalized	HCM 7th Edition	EB Left	0.617	28.3	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Left	0.525	21.3	C
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	SB Right	0.354	11.5	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	NB Thru	0.610	26.3	C
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.503	17.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	22.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.624

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	280	415	0	0	700	164	0	0	0	34	107	286
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	280	415	0	0	700	164	0	0	0	34	107	286
Peak Hour Factor	0.9350	0.9350	0.9500	0.9500	0.9350	0.9350	0.9500	0.9500	0.9500	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	75	111	0	0	187	44	0	0	0	9	29	76
Total Analysis Volume [veh/h]	299	444	0	0	749	175	0	0	0	36	114	306
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	25	39	0	0	14	0	0	0	0	0	26	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	65	65	65	65		65	65
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	13	40	23	23		15	15
g / C, Green / Cycle	0.20	0.62	0.36	0.36		0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.17	0.12	0.25	0.26		0.08	0.19
s, saturation flow rate [veh/h]	1781	3560	1870	1753		1848	1589
c, Capacity [veh/h]	356	2192	662	620		420	362
d1, Uniform Delay [s]	24.99	5.49	18.02	18.42		21.11	24.02
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	5.30	0.21	6.02	7.92		0.51	6.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.20	0.70	0.74		0.36	0.85
d, Delay for Lane Group [s/veh]	30.29	5.70	24.04	26.34		21.62	30.28
Lane Group LOS	C	A	C	C		C	C
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	4.60	1.03	6.34	6.72		1.83	4.74
50th-Percentile Queue Length [ft/ln]	115.05	25.82	158.54	167.92		45.76	118.49
95th-Percentile Queue Length [veh/ln]	8.12	1.86	10.47	10.97		3.29	8.31
95th-Percentile Queue Length [ft/ln]	203.00	46.47	261.79	274.17		82.37	207.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.29	5.70	0.00	0.00	24.92	26.34	0.00	0.00	0.00	21.62	21.62	30.28
Movement LOS	C	A			C	C				C	C	C
d_A, Approach Delay [s/veh]	15.59			25.19			0.00			27.43		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	22.31											
Intersection LOS	C											
Intersection V/C	0.624											

Emissions

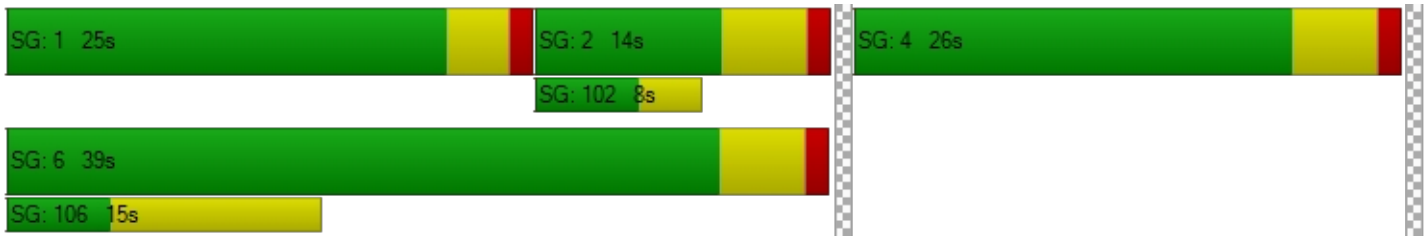
Vehicle Miles Traveled [mph]	17.79	26.41	17.10	17.10		5.50	11.23
Stops [stops/h]	254.87	114.39	351.22	372.00		101.38	262.49
Fuel consumption [US gal/h]	4.44	2.38	5.55	5.93		1.63	4.29
CO [g/h]	310.22	166.49	388.19	414.23		114.09	299.71
NOx [g/h]	60.36	32.39	75.53	80.59		22.20	58.31
VOC [g/h]	71.90	38.59	89.97	96.00		26.44	69.46

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.982	2.098
Crosswalk LOS	F	F	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1043	274	0	643
d_b, Bicycle Delay [s]	7.44	24.21	32.50	14.96
l_b,int, Bicycle LOS Score for Intersection	2.173	2.322	4.132	2.312
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.506

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	608	180	391	337	0	87	29	174	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	608	180	391	337	0	87	29	174	0	0	0
Peak Hour Factor	0.9500	0.9880	0.9880	0.9880	0.9880	0.9500	0.9880	0.9880	0.9880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	154	46	99	85	0	22	7	44	0	0	0
Total Analysis Volume [veh/h]	0	615	182	396	341	0	88	29	176	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	24	42	0	0	28	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	28	28	17	50	10	10	
g / C, Green / Cycle	0.41	0.41	0.25	0.71	0.14	0.14	
(v / s)_i Volume / Saturation Flow Rate	0.17	0.11	0.22	0.10	0.06	0.11	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1802	1589	
c, Capacity [veh/h]	1439	643	442	2527	261	230	
d1, Uniform Delay [s]	15.02	14.03	25.43	3.26	27.39	28.80	
k, delay calibration	0.50	0.50	0.27	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.93	1.10	14.46	0.11	1.21	5.26	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.43	0.28	0.90	0.13	0.45	0.77	
d, Delay for Lane Group [s/veh]	15.95	15.13	39.89	3.37	28.59	34.06	
Lane Group LOS	B	B	D	A	C	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.33	1.94	7.64	0.51	1.78	3.01	
50th-Percentile Queue Length [ft/ln]	83.24	48.38	190.89	12.86	44.53	75.37	
95th-Percentile Queue Length [veh/ln]	5.99	3.48	12.17	0.93	3.21	5.43	
95th-Percentile Queue Length [ft/ln]	149.84	87.09	304.19	23.14	80.15	135.67	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	15.95	15.13	39.89	3.37	0.00	28.59	28.59	34.06	0.00	0.00	0.00
Movement LOS		B	B	D	A		C	C	C			
d_A, Approach Delay [s/veh]	15.76			23.00			31.88			0.00		
Approach LOS	B			C			C			A		
d_I, Intersection Delay [s/veh]	21.26											
Intersection LOS	C											
Intersection V/C	0.506											

Emissions

Vehicle Miles Traveled [mph]	83.86	24.82	23.56	20.29	3.57	5.37	
Stops [stops/h]	342.49	99.53	392.69	52.90	91.60	155.05	
Fuel consumption [US gal/h]	7.77	2.26	7.07	1.41	1.51	2.59	
CO [g/h]	543.00	157.63	493.91	98.23	105.25	181.07	
NOx [g/h]	105.65	30.67	96.10	19.11	20.48	35.23	
VOC [g/h]	125.84	36.53	114.47	22.77	24.39	41.97	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.588	0.000	2.040	2.000
Crosswalk LOS	B	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	369	1054	654	0
d_b, Bicycle Delay [s]	23.29	7.83	15.85	35.00
l_b,int, Bicycle LOS Score for Intersection	2.217	2.168	1.801	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.328

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	476	28	136	285	9	65	202	25	54	31	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	476	28	136	285	9	65	202	25	54	31	117
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	129	8	37	77	2	18	55	7	15	8	32
Total Analysis Volume [veh/h]	6	515	30	147	308	10	70	218	27	58	34	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	11	21	0	0	23	0	0	23	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	55	55	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	22	22	32	27	27	13	13	13	13
g / C, Green / Cycle	0.58	0.40	0.40	0.58	0.50	0.50	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.01	0.15	0.15	0.13	0.09	0.09	0.06	0.13	0.05	0.10
s, saturation flow rate [veh/h]	1120	1870	1834	1098	1870	1849	1226	1834	1135	1642
c, Capacity [veh/h]	802	741	727	750	932	922	275	442	224	395
d1, Uniform Delay [s]	4.86	11.75	11.76	5.55	7.56	7.56	22.69	18.29	24.40	17.56
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	1.42	1.46	0.58	0.40	0.40	0.48	1.09	0.60	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.37	0.37	0.20	0.17	0.17	0.25	0.55	0.26	0.40
d, Delay for Lane Group [s/veh]	4.86	13.18	13.22	6.13	7.96	7.96	23.18	19.38	25.00	18.22
Lane Group LOS	A	B	B	A	A	A	C	B	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.02	2.26	2.23	0.64	0.90	0.89	0.84	2.66	0.73	1.66
50th-Percentile Queue Length [ft/ln]	0.51	56.47	55.77	16.09	22.39	22.24	21.01	66.59	18.31	41.48
95th-Percentile Queue Length [veh/ln]	0.04	4.07	4.02	1.16	1.61	1.60	1.51	4.79	1.32	2.99
95th-Percentile Queue Length [ft/ln]	0.92	101.65	100.39	28.95	40.30	40.04	37.82	119.86	32.96	74.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.86	13.20	13.22	6.13	7.96	7.96	23.18	19.38	19.38	25.00	18.22	18.22
Movement LOS	A	B	B	A	A	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.11			7.38			20.22			20.03		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	13.81											
Intersection LOS	B											
Intersection V/C	0.328											

Emissions

Vehicle Miles Traveled [mph]	2.66	121.96	120.05	20.04	21.77	21.59	1.98	6.94	1.63	4.49
Stops [stops/h]	1.34	147.85	146.03	42.11	58.62	58.24	55.01	174.35	47.94	108.61
Fuel consumption [US gal/h]	0.12	6.50	6.40	1.26	1.53	1.52	0.63	1.95	0.55	1.21
CO [g/h]	8.22	454.16	447.48	88.37	106.88	106.09	44.06	136.10	38.60	84.71
NOx [g/h]	1.60	88.36	87.06	17.19	20.80	20.64	8.57	26.48	7.51	16.48
VOC [g/h]	1.90	105.26	103.71	20.48	24.77	24.59	10.21	31.54	8.95	19.63

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	2.573	2.643	2.020	2.173
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	669	669
d_b, Bicycle Delay [s]	13.90	13.90	12.18	12.18
l_b,int, Bicycle LOS Score for Intersection	2.014	1.943	2.079	1.919
Bicycle LOS	B	A	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.234

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	330	10	6	264	65	84	68	145	31	52	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	330	10	6	264	65	84	68	145	31	52	11
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	88	3	2	70	17	22	18	39	8	14	3
Total Analysis Volume [veh/h]	4	351	11	6	281	69	89	72	154	33	55	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	35	35	40	35	35	10	10	10
g / C, Green / Cycle	0.66	0.59	0.59	0.66	0.59	0.59	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.00	0.10	0.10	0.01	0.10	0.10	0.07	0.14	0.12
s, saturation flow rate [veh/h]	1079	1870	1850	1072	1870	1746	1334	1669	831
c, Capacity [veh/h]	832	1092	1081	828	1099	1026	155	292	225
d1, Uniform Delay [s]	3.52	5.74	5.75	3.52	5.64	5.65	23.41	23.63	21.88
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.33	0.33	0.02	0.32	0.35	3.34	4.40	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.17	0.17	0.01	0.16	0.17	0.58	0.77	0.44
d, Delay for Lane Group [s/veh]	3.52	6.07	6.08	3.54	5.96	6.01	26.76	28.03	23.26
Lane Group LOS	A	A	A	A	A	A	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.01	0.86	0.86	0.02	0.83	0.81	1.28	3.26	1.26
50th-Percentile Queue Length [ft/ln]	0.26	21.56	21.46	0.46	20.86	20.24	31.92	81.51	31.53
95th-Percentile Queue Length [veh/ln]	0.02	1.55	1.54	0.03	1.50	1.46	2.30	5.87	2.27
95th-Percentile Queue Length [ft/ln]	0.47	38.81	38.62	0.84	37.55	36.43	57.45	146.72	56.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.52	6.08	6.08	3.54	5.97	6.01	26.76	28.03	28.03	23.26	23.26	23.26
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	6.05			5.94			27.67			23.26		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	13.52											
Intersection LOS	B											
Intersection V/C	0.234											

Emissions

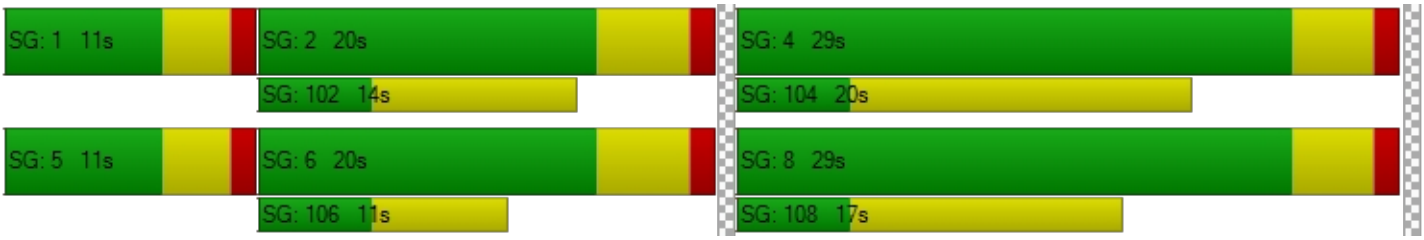
Vehicle Miles Traveled [mph]	0.30	13.70	13.61	2.66	79.33	76.09	7.36	18.70	2.83
Stops [stops/h]	0.63	51.74	51.49	1.12	50.06	48.57	76.60	195.62	75.67
Fuel consumption [US gal/h]	0.02	1.14	1.13	0.11	3.62	3.48	1.11	2.88	0.89
CO [g/h]	1.33	79.40	78.95	7.99	252.81	242.92	77.56	201.35	62.26
NOx [g/h]	0.26	15.45	15.36	1.55	49.19	47.26	15.09	39.18	12.11
VOC [g/h]	0.31	18.40	18.30	1.85	58.59	56.30	17.98	46.67	14.43

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.517	2.591	2.044	1.778
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	497	497	813	813
d_b, Bicycle Delay [s]	16.95	16.95	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.076	2.068	2.294	1.939
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	13.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	340	7	5	432	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	340	7	5	432	9	5
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	2	1	116	2	1
Total Analysis Volume [veh/h]	365	8	5	464	10	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.06	0.00	13.71	9.59
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.32	0.00	2.29	2.29
d_A, Approach Delay [s/veh]	0.00		0.09		12.34	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.26					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.624

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	7	6	17	299	4	140	146	687	10	13	283	203
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	6	17	299	4	140	146	687	10	13	283	203
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	4	78	1	36	38	179	3	3	74	53
Total Analysis Volume [veh/h]	7	6	18	311	4	146	152	715	10	14	294	211
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	19	0	12	20	0	26	43	0	11	28	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	4.55	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	32	20	31	31	25	45	39	45	34
g / C, Green / Cycle	0.37	0.23	0.36	0.36	0.29	0.53	0.46	0.53	0.40
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.10	0.16	0.10	0.16	0.43	0.02	0.32
s, saturation flow rate [veh/h]	1161	1486	1364	1086	1431	962	1679	740	1567
c, Capacity [veh/h]	373	344	597	536	418	397	764	239	624
d1, Uniform Delay [s]	22.37	25.52	19.15	21.13	23.73	14.90	22.22	17.12	22.72
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.15	0.34	0.11	0.24
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.39	0.94	1.59	2.30	0.87	17.14	0.10	5.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.07	0.24	0.32	0.35	0.38	0.95	0.06	0.81
d, Delay for Lane Group [s/veh]	22.47	25.92	20.09	22.72	26.03	15.77	39.36	17.22	28.20
Lane Group LOS	C	C	C	C	C	B	D	B	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.10	0.43	2.03	2.81	2.48	1.49	16.38	0.12	9.39
50th-Percentile Queue Length [ft/ln]	2.46	10.66	50.85	70.29	61.90	37.34	409.40	3.11	234.72
95th-Percentile Queue Length [veh/ln]	0.18	0.77	3.66	5.06	4.46	2.69	23.01	0.22	14.41
95th-Percentile Queue Length [ft/ln]	4.42	19.18	91.52	126.53	111.42	67.21	575.31	5.59	360.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.47	25.92	25.92	21.52	22.72	26.03	15.77	39.36	39.36	17.22	28.20	28.20
Movement LOS	C	C	C	C	C	C	B	D	D	B	C	C
d_A, Approach Delay [s/veh]	25.14			22.96			35.27			27.90		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	30.07											
Intersection LOS	C											
Intersection V/C	0.624											

Emissions

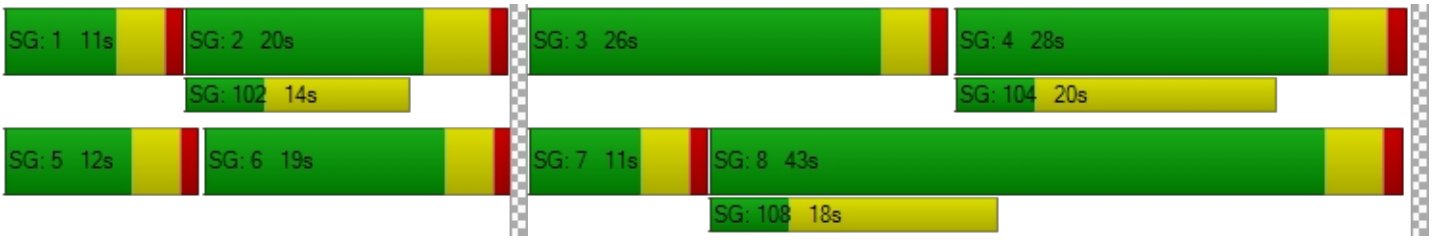
Vehicle Miles Traveled [mph]	0.17	0.57	10.76	13.05	11.03	12.76	60.88	1.07	38.66
Stops [stops/h]	4.16	18.06	86.14	119.08	104.87	63.26	693.56	5.26	397.64
Fuel consumption [US gal/h]	0.05	0.18	1.64	2.19	1.98	1.36	12.14	0.12	6.69
CO [g/h]	3.27	12.77	114.65	153.15	138.58	95.25	848.87	8.55	467.39
NOx [g/h]	0.64	2.48	22.31	29.80	26.96	18.53	165.16	1.66	90.94
VOC [g/h]	0.76	2.96	26.57	35.49	32.12	22.08	196.73	1.98	108.32

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.146	2.457	2.379	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	353	609	901	548
d_b, Bicycle Delay [s]	28.82	20.55	12.83	22.39
l_b,int, Bicycle LOS Score for Intersection	1.825	2.535	3.221	2.630
Bicycle LOS	A	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.372

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	619	71	115	983	24	21	103	15	47	47	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	619	71	115	983	24	21	103	15	47	47	33
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	170	19	32	270	7	6	28	4	13	13	9
Total Analysis Volume [veh/h]	21	679	78	126	1079	26	23	113	16	52	52	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	30	30	40	34	34	10	10	10	10
g / C, Green / Cycle	0.67	0.50	0.50	0.67	0.57	0.57	0.16	0.16	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.03	0.19	0.05	0.14	0.30	0.30	0.02	0.07	0.04	0.05
s, saturation flow rate [veh/h]	638	3560	1589	924	1870	1855	1309	1830	1261	1744
c, Capacity [veh/h]	520	1790	799	722	1067	1058	223	296	195	282
d1, Uniform Delay [s]	4.21	9.17	7.80	3.92	7.87	7.87	25.93	22.69	27.69	22.21
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.61	0.24	0.53	1.81	1.83	0.20	1.01	0.73	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.38	0.10	0.17	0.52	0.52	0.10	0.44	0.27	0.31
d, Delay for Lane Group [s/veh]	4.24	9.78	8.05	4.45	9.68	9.70	26.13	23.70	28.42	22.83
Lane Group LOS	A	A	A	A	A	A	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.05	2.23	0.46	0.40	3.56	3.53	0.31	1.65	0.75	1.10
50th-Percentile Queue Length [ft/ln]	1.25	55.84	11.52	9.90	88.90	88.36	7.74	41.31	18.63	27.42
95th-Percentile Queue Length [veh/ln]	0.09	4.02	0.83	0.71	6.40	6.36	0.56	2.97	1.34	1.97
95th-Percentile Queue Length [ft/ln]	2.25	100.51	20.74	17.82	160.02	159.04	13.93	74.35	33.53	49.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.24	9.78	8.05	4.45	9.69	9.70	26.13	23.70	23.70	28.42	22.83	22.83
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.46			9.15			24.07			24.91		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.20											
Intersection LOS	B											
Intersection V/C	0.372											

Emissions

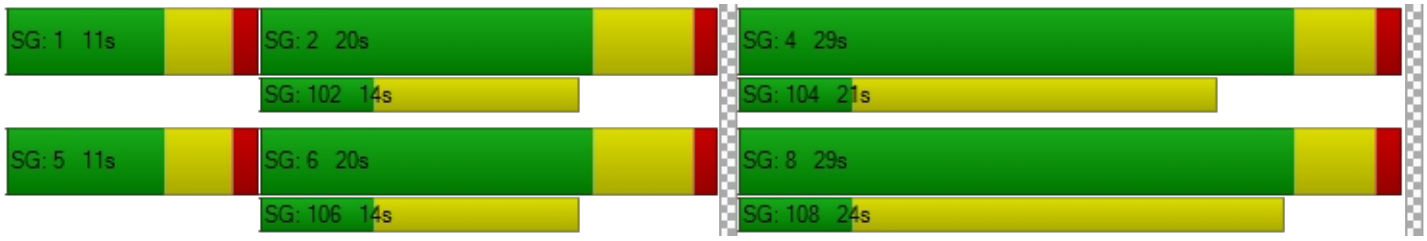
Vehicle Miles Traveled [mph]	1.57	50.69	5.82	4.16	18.32	18.18	0.53	2.97	4.30	7.28
Stops [stops/h]	3.01	268.02	27.66	23.77	213.37	212.05	18.57	99.14	44.70	65.80
Fuel consumption [US gal/h]	0.10	5.80	0.61	0.50	3.84	3.82	0.22	1.14	0.67	0.99
CO [g/h]	7.26	405.46	42.50	34.71	268.74	267.05	15.20	79.42	46.53	69.11
NOx [g/h]	1.41	78.89	8.27	6.75	52.29	51.96	2.96	15.45	9.05	13.45
VOC [g/h]	1.68	93.97	9.85	8.05	62.28	61.89	3.52	18.41	10.78	16.02

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.925	2.825	2.007	2.141
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	487	487	813	813
d_b, Bicycle Delay [s]	17.18	17.18	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.416	2.790	2.025	2.005
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	22.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.041

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	11	700	1035	6	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	700	1035	6	9	5
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	184	272	2	2	1
Total Analysis Volume [veh/h]	12	736	1088	6	9	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	10.79	0.00	0.00	0.00	22.01	13.19
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	1.45	0.00	0.00	0.00	4.02	4.02
d_A, Approach Delay [s/veh]	0.17		0.00		18.86	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.597

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	557	311	398	606	28	30	133	13	177	104	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	557	311	398	606	28	30	133	13	177	104	125
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	142	79	102	155	7	8	34	3	45	27	32
Total Analysis Volume [veh/h]	11	568	317	406	618	29	31	136	13	181	106	128
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	24	0	11	24	0	11	29	0	11	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	46	35	35	45	40	40	20	9	20	12	12
g / C, Green / Cycle	0.61	0.46	0.46	0.61	0.53	0.53	0.26	0.11	0.26	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.28	0.28	0.53	0.19	0.19	0.03	0.09	0.14	0.06	0.09
s, saturation flow rate [veh/h]	593	1683	1483	771	1683	1657	1188	1657	1339	1683	1431
c, Capacity [veh/h]	490	778	685	483	895	881	394	189	397	274	233
d1, Uniform Delay [s]	6.54	15.06	15.07	14.39	10.20	10.20	21.01	32.35	23.41	28.07	28.89
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	3.48	3.94	16.13	1.15	1.17	0.08	7.14	0.82	0.90	2.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.60	0.61	0.84	0.36	0.36	0.08	0.79	0.46	0.39	0.55
d, Delay for Lane Group [s/veh]	6.56	18.54	19.01	30.52	11.35	11.37	21.09	39.49	24.23	28.97	30.91
Lane Group LOS	A	B	B	C	B	B	C	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	6.03	5.41	4.82	2.88	2.83	0.41	2.93	2.65	1.72	2.18
50th-Percentile Queue Length [ft/ln]	1.46	150.74	135.16	120.50	71.88	70.87	10.13	73.15	66.17	42.90	54.47
95th-Percentile Queue Length [veh/ln]	0.10	10.06	9.22	8.42	5.18	5.10	0.73	5.27	4.76	3.09	3.92
95th-Percentile Queue Length [ft/ln]	2.62	251.41	230.49	210.52	129.39	127.57	18.24	131.67	119.10	77.23	98.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.56	18.62	19.01	30.52	11.36	11.37	21.09	39.49	39.49	24.23	28.97	30.91
Movement LOS	A	B	B	C	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	18.61			18.75			36.32			27.50		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	21.37											
Intersection LOS	C											
Intersection V/C	0.597											

Emissions

Vehicle Miles Traveled [mph]	0.43	18.55	16.36	30.72	24.67	24.29	0.79	3.82	15.20	8.90	10.75
Stops [stops/h]	2.79	289.42	259.51	231.36	138.01	136.08	19.45	140.45	127.04	82.38	104.59
Fuel consumption [US gal/h]	0.05	4.66	4.18	5.89	2.99	2.95	0.27	2.13	2.22	1.45	1.83
CO [g/h]	3.65	325.60	292.14	412.03	209.19	206.16	19.10	148.92	155.17	101.10	127.60
NOx [g/h]	0.71	63.35	56.84	80.17	40.70	40.11	3.72	28.97	30.19	19.67	24.83
VOC [g/h]	0.85	75.46	67.71	95.49	48.48	47.78	4.43	34.51	35.96	23.43	29.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.717	2.763	2.047	2.714
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	504	496	648	648
d_b, Bicycle Delay [s]	20.98	21.21	17.14	17.14
l_b,int, Bicycle LOS Score for Intersection	2.513	2.643	2.071	2.459
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	879	1	5	780	6	9	0	13	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	879	1	5	780	6	9	0	13	0	0	14
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	229	0	1	203	2	2	0	3	0	0	4
Total Analysis Volume [veh/h]	23	917	1	5	813	6	9	0	14	0	0	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.01	0.01	0.00	0.04	0.00	0.02	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	9.60	0.00	0.00	9.91	0.00	0.00	21.66	24.32	11.77	23.11	24.15	11.74
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.02	0.00	0.00	0.20	0.20	0.20	0.08	0.08	0.08
95th-Percentile Queue Length [ft/ln]	2.20	0.00	0.00	0.51	0.00	0.00	5.07	5.07	5.07	2.10	2.10	2.10
d_A, Approach Delay [s/veh]	0.23			0.06			15.64			11.74		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	0.45											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.310

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	801	30	82	734	19	14	9	17	19	21	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	801	30	82	734	19	14	9	17	19	21	49
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	204	8	21	186	5	4	2	4	5	5	12
Total Analysis Volume [veh/h]	18	814	30	83	746	19	14	9	17	19	21	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	105
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	32	0	11	32	0	11	50	0	12	51	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	83	72	72	83	76	76	13	6	13	6	6
g / C, Green / Cycle	0.79	0.69	0.69	0.79	0.72	0.72	0.12	0.05	0.12	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.03	0.25	0.25	0.12	0.23	0.23	0.01	0.02	0.01	0.01	0.03
s, saturation flow rate [veh/h]	689	1683	1662	690	1683	1668	1337	1509	1387	1683	1431
c, Capacity [veh/h]	582	1159	1144	574	1215	1204	250	81	250	101	85
d1, Uniform Delay [s]	2.88	6.82	6.82	3.34	5.27	5.27	40.98	47.83	41.12	47.00	48.09
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.90	0.91	0.53	0.68	0.69	0.09	2.25	0.13	1.02	6.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.37	0.37	0.14	0.32	0.32	0.06	0.32	0.08	0.21	0.58
d, Delay for Lane Group [s/veh]	2.90	7.71	7.73	3.87	5.95	5.96	41.07	50.08	41.24	48.02	54.30
Lane Group LOS	A	A	A	A	A	A	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.06	3.67	3.63	0.35	2.71	2.69	0.33	0.71	0.45	0.56	1.43
50th-Percentile Queue Length [ft/ln]	1.48	91.73	90.70	8.83	67.71	67.19	8.29	17.78	11.29	13.89	35.79
95th-Percentile Queue Length [veh/ln]	0.11	6.60	6.53	0.64	4.88	4.84	0.60	1.28	0.81	1.00	2.58
95th-Percentile Queue Length [ft/ln]	2.67	165.12	163.26	15.89	121.89	120.94	14.92	32.00	20.32	25.00	64.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.90	7.72	7.73	3.87	5.95	5.96	41.07	50.08	50.08	41.24	48.02	54.30
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.62			5.75			46.93			50.08		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	9.69											
Intersection LOS	A											
Intersection V/C	0.310											

Emissions

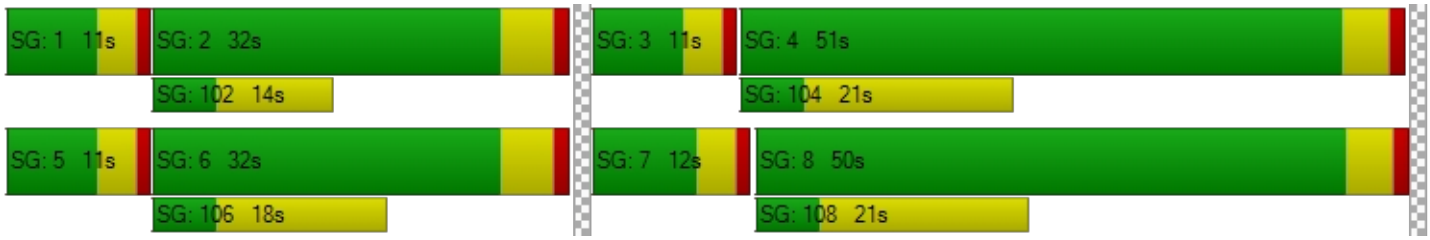
Vehicle Miles Traveled [mph]	1.34	31.66	31.27	6.32	29.27	29.02	0.37	0.68	1.60	1.77	4.22
Stops [stops/h]	2.03	125.80	124.39	12.11	92.87	92.14	11.37	24.38	15.48	19.05	49.08
Fuel consumption [US gal/h]	0.08	2.82	2.79	0.40	2.28	2.26	0.18	0.39	0.29	0.36	0.93
CO [g/h]	5.39	197.08	194.80	27.78	159.32	158.03	12.38	27.21	20.34	25.02	65.05
NOx [g/h]	1.05	38.35	37.90	5.41	31.00	30.75	2.41	5.29	3.96	4.87	12.66
VOC [g/h]	1.25	45.68	45.15	6.44	36.92	36.62	2.87	6.31	4.71	5.80	15.07

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	2.685	2.703	1.995	2.267
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	512	512	865	884
d_b, Bicycle Delay [s]	29.05	29.05	16.92	16.35
l_b,int, Bicycle LOS Score for Intersection	2.485	2.474	1.840	1.923
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.092

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	823	36	19	683	42	0	0	49	0	0	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	823	36	19	683	42	0	0	49	0	0	48
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9500	0.9500	0.9460	0.9500	0.9500	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	217	10	5	180	11	0	0	13	0	0	13
Total Analysis Volume [veh/h]	35	870	38	20	722	44	0	0	52	0	0	51
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.08	0.00	0.00	0.09
d_M, Delay for Movement [s/veh]	9.45	0.00	0.00	9.96	0.00	0.00	0.00	0.00	11.39	0.00	0.00	12.17
Movement LOS	A	A	A	A	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.30
95th-Percentile Queue Length [ft/ln]	3.24	0.00	0.00	2.07	0.00	0.00	0.00	0.00	6.90	0.00	0.00	7.58
d_A, Approach Delay [s/veh]	0.35			0.25			11.39			12.17		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.95											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	28.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.570

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	101	622	89	72	587	73	219	298	184	66	223	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	101	622	89	72	587	73	219	298	184	66	223	53
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	164	24	19	155	19	58	79	49	17	59	14
Total Analysis Volume [veh/h]	107	658	94	76	621	77	232	315	195	70	236	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15	31	0	11	27	0	11	27	0	11	27	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	7	33	33	6	32	32	27	18	18	28	17
g / C, Green / Cycle	0.08	0.41	0.41	0.07	0.40	0.40	0.34	0.22	0.22	0.35	0.21
(v / s)_i Volume / Saturation Flow Rate	0.07	0.23	0.23	0.05	0.21	0.21	0.20	0.19	0.14	0.11	0.18
s, saturation flow rate [veh/h]	1603	1683	1610	1603	1683	1619	1185	1683	1431	642	1628
c, Capacity [veh/h]	135	691	661	115	670	645	371	371	315	384	340
d1, Uniform Delay [s]	35.96	18.01	18.01	36.17	18.36	18.36	21.81	29.91	28.15	19.25	30.51
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.16	0.11	0.11	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.03	3.21	3.36	6.30	2.99	3.12	7.74	7.87	1.98	0.23	9.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.56	0.56	0.66	0.53	0.53	0.63	0.85	0.62	0.18	0.86
d, Delay for Lane Group [s/veh]	45.98	21.21	21.36	42.47	21.35	21.48	29.55	37.78	30.12	19.48	39.86
Lane Group LOS	D	C	C	D	C	C	C	D	C	B	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.35	5.58	5.37	1.60	5.17	5.00	3.94	6.32	3.38	0.89	6.20
50th-Percentile Queue Length [ft/ln]	58.85	139.48	134.22	39.98	129.22	125.08	98.39	158.03	84.58	22.34	154.92
95th-Percentile Queue Length [veh/ln]	4.24	9.45	9.17	2.88	8.90	8.67	7.08	10.44	6.09	1.61	10.28
95th-Percentile Queue Length [ft/ln]	105.93	236.32	229.23	71.97	222.43	216.79	177.10	261.12	152.24	40.21	256.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.98	21.28	21.36	42.47	21.40	21.48	29.55	37.78	30.12	19.48	39.86	39.86
Movement LOS	D	C	C	D	C	C	C	D	C	B	D	D
d_A, Approach Delay [s/veh]	24.36			23.48			33.19			35.92		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	28.04											
Intersection LOS	C											
Intersection V/C	0.570											

Emissions

Vehicle Miles Traveled [mph]	8.45	30.33	29.04	6.04	28.27	27.23	53.16	72.18	44.69	11.22	46.79
Stops [stops/h]	105.93	251.06	241.60	71.97	232.59	225.15	177.10	284.46	152.24	40.21	278.85
Fuel consumption [US gal/h]	2.12	4.70	4.52	1.43	4.37	4.23	4.75	7.31	4.04	0.94	5.54
CO [g/h]	148.18	328.74	316.17	99.85	305.53	295.57	332.28	511.14	282.64	65.44	387.40
NOx [g/h]	28.83	63.96	61.52	19.43	59.45	57.51	64.65	99.45	54.99	12.73	75.37
VOC [g/h]	34.34	76.19	73.28	23.14	70.81	68.50	77.01	118.46	65.50	15.17	89.78

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.714	2.762	2.560	2.165
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	648	548	548	560
d_b, Bicycle Delay [s]	18.29	21.10	21.10	20.74
l_b,int, Bicycle LOS Score for Intersection	2.483	2.413	2.998	2.371
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	28.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	609	132	173	632	56	48	400	79	67	278	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	609	132	173	632	56	48	400	79	67	278	116
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	165	36	47	171	15	13	108	21	18	75	31
Total Analysis Volume [veh/h]	73	661	143	188	685	61	52	434	86	73	302	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	18	34	0	11	29	0	11	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	6	34	34	12	40	40	5	16	16	6	17	17
g / C, Green / Cycle	0.07	0.40	0.40	0.14	0.47	0.47	0.06	0.19	0.19	0.07	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.05	0.21	0.10	0.12	0.21	0.04	0.03	0.16	0.16	0.05	0.13	0.14
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1588	1603	1683	1519
c, Capacity [veh/h]	109	1263	564	221	1487	664	95	320	302	109	338	305
d1, Uniform Delay [s]	38.67	19.65	17.33	35.78	15.52	12.75	38.90	33.11	33.17	38.67	31.30	31.41
k, delay calibration	0.11	0.50	0.50	0.20	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.87	1.55	1.08	15.38	1.03	0.27	4.91	5.59	6.21	6.87	2.20	2.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.52	0.25	0.85	0.46	0.09	0.55	0.83	0.84	0.67	0.66	0.67
d, Delay for Lane Group [s/veh]	45.54	21.20	18.41	51.16	16.55	13.02	43.81	38.70	39.38	45.54	33.50	34.01
Lane Group LOS	D	C	B	D	B	B	D	D	D	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.65	4.92	1.94	4.62	4.36	0.66	1.17	5.64	5.43	1.69	4.37	4.08
50th-Percentile Queue Length [ft/ln]	41.34	123.04	48.58	115.46	108.96	16.42	29.21	140.95	135.69	42.21	109.18	101.93
95th-Percentile Queue Length [veh/ln]	2.98	8.56	3.50	8.14	7.78	1.18	2.10	9.53	9.25	3.04	7.79	7.34
95th-Percentile Queue Length [ft/ln]	74.42	214.00	87.45	203.57	194.55	29.56	52.58	238.30	231.21	75.97	194.86	183.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.54	21.20	18.41	51.16	16.55	13.02	43.81	38.96	39.38	45.54	33.63	34.01
Movement LOS	D	C	B	D	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	22.77			23.29			39.46			35.46		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	28.45											
Intersection LOS	C											
Intersection V/C	0.529											

Emissions

Vehicle Miles Traveled [mph]	5.86	53.04	11.47	14.84	54.08	4.82	11.83	60.56	57.69	11.87	36.19	33.43
Stops [stops/h]	70.04	416.90	82.31	195.60	369.17	27.82	49.49	238.78	229.88	71.50	184.96	172.67
Fuel consumption [US gal/h]	1.43	8.01	1.59	3.99	7.15	0.55	1.22	5.91	5.68	1.48	3.85	3.59
CO [g/h]	99.71	559.82	111.29	279.16	499.47	38.76	85.54	413.05	396.89	103.78	269.38	250.80
NOx [g/h]	19.40	108.92	21.65	54.32	97.18	7.54	16.64	80.36	77.22	20.19	52.41	48.80
VOC [g/h]	23.11	129.74	25.79	64.70	115.76	8.98	19.82	95.73	91.98	24.05	62.43	58.13

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.778	2.788	2.495	2.504
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	515	680	572	574
d_b, Bicycle Delay [s]	23.42	18.51	21.67	21.60
l_b,int, Bicycle LOS Score for Intersection	2.498	2.545	2.246	2.187
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.292

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	751	42	38	717	43	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	751	42	38	717	43	77
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	203	11	10	193	12	21
Total Analysis Volume [veh/h]	810	45	41	773	46	83
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	31	0	11	42	33	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	51	51	59	59	7	7
g / C, Green / Cycle	0.68	0.68	0.78	0.78	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.23	0.23	0.05	0.22	0.03	0.05
s, saturation flow rate [veh/h]	1870	1836	763	3560	1781	1589
c, Capacity [veh/h]	1261	1238	666	2782	159	142
d1, Uniform Delay [s]	5.16	5.19	2.35	2.29	31.93	32.82
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	0.77	0.18	0.25	0.99	3.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.35	0.06	0.28	0.29	0.59
d, Delay for Lane Group [s/veh]	5.89	5.96	2.53	2.54	32.92	36.61
Lane Group LOS	A	A	A	A	C	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.28	2.30	0.09	0.80	0.82	1.58
50th-Percentile Queue Length [ft/ln]	56.98	57.44	2.31	19.92	20.38	39.50
95th-Percentile Queue Length [veh/ln]	4.10	4.14	0.17	1.43	1.47	2.84
95th-Percentile Queue Length [ft/ln]	102.56	103.39	4.16	35.86	36.69	71.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.92	5.96	2.53	2.54	32.92	36.61
Movement LOS	A	A	A	A	C	D
d_A, Approach Delay [s/veh]	5.92		2.54		35.29	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	6.50					
Intersection LOS	A					
Intersection V/C	0.292					

Emissions

Vehicle Miles Traveled [mph]	31.63	31.63	3.29	62.03	7.58	13.68
Stops [stops/h]	109.40	110.28	4.43	76.51	39.14	75.85
Fuel consumption [US gal/h]	2.54	2.55	0.18	3.34	0.80	1.52
CO [g/h]	177.61	178.46	12.57	233.39	55.87	106.56
NOx [g/h]	34.56	34.72	2.45	45.41	10.87	20.73
VOC [g/h]	41.16	41.36	2.91	54.09	12.95	24.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	0.00	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.600	0.000	2.032
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	691	984	757
d_b, Bicycle Delay [s]	16.07	9.68	14.48
l_b,int, Bicycle LOS Score for Intersection	2.479	2.446	1.774
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.283

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	723	26	60	660	26	34	50	16	24	27	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	723	26	60	660	26	34	50	16	24	27	49
Peak Hour Factor	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	190	7	16	173	7	9	13	4	6	7	13
Total Analysis Volume [veh/h]	15	759	27	63	693	27	36	53	17	25	28	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	26	0	11	26	0	0	28	0	0	28	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	49	40	40	49	43	43	6	6
g / C, Green / Cycle	0.76	0.62	0.62	0.76	0.67	0.67	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.21	0.08	0.19	0.19	0.06	0.06
s, saturation flow rate [veh/h]	811	1870	1847	839	1870	1845	1782	1771
c, Capacity [veh/h]	710	1160	1146	721	1248	1232	241	235
d1, Uniform Delay [s]	2.26	5.94	5.94	2.49	4.45	4.45	28.34	28.36
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.80	0.81	0.24	0.59	0.60	1.25	1.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.34	0.34	0.09	0.29	0.29	0.44	0.44
d, Delay for Lane Group [s/veh]	2.27	6.74	6.75	2.72	5.04	5.05	29.59	29.67
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.02	2.12	2.10	0.13	1.49	1.48	1.60	1.58
50th-Percentile Queue Length [ft/ln]	0.55	53.09	52.56	3.30	37.30	36.90	40.08	39.40
95th-Percentile Queue Length [veh/ln]	0.04	3.82	3.78	0.24	2.69	2.66	2.89	2.84
95th-Percentile Queue Length [ft/ln]	0.98	95.57	94.60	5.94	67.14	66.42	72.14	70.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.27	6.74	6.75	2.72	5.05	5.05	29.59	29.59	29.59	29.67	29.67	29.67
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	6.66			4.86			29.59			29.67		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	8.56											
Intersection LOS	A											
Intersection V/C	0.283											

Emissions

Vehicle Miles Traveled [mph]	1.13	29.82	29.47	4.66	26.80	26.46	2.76	17.36
Stops [stops/h]	1.21	117.62	116.43	7.31	82.63	81.75	88.79	87.28
Fuel consumption [US gal/h]	0.06	2.56	2.54	0.27	2.01	1.99	1.24	1.82
CO [g/h]	4.13	179.19	177.25	18.70	140.84	139.19	86.86	127.56
NOx [g/h]	0.80	34.86	34.49	3.64	27.40	27.08	16.90	24.82
VOC [g/h]	0.96	41.53	41.08	4.33	32.64	32.26	20.13	29.56

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.670	2.707	1.801	1.879
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	643	643	717	717
d_b, Bicycle Delay [s]	14.96	14.96	13.38	13.38
l_b,int, Bicycle LOS Score for Intersection	2.435	2.420	1.949	1.946
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	34.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	733	4	3	699	7	7	0	40	4	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	733	4	3	699	7	7	0	40	4	0	20
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	200	1	1	191	2	2	0	11	1	0	5
Total Analysis Volume [veh/h]	12	802	4	3	765	8	8	0	44	4	0	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.01	0.00	0.06	0.00	0.07	0.03	0.00	0.04
d_M, Delay for Movement [s/veh]	9.36	0.00	0.00	9.44	0.00	0.00	33.43	41.53	12.27	34.57	40.95	11.74
Movement LOS	A	A	A	A	A	A	D	E	B	D	E	B
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.01	0.00	0.00	0.45	0.45	0.45	0.22	0.22	0.22
95th-Percentile Queue Length [ft/ln]	1.09	0.00	0.00	0.28	0.00	0.00	11.29	11.29	11.29	5.52	5.52	5.52
d_A, Approach Delay [s/veh]	0.14			0.04			15.52			15.25		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	0.80											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.320

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	625	12	32	705	14	34	38	65	19	14	71
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	625	12	32	705	14	34	38	65	19	14	71
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	171	3	9	193	4	9	10	18	5	4	19
Total Analysis Volume [veh/h]	16	685	13	35	773	15	37	42	71	21	15	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	35	35	42	37	37	8	8	8
g / C, Green / Cycle	0.71	0.59	0.59	0.71	0.61	0.61	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.19	0.04	0.21	0.21	0.11	0.02	0.05
s, saturation flow rate [veh/h]	781	1870	1858	872	1870	1857	1421	1475	1589
c, Capacity [veh/h]	661	1102	1095	726	1148	1140	260	287	207
d1, Uniform Delay [s]	2.91	6.22	6.22	2.89	5.68	5.68	25.45	23.13	23.85
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.76	0.76	0.13	0.82	0.83	2.01	0.19	1.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.32	0.32	0.05	0.34	0.34	0.58	0.13	0.38
d, Delay for Lane Group [s/veh]	2.93	6.98	6.98	3.02	6.50	6.50	27.46	23.32	24.98
Lane Group LOS	A	A	A	A	A	A	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.03	1.84	1.83	0.09	1.93	1.92	2.14	0.45	1.03
50th-Percentile Queue Length [ft/ln]	0.78	46.08	45.85	2.21	48.37	48.10	53.51	11.24	25.87
95th-Percentile Queue Length [veh/ln]	0.06	3.32	3.30	0.16	3.48	3.46	3.85	0.81	1.86
95th-Percentile Queue Length [ft/ln]	1.41	82.95	82.52	3.98	87.06	86.58	96.32	20.22	46.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.93	6.98	6.98	3.02	6.50	6.50	27.46	27.46	27.46	23.32	23.32	24.98
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	6.89			6.35			27.46			24.45		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.47											
Intersection LOS	A											
Intersection V/C	0.320											

Emissions

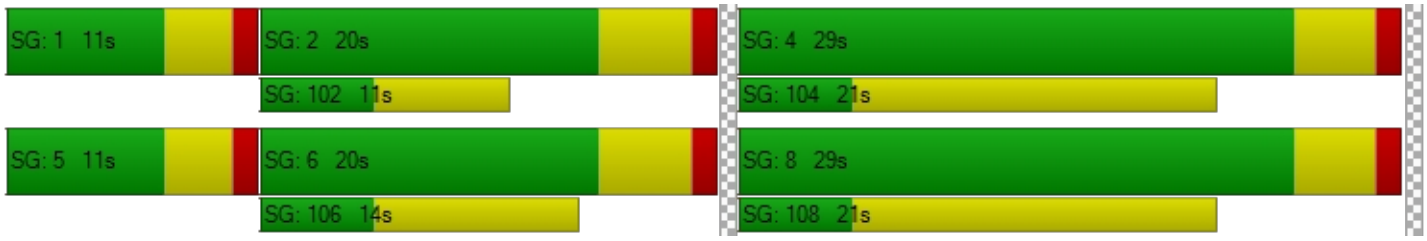
Vehicle Miles Traveled [mph]	1.20	26.28	26.12	2.63	29.71	29.52	4.40	1.07	2.33
Stops [stops/h]	1.87	110.60	110.03	5.31	116.08	115.43	128.43	26.97	62.08
Fuel consumption [US gal/h]	0.07	2.33	2.32	0.16	2.53	2.51	1.53	0.32	0.74
CO [g/h]	4.85	162.91	162.00	11.30	176.74	175.67	106.87	22.55	51.68
NOx [g/h]	0.94	31.70	31.52	2.20	34.39	34.18	20.79	4.39	10.06
VOC [g/h]	1.12	37.76	37.55	2.62	40.96	40.71	24.77	5.23	11.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.670	2.702	1.790	2.007
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	497	497	813	813
d_b, Bicycle Delay [s]	16.95	16.95	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.363	2.453	2.022	1.962
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	43.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.096

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	603	15	28	742	8	4	9	53	2	4	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	603	15	28	742	8	4	9	53	2	4	51
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	166	4	8	204	2	1	2	15	1	1	14
Total Analysis Volume [veh/h]	7	663	17	31	816	9	4	10	58	2	4	56
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.03	0.01	0.00	0.04	0.10	0.10	0.02	0.04	0.09
d_M, Delay for Movement [s/veh]	9.53	0.00	0.00	9.10	0.00	0.00	40.32	43.03	14.52	36.87	40.76	11.82
Movement LOS	A	A	A	A	A	A	E	E	B	E	E	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.11	0.00	0.00	0.87	0.87	0.87	0.49	0.49	0.49
95th-Percentile Queue Length [ft/ln]	0.66	0.00	0.00	2.65	0.00	0.00	21.79	21.79	21.79	12.15	12.15	12.15
d_A, Approach Delay [s/veh]	0.10			0.33			19.92			14.50		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	1.60											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	465	151	150	593	37	66	408	49	176	446	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	465	151	150	593	37	66	408	49	176	446	85
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	127	41	41	162	10	18	111	13	48	122	23
Total Analysis Volume [veh/h]	58	507	165	164	647	40	72	445	53	192	486	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	13	29	0	11	30	0	15	34	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	5	33	33	9	37	37	6	14	14	11	19	19
g / C, Green / Cycle	0.06	0.38	0.38	0.11	0.43	0.43	0.07	0.17	0.17	0.13	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.10	0.09	0.18	0.03	0.04	0.14	0.14	0.11	0.16	0.16
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1801	1781	1870	1767
c, Capacity [veh/h]	110	1360	607	189	1530	683	120	312	300	227	424	401
d1, Uniform Delay [s]	38.67	18.92	18.11	37.42	16.89	14.18	38.51	34.12	34.15	36.25	30.21	30.22
k, delay calibration	0.11	0.50	0.50	0.27	0.50	0.50	0.11	0.11	0.11	0.27	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.88	0.78	1.10	24.59	0.86	0.16	4.70	5.04	5.38	18.36	2.12	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.37	0.27	0.87	0.42	0.06	0.60	0.81	0.82	0.84	0.70	0.70
d, Delay for Lane Group [s/veh]	42.55	19.71	19.21	62.01	17.75	14.34	43.21	39.16	39.53	54.61	32.32	32.47
Lane Group LOS	D	B	B	E	B	B	D	D	D	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.25	3.47	2.26	4.54	4.27	0.46	1.58	5.28	5.15	4.92	5.61	5.33
50th-Percentile Queue Length [ft/ln]	31.17	86.78	56.39	113.49	106.76	11.38	39.39	132.06	128.78	123.06	140.16	133.19
95th-Percentile Queue Length [veh/ln]	2.24	6.25	4.06	8.03	7.66	0.82	2.84	9.05	8.87	8.56	9.49	9.11
95th-Percentile Queue Length [ft/ln]	56.10	156.21	101.51	200.84	191.49	20.49	70.91	226.30	221.84	214.02	237.24	227.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.55	19.71	19.21	62.01	17.75	14.34	43.21	39.32	39.53	54.61	32.38	32.47
Movement LOS	D	B	B	E	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	21.41			26.12			39.83			37.93		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	30.73											
Intersection LOS	C											
Intersection V/C	0.478											

Emissions

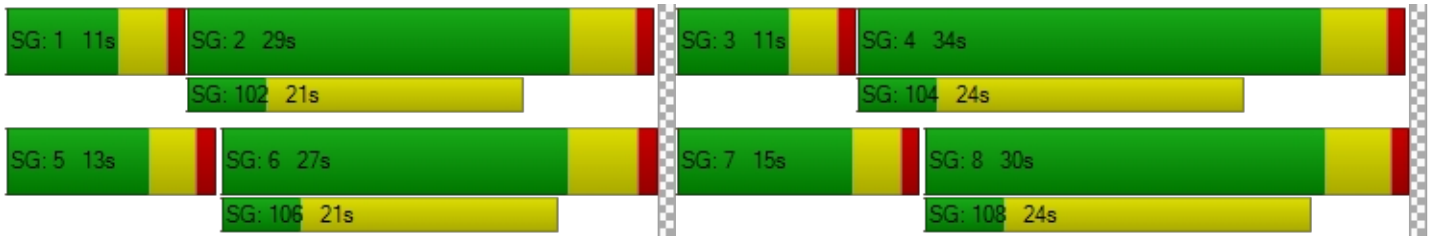
Vehicle Miles Traveled [mph]	2.19	19.16	6.23	12.55	49.52	3.06	2.83	9.93	9.63	7.12	11.03	10.45
Stops [stops/h]	52.80	294.04	95.54	192.26	361.73	19.29	66.74	223.73	218.17	208.47	237.44	225.63
Fuel consumption [US gal/h]	1.10	5.61	1.81	3.99	6.95	0.38	1.24	4.08	3.98	3.97	4.16	3.96
CO [g/h]	76.85	392.01	126.30	279.17	485.46	26.46	86.87	284.92	278.18	277.72	290.93	276.56
NOx [g/h]	14.95	76.27	24.57	54.32	94.45	5.15	16.90	55.43	54.12	54.03	56.60	53.81
VOC [g/h]	17.81	90.85	29.27	64.70	112.51	6.13	20.13	66.03	64.47	64.36	67.43	64.09

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.803	2.740	2.561	2.650
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	508	562	586	680
d_b, Bicycle Delay [s]	23.64	21.96	21.25	18.51
l_b,int, Bicycle LOS Score for Intersection	2.376	2.476	2.244	2.410
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.360

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	148	101	74	2	94	19	19	570	121	65	297	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	148	101	74	2	94	19	19	570	121	65	297	19
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	26	19	1	25	5	5	149	32	17	78	5
Total Analysis Volume [veh/h]	155	106	77	2	98	20	20	596	127	68	311	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	27	0	0	27	0	21	27	0	11	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	14	14	14	14	2	32	32	5	35	35
g / C, Green / Cycle	0.21	0.21	0.21	0.22	0.03	0.49	0.49	0.08	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.12	0.06	0.05	0.07	0.01	0.20	0.20	0.04	0.09	0.09
s, saturation flow rate [veh/h]	1274	1870	1589	1746	1781	1870	1758	1781	1870	1831
c, Capacity [veh/h]	211	374	318	349	58	945	889	136	1027	1005
d1, Uniform Delay [s]	26.74	22.06	21.86	21.85	30.76	9.92	9.93	28.84	7.26	7.26
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.90	0.41	0.39	0.58	3.47	1.23	1.32	2.85	0.34	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.28	0.24	0.34	0.34	0.39	0.39	0.50	0.16	0.16
d, Delay for Lane Group [s/veh]	31.64	22.47	22.26	22.43	34.23	11.15	11.25	31.69	7.60	7.61
Lane Group LOS	C	C	C	C	C	B	B	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.46	1.29	0.93	1.53	0.35	3.13	2.97	1.07	1.06	1.05
50th-Percentile Queue Length [ft/ln]	61.44	32.30	23.36	38.14	8.66	78.15	74.26	26.67	26.43	26.13
95th-Percentile Queue Length [veh/ln]	4.42	2.33	1.68	2.75	0.62	5.63	5.35	1.92	1.90	1.88
95th-Percentile Queue Length [ft/ln]	110.59	58.15	42.04	68.65	15.59	140.67	133.67	48.00	47.57	47.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.64	22.47	22.26	22.43	22.43	22.43	34.23	11.19	11.25	31.69	7.60	7.61
Movement LOS	C	C	C	C	C	C	C	B	B	C	A	A
d_A, Approach Delay [s/veh]	26.63			22.43			11.82			11.71		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.71											
Intersection LOS	B											
Intersection V/C	0.360											

Emissions

Vehicle Miles Traveled [mph]	12.63	8.64	6.27	3.30	0.63	11.75	11.08	15.58	38.19	37.66
Stops [stops/h]	136.11	71.57	51.74	84.49	19.18	173.13	164.52	59.08	58.55	57.90
Fuel consumption [US gal/h]	2.50	1.35	0.98	1.02	0.31	2.59	2.46	1.48	2.15	2.13
CO [g/h]	174.96	94.51	68.29	71.32	21.50	181.35	172.16	103.23	150.54	148.58
NOx [g/h]	34.04	18.39	13.29	13.88	4.18	35.28	33.50	20.08	29.29	28.91
VOC [g/h]	40.55	21.90	15.83	16.53	4.98	42.03	39.90	23.92	34.89	34.43

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.295	1.808	2.785	2.693
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	674	689	674	366
d_b, Bicycle Delay [s]	14.29	13.96	14.29	21.69
l_b,int, Bicycle LOS Score for Intersection	2.332	1.972	2.387	2.103
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	22.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	184	299	68	37	237	5	6	329	184	44	284	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	299	68	37	237	5	6	329	184	44	284	23
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	78	18	10	62	1	2	86	48	12	75	6
Total Analysis Volume [veh/h]	193	314	71	39	249	5	6	345	193	46	298	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13	29	0	11	27	0	15	24	0	11	20	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	24	16	16	24	12	1	32	32	4	36	36
g / C, Green / Cycle	0.32	0.22	0.22	0.32	0.16	0.01	0.42	0.42	0.06	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.14	0.17	0.04	0.03	0.14	0.00	0.15	0.15	0.03	0.09	0.09
s, saturation flow rate [veh/h]	1394	1870	1589	1189	1864	1781	1870	1650	1781	1870	1822
c, Capacity [veh/h]	455	410	348	376	307	23	792	699	103	894	871
d1, Uniform Delay [s]	19.87	27.48	23.93	18.39	30.27	36.65	14.68	14.74	34.15	11.19	11.21
k, delay calibration	0.46	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.62	3.02	0.29	0.12	5.60	5.69	1.26	1.48	2.97	0.45	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.77	0.20	0.10	0.83	0.26	0.36	0.37	0.44	0.18	0.18
d, Delay for Lane Group [s/veh]	22.50	30.50	24.22	18.51	35.88	42.34	15.94	16.22	37.12	11.64	11.67
Lane Group LOS	C	C	C	B	D	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.70	5.31	1.01	0.45	4.68	0.14	3.16	2.90	0.88	1.53	1.51
50th-Percentile Queue Length [ft/ln]	67.58	132.70	25.13	11.23	117.06	3.52	79.04	72.57	21.90	38.17	37.67
95th-Percentile Queue Length [veh/ln]	4.87	9.09	1.81	0.81	8.23	0.25	5.69	5.22	1.58	2.75	2.71
95th-Percentile Queue Length [ft/ln]	121.64	227.16	45.23	20.22	205.78	6.33	142.28	130.62	39.43	68.71	67.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.50	30.50	24.22	18.51	35.88	35.88	42.34	15.99	16.22	37.12	11.65	11.67
Movement LOS	C	C	C	B	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	27.06			33.56			16.36			14.84		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	22.34											
Intersection LOS	C											
Intersection V/C	0.405											

Emissions

Vehicle Miles Traveled [mph]	6.87	11.18	2.53	3.18	20.69	0.17	8.04	7.26	10.46	36.91	36.32
Stops [stops/h]	129.75	254.78	48.25	21.57	224.75	6.75	151.77	139.33	42.05	73.29	72.33
Fuel consumption [US gal/h]	2.12	4.29	0.81	0.43	4.33	0.12	2.70	2.47	1.01	2.31	2.27
CO [g/h]	148.28	299.97	56.56	30.07	302.90	8.68	188.43	172.73	70.63	161.39	158.95
NOx [g/h]	28.85	58.36	11.00	5.85	58.93	1.69	36.66	33.61	13.74	31.40	30.93
VOC [g/h]	34.36	69.52	13.11	6.97	70.20	2.01	43.67	40.03	16.37	37.40	36.84

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.427	2.174	2.615	2.466
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	637	584	496	408
d_b, Bicycle Delay [s]	17.41	18.80	21.21	23.76
l_b,int, Bicycle LOS Score for Intersection	2.728	2.257	2.223	2.078
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	0	48	0	0	16	0	953	40	18	480	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	0	48	0	0	16	0	953	40	18	480	93
Peak Hour Factor	0.9270	0.9500	0.9270	0.9500	0.9500	0.9270	0.9500	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	0	13	0	0	4	0	257	11	5	129	25
Total Analysis Volume [veh/h]	61	0	52	0	0	17	0	1028	43	19	518	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	23	0	0	0	0	42	0	24	0	11	35	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	7	7	3	70	70	77	77
g / C, Green / Cycle	0.07	0.07	0.03	0.70	0.70	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.01	0.29	0.29	0.03	0.34
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1844	607	1818
c, Capacity [veh/h]	120	107	44	1303	1285	500	1392
d1, Uniform Delay [s]	45.03	44.96	47.78	6.43	6.47	3.75	4.15
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.30	3.37	5.45	0.96	1.00	0.03	1.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.49	0.39	0.41	0.42	0.04	0.44
d, Delay for Lane Group [s/veh]	48.32	48.33	53.22	7.39	7.47	3.78	5.18
Lane Group LOS	D	D	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.58	1.35	0.49	4.48	4.51	0.07	3.76
50th-Percentile Queue Length [ft/ln]	39.47	33.76	12.13	111.96	112.76	1.83	94.06
95th-Percentile Queue Length [veh/ln]	2.84	2.43	0.87	7.95	7.99	0.13	6.77
95th-Percentile Queue Length [ft/ln]	71.04	60.77	21.84	198.72	199.83	3.30	169.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.32	0.00	48.33	0.00	0.00	53.22	0.00	7.43	7.47	3.78	5.18	5.18
Movement LOS	D		D			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	48.32			53.22			7.43			5.14		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.57											
Intersection LOS	A											
Intersection V/C	0.385											

Emissions

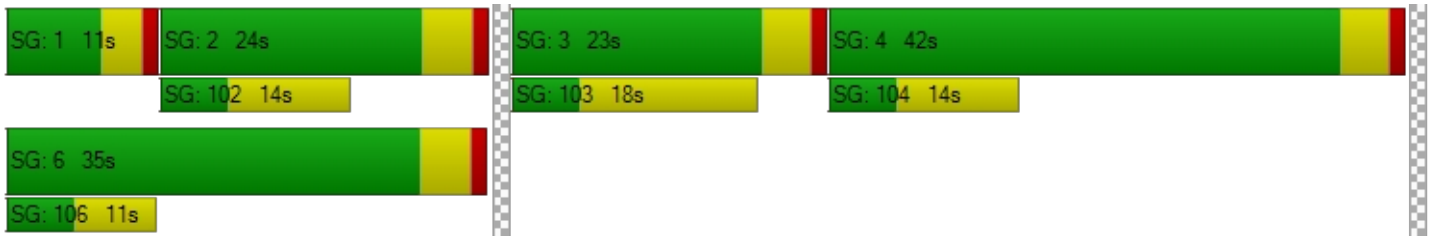
Vehicle Miles Traveled [mph]	4.57	3.90	0.41	41.00	41.00	2.87	93.21
Stops [stops/h]	56.83	48.62	17.47	161.22	162.37	2.64	135.45
Fuel consumption [US gal/h]	1.02	0.87	0.27	3.38	3.40	0.15	5.24
CO [g/h]	71.54	61.04	18.86	236.55	237.56	10.29	366.07
NOx [g/h]	13.92	11.88	3.67	46.02	46.22	2.00	71.22
VOC [g/h]	16.58	14.15	4.37	54.82	55.06	2.38	84.84

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.014	1.769	2.489	2.556
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	368	748	386	606
d_b, Bicycle Delay [s]	33.29	19.59	32.56	24.29
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.658	2.825
Bicycle LOS	A	A	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	6	7	52	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	6	7	52	5	8
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	2	2	16	2	3
Total Analysis Volume [veh/h]	121	8	9	65	6	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.49	0.00	9.72	8.97
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.00	0.06	0.06
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.47	0.00	1.42	1.42
d_A, Approach Delay [s/veh]	0.00		0.91		9.25	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.98					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	8.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.216

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	38	3	5	46	7	46	66	35	2	56	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	38	3	5	46	7	46	66	35	2	56	20
Peak Hour Factor	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	12	1	2	14	2	14	20	11	1	17	6
Total Analysis Volume [veh/h]	15	47	4	6	56	9	56	81	43	2	69	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	626	693	626	700	835	831
Degree of Utilization, x	0.02	0.07	0.01	0.09	0.22	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.07	0.24	0.03	0.31	0.82	0.39
95th-Percentile Queue Length [ft]	1.84	5.94	0.72	7.65	20.41	9.76
Approach Delay [s/veh]	8.37		8.38		8.49	7.90
Approach LOS	A		A		A	A
Intersection Delay [s/veh]	8.32					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	8.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.112

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	40	39	20	9	58	11	15	38	21	7	28	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	39	20	9	58	11	15	38	21	7	28	6
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	11	6	2	16	3	4	11	6	2	8	2
Total Analysis Volume [veh/h]	44	43	22	10	64	12	17	42	23	8	31	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	643	742	657	724	842	734	718
Degree of Utilization, x	0.07	0.09	0.02	0.09	0.01	0.11	0.06

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.22	0.29	0.05	0.29	0.04	0.38	0.20
95th-Percentile Queue Length [ft]	5.49	7.18	1.16	7.25	1.08	9.40	5.12
Approach Delay [s/veh]	8.30		8.01			8.53	8.36
Approach LOS	A		A			A	A
Intersection Delay [s/veh]	8.29						
Intersection LOS	A						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.343

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	26	22	18	55	29	42	393	49	52	315	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	26	22	18	55	29	42	393	49	52	315	25
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	7	6	5	14	7	11	101	13	13	81	6
Total Analysis Volume [veh/h]	13	27	23	19	57	30	43	405	51	54	325	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	26	0	0	26	0	11	23	0	11	23	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	6	6	6	6	45	37	45	37
g / C, Green / Cycle	0.10	0.10	0.10	0.10	0.75	0.61	0.75	0.62
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.02	0.05	0.04	0.28	0.06	0.21
s, saturation flow rate [veh/h]	1179	1557	1219	1586	1011	1650	946	1661
c, Capacity [veh/h]	145	154	172	157	823	1009	744	1032
d1, Uniform Delay [s]	29.07	25.18	27.92	25.78	2.37	6.25	2.82	5.46
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	1.21	0.28	3.05	0.12	1.46	0.04	0.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.33	0.11	0.56	0.05	0.45	0.07	0.34
d, Delay for Lane Group [s/veh]	29.33	26.39	28.20	28.83	2.49	7.71	2.86	6.36
Lane Group LOS	C	C	C	C	A	A	A	A
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.19	0.69	0.27	1.27	0.09	2.80	0.09	1.88
50th-Percentile Queue Length [ft/ln]	4.76	17.28	6.76	31.81	2.37	70.01	2.34	46.88
95th-Percentile Queue Length [veh/ln]	0.34	1.24	0.49	2.29	0.17	5.04	0.17	3.38
95th-Percentile Queue Length [ft/ln]	8.57	31.11	12.16	57.26	4.27	126.02	4.22	84.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.33	26.39	26.39	28.20	28.83	28.83	2.49	7.71	7.71	2.86	6.36	6.36
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	27.00			28.72			7.26			5.89		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	10.02											
Intersection LOS	B											
Intersection V/C	0.343											

Emissions

Vehicle Miles Traveled [mph]	1.05	4.04	1.50	6.85	6.89	73.07	8.08	52.52
Stops [stops/h]	11.42	41.48	16.22	76.34	5.70	168.03	5.63	112.51
Fuel consumption [US gal/h]	0.17	0.61	0.24	1.11	0.35	4.65	0.42	3.25
CO [g/h]	11.79	42.60	16.67	77.69	24.71	324.79	29.11	227.00
NOx [g/h]	2.29	8.29	3.24	15.11	4.81	63.19	5.66	44.17
VOC [g/h]	2.73	9.87	3.86	18.00	5.73	75.27	6.75	52.61

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.207	2.016	2.174	2.312
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	713	713	613	613
d_b, Bicycle Delay [s]	12.42	12.42	14.42	14.42
l_b,int, Bicycle LOS Score for Intersection	1.878	1.949	2.597	2.442
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.302

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	34	99	38	21	633	53	46	432	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	34	99	38	21	633	53	46	432	27
Peak Hour Factor	0.9500	0.9500	0.9500	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	9	28	11	6	177	15	13	121	8
Total Analysis Volume [veh/h]	0	0	0	38	110	42	23	706	59	51	482	30
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	30	0	11	19	0	11	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		7	7	44	36	36	44	38	38
g / C, Green / Cycle		0.11	0.11	0.73	0.60	0.60	0.73	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.03	0.23	0.23	0.07	0.15	0.15
s, saturation flow rate [veh/h]		1650	1560	877	1683	1638	765	1683	1649
c, Capacity [veh/h]		188	178	750	1007	980	648	1057	1035
d1, Uniform Delay [s]		24.99	25.05	2.39	6.28	6.28	2.82	4.90	4.91
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.12	2.41	0.08	1.11	1.14	0.05	0.55	0.56
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.51	0.53	0.03	0.38	0.39	0.08	0.24	0.25
d, Delay for Lane Group [s/veh]		27.12	27.46	2.46	7.39	7.43	2.87	5.45	5.47
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.35	1.33	0.06	2.33	2.28	0.10	1.23	1.22
50th-Percentile Queue Length [ft/ln]		33.67	33.32	1.43	58.22	56.94	2.57	30.84	30.42
95th-Percentile Queue Length [veh/ln]		2.42	2.40	0.10	4.19	4.10	0.19	2.22	2.19
95th-Percentile Queue Length [ft/ln]		60.60	59.97	2.58	104.80	102.50	4.63	55.51	54.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	27.12	27.28	27.46	2.46	7.41	7.43	2.87	5.46	5.47
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			27.29			7.26			5.23		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	8.99											
Intersection LOS	A											
Intersection V/C	0.302											

Emissions

Vehicle Miles Traveled [mph]		7.76	7.60	3.74	63.04	61.40	7.66	38.75	38.10
Stops [stops/h]		80.80	79.96	3.44	139.74	136.67	6.18	74.01	73.01
Fuel consumption [US gal/h]		1.19	1.17	0.19	3.95	3.86	0.40	2.31	2.28
CO [g/h]		83.07	82.07	13.49	276.37	269.54	27.80	161.69	159.09
NOx [g/h]		16.16	15.97	2.62	53.77	52.44	5.41	31.46	30.95
VOC [g/h]		19.25	19.02	3.13	64.05	62.47	6.44	37.47	36.87

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.038	2.008	2.494	2.493
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	847	480	480
d_b, Bicycle Delay [s]	30.00	9.98	17.33	17.33
l_b,int, Bicycle LOS Score for Intersection	4.132	1.931	2.424	2.238
Bicycle LOS	D	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.211

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	45	61	37	0	201	16	7	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	45	61	37	0	201	16	7	53	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.7720	0.7720	0.7720	0.9500	0.7720	0.7720	0.7720	0.7720	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	15	20	12	0	65	5	2	17	0
Total Analysis Volume [veh/h]	0	0	0	58	79	48	0	260	21	9	69	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	23	0	0	27	0	0	27	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		7	7	7	34	34	34
g / C, Green / Cycle		0.13	0.13	0.13	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate		0.04	0.04	0.03	0.17	0.01	0.04
s, saturation flow rate [veh/h]		1614	1683	1431	1661	988	1683
c, Capacity [veh/h]		215	224	190	1131	698	1146
d1, Uniform Delay [s]		19.62	19.60	19.44	3.06	4.88	2.65
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.84	0.77	0.69	0.53	0.03	0.10
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.32	0.31	0.25	0.25	0.01	0.06
d, Delay for Lane Group [s/veh]		20.46	20.37	20.13	3.59	4.91	2.75
Lane Group LOS		C	C	C	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.72	0.73	0.50	0.68	0.04	0.14
50th-Percentile Queue Length [ft/ln]		17.95	18.13	12.59	16.98	0.89	3.54
95th-Percentile Queue Length [veh/ln]		1.29	1.31	0.91	1.22	0.06	0.25
95th-Percentile Queue Length [ft/ln]		32.31	32.63	22.67	30.57	1.60	6.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.46	20.38	20.13	0.00	3.59	3.59	4.91	2.75	0.00
Movement LOS				C	C	C		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			20.34			3.59			3.00		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.20											
Intersection LOS	A											
Intersection V/C	0.211											

Emissions

Vehicle Miles Traveled [mph]		5.13	5.20	3.62	46.92	1.32	10.09
Stops [stops/h]		51.69	52.20	36.27	48.91	2.56	10.18
Fuel consumption [US gal/h]		0.71	0.72	0.50	2.41	0.08	0.51
CO [g/h]		49.76	50.34	34.85	168.24	5.41	35.68
NOx [g/h]		9.68	9.79	6.78	32.73	1.05	6.94
VOC [g/h]		11.53	11.67	8.08	38.99	1.25	8.27

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.751	1.961	1.879	2.039
Crosswalk LOS	A	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	736	892	892
d_b, Bicycle Delay [s]	25.00	9.99	7.67	7.67
l_b,int, Bicycle LOS Score for Intersection	4.132	1.927	2.238	1.903
Bicycle LOS	D	A	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.414

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	144	0	68	0	0	7	0	960	81	108	389	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	144	0	68	0	0	7	0	960	81	108	389	0
Peak Hour Factor	0.9580	0.9500	0.9580	0.9500	0.9500	0.9580	0.9500	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	0	18	0	0	2	0	251	21	28	102	0
Total Analysis Volume [veh/h]	150	0	71	0	0	7	0	1002	85	113	406	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	22	0	0	0	0	19	0	23	0	11	34	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	8	8	1	42	42	52	52
g / C, Green / Cycle	0.11	0.11	0.01	0.56	0.56	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.08	0.04	0.00	0.29	0.30	0.16	0.22
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1820	720	1870
c, Capacity [veh/h]	200	179	22	1044	1016	540	1302
d1, Uniform Delay [s]	32.26	30.92	36.61	10.31	10.43	5.65	4.42
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.53	1.43	7.73	1.86	2.02	0.88	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.40	0.31	0.52	0.53	0.21	0.31
d, Delay for Lane Group [s/veh]	37.79	32.35	44.35	12.17	12.45	6.53	5.05
Lane Group LOS	D	C	D	B	B	A	A
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.83	1.21	0.17	5.36	5.45	0.55	2.00
50th-Percentile Queue Length [ft/ln]	70.70	30.36	4.35	134.07	136.23	13.63	50.06
95th-Percentile Queue Length [veh/ln]	5.09	2.19	0.31	9.16	9.28	0.98	3.60
95th-Percentile Queue Length [ft/ln]	127.25	54.65	7.82	229.01	231.94	24.53	90.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.79	0.00	32.35	0.00	0.00	44.35	0.00	12.30	12.45	6.53	5.05	5.05
Movement LOS	D		C			D		B	B	A	A	A
d_A, Approach Delay [s/veh]	36.04			44.35			12.31			5.37		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	13.33											
Intersection LOS	B											
Intersection V/C	0.414											

Emissions

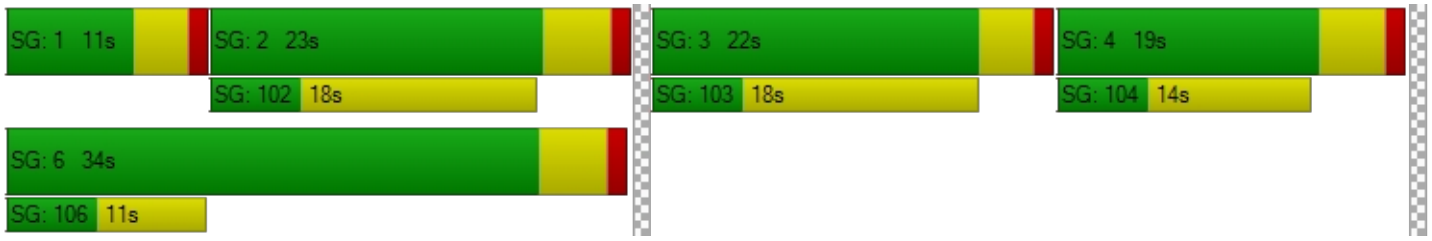
Vehicle Miles Traveled [mph]	11.33	5.36	0.19	81.98	81.98	3.83	13.76
Stops [stops/h]	135.74	58.29	8.35	257.41	261.56	26.17	96.11
Fuel consumption [US gal/h]	2.61	1.11	0.10	6.14	6.20	0.45	1.51
CO [g/h]	182.18	77.61	7.25	429.39	433.16	31.62	105.86
NOx [g/h]	35.45	15.10	1.41	83.54	84.28	6.15	20.60
VOC [g/h]	42.22	17.99	1.68	99.52	100.39	7.33	24.53

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.337	1.710	2.469	2.512
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	384	488	781
d_b, Bicycle Delay [s]	21.66	24.48	21.43	13.92
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.671	2.630
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	222	1	2	173	2	3	0	13	3	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	222	1	2	173	2	3	0	13	3	0	2
Peak Hour Factor	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	62	0	1	48	1	1	0	4	1	0	1
Total Analysis Volume [veh/h]	3	247	1	2	193	2	3	0	14	3	0	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	7.74	0.00	0.00	11.10	12.29	8.92	11.41	12.25	9.03
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.13	0.06	0.00	0.08	0.04	0.00	1.52	1.52	1.52	0.57	0.57	0.57
d_A, Approach Delay [s/veh]	0.09			0.08			9.30			10.45		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.53											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.066

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	189	11	2	184	4	10	2	58	26	6	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	189	11	2	184	4	10	2	58	26	6	15
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	51	3	1	49	1	3	1	16	7	2	4
Total Analysis Volume [veh/h]	34	203	12	2	198	4	11	2	62	28	6	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.07	0.07	0.01	0.02
d_M, Delay for Movement [s/veh]	7.67	0.00	0.00	7.66	0.00	0.00	13.32	13.27	9.83	14.30	13.45	10.10
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	B
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.00	0.00	0.00	0.34	0.34	0.34	0.33	0.33	0.33
95th-Percentile Queue Length [ft/ln]	1.46	1.46	1.46	0.08	0.08	0.08	8.46	8.46	8.46	8.14	8.14	8.14
d_A, Approach Delay [s/veh]	1.05			0.08			10.44			12.85		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.94											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	183	112	55	276	27	11	355	86	140	355	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	183	112	55	276	27	11	355	86	140	355	155
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	48	30	15	73	7	3	94	23	37	94	41
Total Analysis Volume [veh/h]	40	193	118	58	291	28	12	374	91	148	374	164
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	11	27	0	11	26	0	16	31	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	21	12	12	21	13	13	2	37	37	9	44	44
g / C, Green / Cycle	0.26	0.14	0.14	0.26	0.16	0.16	0.02	0.46	0.46	0.11	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.08	0.05	0.10	0.10	0.01	0.14	0.14	0.09	0.22	0.11
s, saturation flow rate [veh/h]	1148	1683	1431	1181	1683	1632	1603	1683	1572	1603	1683	1431
c, Capacity [veh/h]	346	244	208	335	264	256	35	770	719	180	921	783
d1, Uniform Delay [s]	22.84	33.02	31.86	23.26	31.45	31.49	38.59	13.71	13.75	34.73	10.55	9.27
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.13	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	5.67	2.44	0.24	2.28	2.42	5.89	1.04	1.15	10.61	1.33	0.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.79	0.57	0.17	0.61	0.62	0.35	0.31	0.32	0.82	0.41	0.21
d, Delay for Lane Group [s/veh]	22.98	38.69	34.30	23.50	33.73	33.91	44.48	14.75	14.90	45.34	11.88	9.87
Lane Group LOS	C	D	C	C	C	C	D	B	B	D	B	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.56	3.85	2.19	0.83	2.95	2.91	0.29	2.83	2.71	3.28	3.78	1.46
50th-Percentile Queue Length [ft/ln]	14.07	96.25	54.63	20.69	73.79	72.66	7.18	70.70	67.77	81.93	94.50	36.43
95th-Percentile Queue Length [veh/ln]	1.01	6.93	3.93	1.49	5.31	5.23	0.52	5.09	4.88	5.90	6.80	2.62
95th-Percentile Queue Length [ft/ln]	25.33	173.26	98.34	37.23	132.83	130.80	12.93	127.26	121.99	147.48	170.10	65.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.98	38.69	34.30	23.50	33.81	33.91	44.48	14.80	14.90	45.34	11.88	9.87
Movement LOS	C	D	C	C	C	C	D	B	B	D	B	A
d_A, Approach Delay [s/veh]	35.42			32.23			15.57			18.62		
Approach LOS	D			C			B			B		
d_I, Intersection Delay [s/veh]	23.68											
Intersection LOS	C											
Intersection V/C	0.381											

Emissions

Vehicle Miles Traveled [mph]	3.25	15.69	9.59	4.54	12.61	12.37	1.80	35.68	33.90	7.31	18.46	8.10
Stops [stops/h]	25.33	173.26	98.34	37.23	132.83	130.80	12.93	127.26	121.99	147.48	170.10	65.58
Fuel consumption [US gal/h]	0.50	3.42	1.93	0.73	2.59	2.55	0.24	2.81	2.68	2.48	2.60	1.03
CO [g/h]	35.05	239.09	134.83	51.06	180.69	177.90	16.70	196.32	187.28	173.42	182.02	71.66
NOx [g/h]	6.82	46.52	26.23	9.94	35.16	34.61	3.25	38.20	36.44	33.74	35.41	13.94
VOC [g/h]	8.12	55.41	31.25	11.83	41.88	41.23	3.87	45.50	43.40	40.19	42.18	16.61

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.496	2.339	2.324	2.551
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	548	548	535	658
d_b, Bicycle Delay [s]	21.10	21.10	21.46	18.02
l_b,int, Bicycle LOS Score for Intersection	2.353	2.085	2.168	2.906
Bicycle LOS	B	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	247	374	102	370	40	8	675	93	202	420	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	247	374	102	370	40	8	675	93	202	420	75
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	66	99	27	98	11	2	180	25	54	112	20
Total Analysis Volume [veh/h]	28	263	398	109	394	43	9	718	99	215	447	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	34	0	11	34	0	14	29	0	11	26	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	36	26	26	36	29	29	1	28	28	7	34	34
g / C, Green / Cycle	0.43	0.30	0.30	0.43	0.34	0.34	0.02	0.33	0.33	0.08	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.28	0.12	0.13	0.13	0.01	0.22	0.07	0.07	0.16	0.16
s, saturation flow rate [veh/h]	969	3204	1431	908	1683	1626	1603	3204	1431	3113	1683	1595
c, Capacity [veh/h]	448	971	433	467	570	551	28	1058	472	256	665	630
d1, Uniform Delay [s]	14.69	22.49	28.60	15.20	21.40	21.43	41.27	24.57	20.48	38.44	18.52	18.53
k, delay calibration	0.11	0.11	0.29	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	0.15	17.93	0.25	0.43	0.45	6.54	3.51	1.01	7.18	1.84	1.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.27	0.92	0.23	0.39	0.39	0.32	0.68	0.21	0.84	0.41	0.41
d, Delay for Lane Group [s/veh]	14.75	22.64	46.54	15.45	21.84	21.88	47.81	28.08	21.49	45.62	20.36	20.48
Lane Group LOS	B	C	D	B	C	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	1.93	9.52	1.25	3.26	3.17	0.24	6.60	1.53	2.45	4.07	3.89
50th-Percentile Queue Length [ft/ln]	7.62	48.30	237.96	31.34	81.43	79.32	5.92	165.03	38.28	61.27	101.83	97.31
95th-Percentile Queue Length [veh/ln]	0.55	3.48	14.58	2.26	5.86	5.71	0.43	10.82	2.76	4.41	7.33	7.01
95th-Percentile Queue Length [ft/ln]	13.71	86.94	364.45	56.41	146.58	142.78	10.65	270.38	68.91	110.28	183.29	175.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.75	22.64	46.54	15.45	21.86	21.88	47.81	28.08	21.49	45.62	20.40	20.48
Movement LOS	B	C	D	B	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	36.12			20.58			27.50			27.72		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	28.33											
Intersection LOS	C											
Intersection V/C	0.617											

Emissions

Vehicle Miles Traveled [mph]	2.17	20.40	30.88	8.86	18.01	17.51	1.35	107.77	14.86	15.52	19.50	18.54
Stops [stops/h]	12.90	163.65	403.13	53.09	137.96	134.38	10.02	559.17	64.86	207.58	172.51	164.86
Fuel consumption [US gal/h]	0.26	3.22	7.98	1.08	2.71	2.64	0.19	11.09	1.35	3.49	2.66	2.54
CO [g/h]	18.45	225.09	557.63	75.48	189.34	184.36	13.06	775.47	94.37	243.97	185.79	177.30
NOx [g/h]	3.59	43.79	108.49	14.69	36.84	35.87	2.54	150.88	18.36	47.47	36.15	34.50
VOC [g/h]	4.28	52.17	129.24	17.49	43.88	42.73	3.03	179.72	21.87	56.54	43.06	41.09

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.716	2.503	2.648	2.872
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	680	574	504
d_b, Bicycle Delay [s]	18.51	18.51	21.60	23.79
l_b,int, Bicycle LOS Score for Intersection	2.342	2.224	2.455	2.386
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.525

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	385	54	496	314	23	76	217	58	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	385	54	496	314	23	76	217	58	0	0	0
Peak Hour Factor	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	120	17	154	98	7	24	67	18	0	0	0
Total Analysis Volume [veh/h]	30	479	67	617	391	29	95	270	72	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	17	0	19	24	0	0	29	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	3	24	24	15	35	35	13	13	13	
g / C, Green / Cycle	0.05	0.37	0.37	0.22	0.54	0.54	0.20	0.20	0.20	
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.20	0.13	0.13	0.06	0.16	0.05	
s, saturation flow rate [veh/h]	1603	1683	1612	3113	1683	1642	1603	1683	1431	
c, Capacity [veh/h]	74	614	588	699	915	893	317	333	283	
d1, Uniform Delay [s]	30.13	15.70	15.72	24.37	7.75	7.75	22.22	24.90	22.01	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.52	2.40	2.53	3.88	0.59	0.61	0.52	4.72	0.47	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.40	0.45	0.46	0.88	0.23	0.23	0.30	0.81	0.25	
d, Delay for Lane Group [s/veh]	33.64	18.10	18.25	28.25	8.35	8.36	22.74	29.62	22.48	
Lane Group LOS	C	B	B	C	A	A	C	C	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.50	3.19	3.10	4.57	1.40	1.37	1.22	4.17	0.92	
50th-Percentile Queue Length [ft/ln]	12.60	79.69	77.45	114.16	34.88	34.13	30.45	104.22	22.91	
95th-Percentile Queue Length [veh/ln]	0.91	5.74	5.58	8.07	2.51	2.46	2.19	7.50	1.65	
95th-Percentile Queue Length [ft/ln]	22.69	143.44	139.40	201.78	62.78	61.44	54.81	187.60	41.25	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.64	18.16	18.25	28.25	8.36	8.36	22.74	29.62	22.48	0.00	0.00	0.00
Movement LOS	C	B	B	C	A	A	C	C	C			
d_A, Approach Delay [s/veh]	18.98			20.19			26.95			0.00		
Approach LOS	B			C			C			A		
d_I, Intersection Delay [s/veh]	21.29											
Intersection LOS	C											
Intersection V/C	0.525											

Emissions

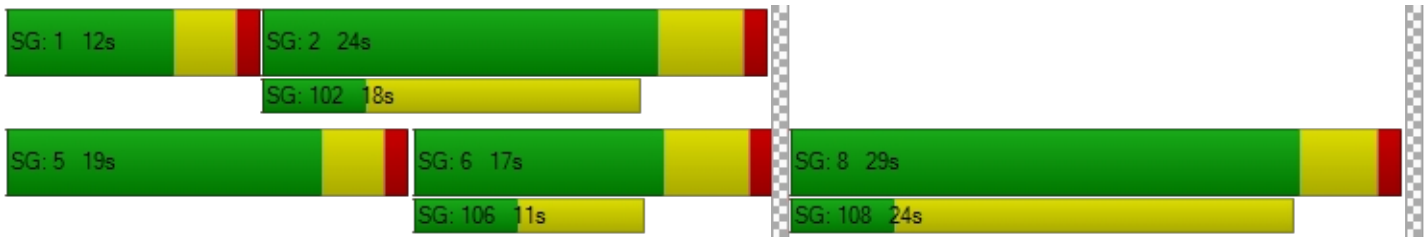
Vehicle Miles Traveled [mph]	1.19	11.02	10.63	45.31	15.61	15.23	13.90	39.50	10.53
Stops [stops/h]	27.92	176.54	171.57	505.83	77.27	75.62	67.46	230.89	50.76
Fuel consumption [US gal/h]	0.46	2.77	2.69	9.08	1.54	1.50	1.38	4.53	1.04
CO [g/h]	32.21	193.72	188.13	634.54	107.45	105.03	96.78	316.58	72.94
NOx [g/h]	6.27	37.69	36.60	123.46	20.91	20.43	18.83	61.59	14.19
VOC [g/h]	7.46	44.90	43.60	147.06	24.90	24.34	22.43	73.37	16.90

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.521	2.743	2.237	2.165
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	366	582	748	0
d_b, Bicycle Delay [s]	21.69	16.35	12.74	32.50
l_b,int, Bicycle LOS Score for Intersection	2.249	2.630	2.495	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.354

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	155	446	0	522	205	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	155	446	0	522	205	0
Peak Hour Factor	0.9570	0.9570	0.9500	0.9570	0.9570	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	117	0	136	54	0
Total Analysis Volume [veh/h]	162	466	0	545	214	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	27	0	0	23	23	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	50	50	50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	12	12	29	29
g / C, Green / Cycle	0.24	0.24	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.10	0.18	0.17	0.07
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	389	614	1870	1870
d1, Uniform Delay [s]	15.96	17.58	5.22	4.65
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.71	1.96	0.40	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.76	0.29	0.11
d, Delay for Lane Group [s/veh]	16.68	19.55	5.62	4.77
Lane Group LOS	B	B	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.42	2.29	1.05	0.36
50th-Percentile Queue Length [ft/ln]	35.39	57.21	26.23	9.07
95th-Percentile Queue Length [veh/ln]	2.55	4.12	1.89	0.65
95th-Percentile Queue Length [ft/ln]	63.71	102.98	47.21	16.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.68	19.55	0.00	5.62	4.77	0.00
Movement LOS	B	B		A	A	
d_A, Approach Delay [s/veh]	18.81		5.62		4.77	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	11.46					
Intersection LOS	B					
Intersection V/C	0.354					

Emissions

Vehicle Miles Traveled [mph]	13.58	39.07	26.91	10.27
Stops [stops/h]	101.93	329.54	151.07	52.24
Fuel consumption [US gal/h]	1.83	5.82	2.57	0.92
CO [g/h]	128.20	406.91	179.33	64.24
NOx [g/h]	24.94	79.17	34.89	12.50
VOC [g/h]	29.71	94.30	41.56	14.89

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.280	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	920	732	732
d_b, Bicycle Delay [s]	7.29	10.05	10.05
l_b,int, Bicycle LOS Score for Intersection	1.774	2.224	1.951
Bicycle LOS	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	87	291	45	0	0	0	359	317	0	0	118	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	291	45	0	0	0	359	317	0	0	118	143
Peak Hour Factor	0.8650	0.8650	0.8650	0.9500	0.9500	0.9500	0.8650	0.8650	0.9500	0.9500	0.8650	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	84	13	0	0	0	104	92	0	0	34	41
Total Analysis Volume [veh/h]	101	336	52	0	0	0	415	366	0	0	136	165
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	21	0	0	0	0	23	39	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	16	16		17	34	13	13
g / C, Green / Cycle	0.26	0.26		0.29	0.57	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.06	0.24		0.26	0.11	0.08	0.12
s, saturation flow rate [veh/h]	1603	1644		1603	3204	1683	1431
c, Capacity [veh/h]	420	431		461	1841	370	315
d1, Uniform Delay [s]	17.44	21.38		20.53	6.13	19.85	20.63
k, delay calibration	0.11	0.30		0.30	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	16.58		15.40	0.24	2.79	6.12
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.90		0.90	0.20	0.37	0.52
d, Delay for Lane Group [s/veh]	17.73	37.97		35.93	6.37	22.65	26.75
Lane Group LOS	B	D		D	A	C	C
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.02	6.65		7.01	0.93	1.78	2.42
50th-Percentile Queue Length [ft/ln]	25.62	166.29		175.31	23.26	44.54	60.48
95th-Percentile Queue Length [veh/ln]	1.84	10.88		11.36	1.67	3.21	4.35
95th-Percentile Queue Length [ft/ln]	46.12	272.03		283.88	41.87	80.18	108.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.73	37.97	37.97	0.00	0.00	0.00	35.93	6.37	0.00	0.00	22.65	26.75
Movement LOS	B	D	D				D	A			C	C
d_A, Approach Delay [s/veh]	33.79			0.00			22.08			24.90		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	26.26											
Intersection LOS	C											
Intersection V/C	0.610											

Emissions

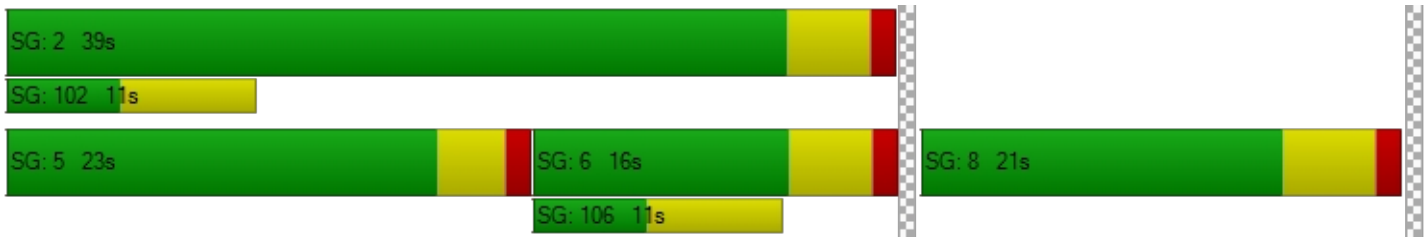
Vehicle Miles Traveled [mph]	8.80	33.80		19.91	17.56	4.98	6.04
Stops [stops/h]	61.49	399.10		420.74	111.66	106.90	145.15
Fuel consumption [US gal/h]	1.16	7.29		6.18	1.81	1.42	1.95
CO [g/h]	81.24	509.40		431.87	126.83	99.42	136.23
NOx [g/h]	15.81	99.11		84.03	24.68	19.34	26.50
VOC [g/h]	18.83	118.06		100.09	29.39	23.04	31.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.974	2.142	0.000	0.000
Crosswalk LOS	A	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	530	0	1143	377
d_b, Bicycle Delay [s]	16.21	30.00	5.50	19.76
l_b,int, Bicycle LOS Score for Intersection	2.581	4.132	2.418	2.022
Bicycle LOS	B	D	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	264	113	379	0	0	0	230	814	0	0	489	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	264	113	379	0	0	0	230	814	0	0	489	105
Peak Hour Factor	0.9290	0.9290	0.9290	0.9500	0.9500	0.9500	0.9290	0.9290	0.9500	0.9500	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	71	30	102	0	0	0	62	219	0	0	132	28
Total Analysis Volume [veh/h]	284	122	408	0	0	0	248	876	0	0	526	113
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	13	30	0	0	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	27	27	27		7	23	12	12
g / C, Green / Cycle	0.45	0.45	0.45		0.12	0.39	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.26		0.07	0.25	0.15	0.07
s, saturation flow rate [veh/h]	1781	1833	1589		3459	3560	3560	1589
c, Capacity [veh/h]	800	823	714		405	1386	703	314
d1, Uniform Delay [s]	10.27	10.26	12.26		25.20	14.83	22.67	20.80
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.76	0.72	3.31		1.51	0.48	1.62	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.25	0.57		0.61	0.63	0.75	0.36
d, Delay for Lane Group [s/veh]	11.03	10.98	15.57		26.71	15.31	24.30	21.50
Lane Group LOS	B	B	B		C	B	C	C
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.54	1.56	3.98		1.70	4.47	3.33	1.31
50th-Percentile Queue Length [ft/ln]	38.57	39.00	99.50		42.45	111.77	83.16	32.74
95th-Percentile Queue Length [veh/ln]	2.78	2.81	7.16		3.06	7.94	5.99	2.36
95th-Percentile Queue Length [ft/ln]	69.43	70.19	179.10		76.41	198.46	149.69	58.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.01	10.98	15.57	0.00	0.00	0.00	26.71	15.31	0.00	0.00	24.30	21.50
Movement LOS	B	B	B				C	B			C	C
d_A, Approach Delay [s/veh]	13.29			0.00			17.83			23.80		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	17.88											
Intersection LOS	B											
Intersection V/C	0.503											

Emissions

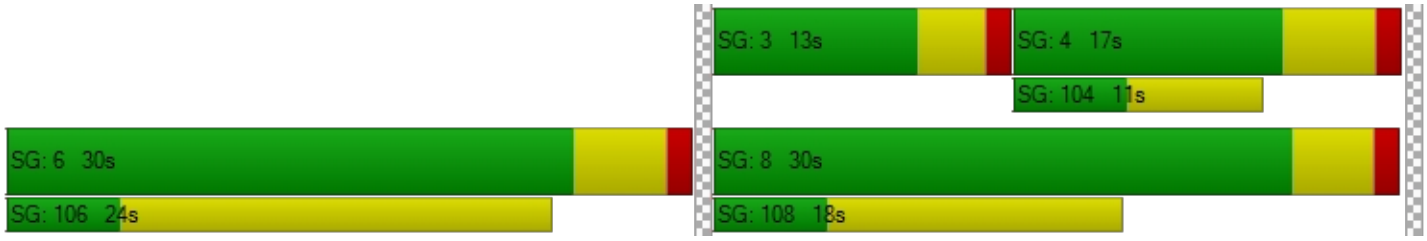
Vehicle Miles Traveled [mph]	7.88	8.01	15.97		17.90	63.24	26.60	5.71
Stops [stops/h]	92.57	93.59	238.80		203.76	536.50	399.16	78.57
Fuel consumption [US gal/h]	1.45	1.47	3.70		2.93	7.63	6.62	1.30
CO [g/h]	101.26	102.50	258.45		205.13	533.49	462.51	91.09
NOx [g/h]	19.70	19.94	50.28		39.91	103.80	89.99	17.72
VOC [g/h]	23.47	23.76	59.90		47.54	123.64	107.19	21.11

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.343	1.931	2.695	0.000
Crosswalk LOS	B	A	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	397
d_b, Bicycle Delay [s]	10.27	30.00	9.98	19.28
l_b,int, Bicycle LOS Score for Intersection	3.117	4.132	2.701	2.301
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix I-2

Background Conditions

Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\2 Background AM.pdf

Scenario 3 Background AM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	NB Left	0.610	21.6	C
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	SB Left	0.656	24.5	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	EB Left	0.402	9.1	A
4	Main St @ First St	Signalized	HCM 7th Edition	EB Left	0.800	17.7	B
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.013	13.0	B
6	Main St @ Third St	Signalized	HCM 7th Edition	WB Right	0.457	25.4	C
7	Market St @ First St	Signalized	HCM 7th Edition	EB Left	0.398	14.7	B
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.008	18.8	C
9	Market St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.429	16.4	B
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	EB Left	0.084	26.8	D
11	Market St @ Fifth St	Signalized	HCM 7th Edition	WB Right	0.357	9.3	A
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	EB Right	0.027	12.5	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	1.140	23.9	C
14	Market St @ University Ave	Signalized	HCM 7th Edition	SB Left	0.556	24.0	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Left	0.381	4.8	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	WB Left	0.341	7.2	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	EB Thru	0.130	82.8	F
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Thru	0.287	6.0	A

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	WB Thru	0.076	64.0	F
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	EB Left	0.509	31.5	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.282	12.4	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.346	21.4	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.342	14.6	B
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.002	10.9	B
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	NB Thru	0.278	9.2	A
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	NB Thru	0.281	9.0	A
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.426	9.9	A
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.249	10.5	B
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Right	0.153	10.3	B
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.210	10.8	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Thru	0.002	11.0	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.039	14.1	B
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	WB Left	0.580	27.8	C
34	Lime St @ University Ave	Signalized	HCM 7th Edition	EB Left	0.431	28.9	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Left	0.275	16.9	B
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	SB Right	0.518	14.1	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	NB Thru	0.414	18.3	B
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.378	16.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	135	326	0	0	733	143	0	0	0	46	78	322
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	23	0	0	37	0	0	0	0	86	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	152	349	0	0	770	143	0	0	0	132	78	322
Peak Hour Factor	0.8950	0.8950	0.9500	0.9500	0.8950	0.8950	0.9500	0.9500	0.9500	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	97	0	0	215	40	0	0	0	37	22	90
Total Analysis Volume [veh/h]	170	390	0	0	860	160	0	0	0	147	87	360
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	19	35	0	0	16	0	0	0	0	0	25	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	60	60	60	60		60	60
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	7	34	23	23		16	16
g / C, Green / Cycle	0.12	0.57	0.38	0.38		0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.27	0.29		0.13	0.23
s, saturation flow rate [veh/h]	1781	3560	1870	1772		1813	1589
c, Capacity [veh/h]	221	2017	702	665		478	419
d1, Uniform Delay [s]	25.44	6.33	16.08	16.43		18.68	21.03
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	5.55	0.21	6.46	8.23		0.78	8.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.19	0.73	0.77		0.49	0.86
d, Delay for Lane Group [s/veh]	30.99	6.55	22.54	24.65		19.46	29.34
Lane Group LOS	C	A	C	C		B	C
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	2.50	0.96	6.36	6.73		2.57	5.23
50th-Percentile Queue Length [ft/ln]	62.60	24.00	158.94	168.18		64.16	130.84
95th-Percentile Queue Length [veh/ln]	4.51	1.73	10.49	10.98		4.62	8.99
95th-Percentile Queue Length [ft/ln]	112.68	43.21	262.32	274.52		115.49	224.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.99	6.55	0.00	0.00	23.40	24.65	0.00	0.00	0.00	19.46	19.46	29.34
Movement LOS	C	A			C	C				B	B	C
d_A, Approach Delay [s/veh]	13.97			23.60			0.00			25.45		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	21.62											
Intersection LOS	C											
Intersection V/C	0.610											

Emissions

Vehicle Miles Traveled [mph]	10.11	23.20	18.88	18.88		8.58	13.21
Stops [stops/h]	150.24	115.22	381.47	403.63		153.98	314.01
Fuel consumption [US gal/h]	2.59	2.27	5.93	6.31		2.41	5.01
CO [g/h]	180.87	158.72	414.39	441.36		168.59	350.51
NOx [g/h]	35.19	30.88	80.62	85.87		32.80	68.20
VOC [g/h]	41.92	36.79	96.04	102.29		39.07	81.23

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.811	2.146
Crosswalk LOS	F	F	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	997	363	0	663
d_b, Bicycle Delay [s]	7.55	20.09	30.00	13.40
l_b,int, Bicycle LOS Score for Intersection	2.022	2.401	4.132	2.540
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	328	219	455	319	0	133	3	198	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	40	17	0	123	0	0	0	86	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	368	236	455	442	0	133	3	284	0	0	0
Peak Hour Factor	0.9500	0.8880	0.8880	0.8880	0.8880	0.9500	0.8880	0.8880	0.8880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	104	66	128	124	0	37	1	80	0	0	0
Total Analysis Volume [veh/h]	0	414	266	512	498	0	150	3	320	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	24	42	0	0	18	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	14	14	19	37	13	13	
g / C, Green / Cycle	0.23	0.23	0.31	0.62	0.22	0.22	
(v / s)_i Volume / Saturation Flow Rate	0.12	0.17	0.29	0.14	0.09	0.20	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1783	1589	
c, Capacity [veh/h]	826	369	563	2190	383	342	
d1, Uniform Delay [s]	20.02	21.25	19.68	5.17	20.22	23.15	
k, delay calibration	0.50	0.50	0.33	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.17	11.55	15.36	0.24	0.67	11.85	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.50	0.72	0.91	0.23	0.40	0.94	
d, Delay for Lane Group [s/veh]	22.19	32.80	35.05	5.41	20.90	34.99	
Lane Group LOS	C	C	D	A	C	C	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	2.51	4.27	8.37	1.03	1.74	5.12	
50th-Percentile Queue Length [ft/ln]	62.81	106.78	209.34	25.76	43.52	128.01	
95th-Percentile Queue Length [veh/ln]	4.52	7.66	13.12	1.86	3.13	8.83	
95th-Percentile Queue Length [ft/ln]	113.06	191.51	327.99	46.38	78.33	220.78	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	22.19	32.80	35.05	5.41	0.00	20.90	20.90	34.99	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	C	C			
d_A, Approach Delay [s/veh]	26.34			20.43			30.43			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	24.48											
Intersection LOS	C											
Intersection V/C	0.656											

Emissions

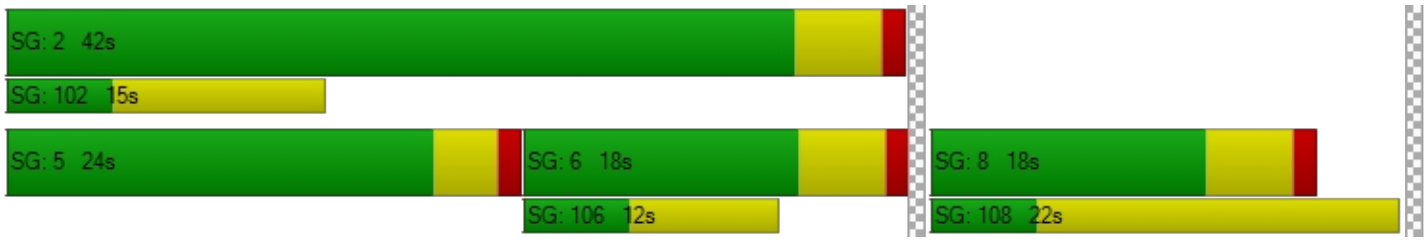
Vehicle Miles Traveled [mph]	56.45	36.27	30.46	29.63	4.67	9.76	
Stops [stops/h]	301.49	256.27	502.43	123.67	104.44	307.22	
Fuel consumption [US gal/h]	6.29	5.09	8.59	2.61	1.61	4.96	
CO [g/h]	439.56	355.46	600.53	182.29	112.81	346.80	
NOx [g/h]	85.52	69.16	116.84	35.47	21.95	67.47	
VOC [g/h]	101.87	82.38	139.18	42.25	26.15	80.37	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.621	0.000	2.100	2.076
Crosswalk LOS	B	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	430	1230	430	0
d_b, Bicycle Delay [s]	18.49	4.45	18.49	30.00
l_b,int, Bicycle LOS Score for Intersection	2.121	2.393	1.950	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	311	23	97	289	8	21	53	12	56	31	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	58	0	0	208	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	369	23	97	497	8	21	53	12	56	31	96
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	101	6	27	137	2	6	15	3	15	9	26
Total Analysis Volume [veh/h]	7	406	25	107	547	9	23	58	13	62	34	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	24	0	11	24	0	0	20	0	0	20	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	7	7	7	7
g / C, Green / Cycle	0.69	0.69	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.24	0.39	0.02	0.04	0.05	0.08
s, saturation flow rate [veh/h]	1848	1691	1248	1811	1329	1650
c, Capacity [veh/h]	1430	1321	182	240	241	218
d1, Uniform Delay [s]	3.43	4.08	25.78	21.55	24.25	22.63
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	1.37	0.31	0.68	0.56	3.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.50	0.13	0.30	0.26	0.64
d, Delay for Lane Group [s/veh]	3.99	5.44	26.09	22.23	24.80	25.76
Lane Group LOS	A	A	C	C	C	C
Critical Lane Group	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.13	2.13	0.30	0.83	0.78	1.81
50th-Percentile Queue Length [ft/ln]	28.23	53.35	7.43	20.75	19.42	45.36
95th-Percentile Queue Length [veh/ln]	2.03	3.84	0.53	1.49	1.40	3.27
95th-Percentile Queue Length [ft/ln]	50.82	96.03	13.37	37.35	34.95	81.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.99	3.99	3.99	5.44	5.44	5.44	26.09	22.23	22.23	24.80	25.76	25.76
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	3.99			5.44			23.18			25.46		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.07											
Intersection LOS	A											
Intersection V/C	0.402											

Emissions

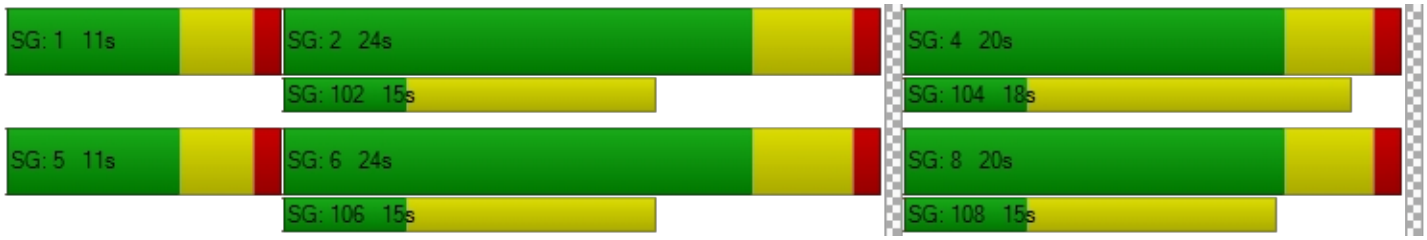
Vehicle Miles Traveled [mph]	194.50	90.41	0.65	2.01	1.74	3.93
Stops [stops/h]	73.91	139.69	19.45	54.33	50.84	118.75
Fuel consumption [US gal/h]	8.32	5.23	0.23	0.62	0.59	1.37
CO [g/h]	581.92	365.63	15.80	43.35	40.98	95.48
NOx [g/h]	113.22	71.14	3.07	8.43	7.97	18.58
VOC [g/h]	134.86	84.74	3.66	10.05	9.50	22.13

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	2.382	2.403	2.578	2.965
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1087	1087	560	560
d_b, Bicycle Delay [s]	5.73	5.73	14.26	14.26
l_b,int, Bicycle LOS Score for Intersection	2.282	2.654	1.715	1.893
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.800

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	225	9	3	235	45	79	40	30	25	26	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	169	14	0	0	8	200	44	0	55	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	174	239	9	3	243	245	123	40	85	25	26	12
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	64	2	1	65	65	33	11	23	7	7	3
Total Analysis Volume [veh/h]	186	255	10	3	260	262	131	43	91	27	28	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	16	37	0	11	32	0	0	12	0	0	12	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.55	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	0.00	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	32	43	27	7	7	7
g / C, Green / Cycle	0.72	0.53	0.72	0.45	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.66	0.01	0.15	0.16	0.10	0.08	0.08
s, saturation flow rate [veh/h]	666	1589	1726	1589	1366	1670	803
c, Capacity [veh/h]	623	846	1312	713	141	206	183
d1, Uniform Delay [s]	9.55	6.61	2.94	10.93	26.81	25.07	24.09
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.68	0.03	0.34	1.46	21.08	3.44	1.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.01	0.20	0.37	0.93	0.65	0.37
d, Delay for Lane Group [s/veh]	16.23	6.64	3.28	12.39	47.89	28.51	25.35
Lane Group LOS	B	A	A	B	D	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.59	0.05	0.63	2.20	2.65	1.94	0.91
50th-Percentile Queue Length [ft/ln]	89.86	1.33	15.67	54.93	66.18	48.46	22.71
95th-Percentile Queue Length [veh/ln]	6.47	0.10	1.13	3.95	4.77	3.49	1.63
95th-Percentile Queue Length [ft/ln]	161.74	2.39	28.21	98.87	119.13	87.22	40.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.23	16.23	6.64	3.28	3.28	12.39	47.89	28.51	28.51	25.35	25.35	25.35
Movement LOS	B	B	A	A	A	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	16.02			7.83			38.09			25.35		
Approach LOS	B			A			D			C		
d_I, Intersection Delay [s/veh]	17.69											
Intersection LOS	B											
Intersection V/C	0.800											

Emissions

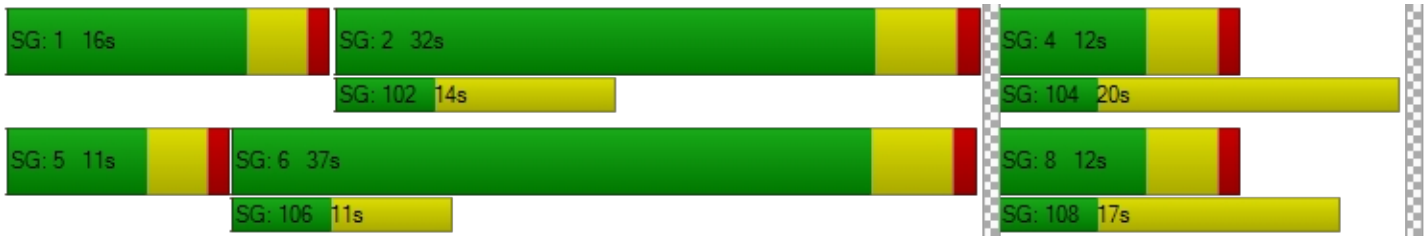
Vehicle Miles Traveled [mph]	33.28	0.75	116.79	116.34	10.84	11.09	1.92
Stops [stops/h]	215.66	3.19	37.62	131.82	158.84	116.30	54.49
Fuel consumption [US gal/h]	4.35	0.07	4.91	6.09	2.37	1.72	0.65
CO [g/h]	303.87	4.63	343.23	425.47	165.90	120.38	45.17
NOx [g/h]	59.12	0.90	66.78	82.78	32.28	23.42	8.79
VOC [g/h]	70.43	1.07	79.55	98.61	38.45	27.90	10.47

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.274	2.561	2.749	2.120
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1430	1430	247	247
d_b, Bicycle Delay [s]	2.44	2.44	23.06	23.06
l_b,int, Bicycle LOS Score for Intersection	2.518	2.640	2.211	1.886
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	28	1	3	287	6	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	183	0	0	63	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	211	1	3	350	6	8
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	0	1	94	2	2
Total Analysis Volume [veh/h]	226	1	3	376	6	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.69	0.00	13.02	9.57
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.13	0.13	1.86	1.86
d_A, Approach Delay [s/veh]	0.00		0.06		10.95	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.30					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.457

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	2	1	4	169	10	118	141	247	51	83	160	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	63	0	0	0	0	0	0	0	183
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	4	232	10	118	141	247	51	83	160	263
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	61	3	31	37	65	13	22	42	70
Total Analysis Volume [veh/h]	2	1	4	246	11	125	149	261	54	88	169	278
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	11	0	20	20	0	11	32	0	12	33	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	4.55	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	32	18	30	30	26	35	25	35	24
g / C, Green / Cycle	0.42	0.24	0.41	0.41	0.35	0.46	0.33	0.46	0.32
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.08	0.12	0.09	0.14	0.19	0.08	0.29
s, saturation flow rate [veh/h]	1174	1475	1398	1197	1431	1037	1634	1104	1517
c, Capacity [veh/h]	405	350	695	646	494	379	542	498	487
d1, Uniform Delay [s]	18.69	21.89	14.29	16.08	17.60	15.54	20.75	12.47	24.52
k, delay calibration	0.50	0.50	0.50	0.48	0.50	0.50	0.11	0.11	0.27
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.07	0.53	0.73	1.23	3.03	0.99	0.17	15.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.01	0.17	0.22	0.25	0.39	0.58	0.18	0.92
d, Delay for Lane Group [s/veh]	18.71	21.97	14.82	16.81	18.83	18.57	21.75	12.64	40.21
Lane Group LOS	B	C	B	B	B	B	C	B	D
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.02	0.08	1.28	1.66	1.61	1.68	4.46	0.80	9.26
50th-Percentile Queue Length [ft/ln]	0.56	1.90	31.99	41.39	40.23	42.05	111.43	19.89	231.50
95th-Percentile Queue Length [veh/ln]	0.04	0.14	2.30	2.98	2.90	3.03	7.92	1.43	14.25
95th-Percentile Queue Length [ft/ln]	1.00	3.42	57.59	74.50	72.41	75.69	198.00	35.79	356.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.71	21.97	21.97	15.85	16.81	18.83	18.57	21.75	21.75	12.64	40.21	40.21
Movement LOS	B	C	C	B	B	B	B	C	C	B	D	D
d_A, Approach Delay [s/veh]	21.04			16.86			20.73			35.67		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	25.42											
Intersection LOS	C											
Intersection V/C	0.457											

Emissions

Vehicle Miles Traveled [mph]	0.05	0.12	8.90	10.52	9.45	12.51	26.45	6.74	34.22
Stops [stops/h]	1.07	3.64	61.43	79.47	77.24	80.74	213.95	38.18	444.49
Fuel consumption [US gal/h]	0.01	0.03	1.16	1.48	1.42	1.52	3.66	0.71	7.52
CO [g/h]	0.82	2.37	80.84	103.11	99.26	106.54	256.18	49.96	525.79
NOx [g/h]	0.16	0.46	15.73	20.06	19.31	20.73	49.84	9.72	102.30
VOC [g/h]	0.19	0.55	18.73	23.90	23.00	24.69	59.37	11.58	121.86

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.188	2.428	2.182	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	187	691	728	755
d_b, Bicycle Delay [s]	30.83	16.07	15.17	14.54
l_b,int, Bicycle LOS Score for Intersection	1.786	2.404	2.540	2.657
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	319	45	29	671	5	11	75	17	32	30	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	95	44	55	55	0	0	0	0	143	0	226
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	414	89	84	726	5	11	75	17	175	30	238
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	114	24	23	199	1	3	21	5	48	8	65
Total Analysis Volume [veh/h]	7	454	98	92	797	5	12	82	19	192	33	261
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	24	24	34	29	29	16	16	16	16
g / C, Green / Cycle	0.56	0.40	0.40	0.56	0.48	0.48	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.01	0.13	0.06	0.09	0.21	0.21	0.01	0.06	0.15	0.18
s, saturation flow rate [veh/h]	770	3560	1589	1062	1870	1866	1085	1810	1293	1617
c, Capacity [veh/h]	518	1433	640	705	899	897	197	494	368	441
d1, Uniform Delay [s]	6.38	12.28	11.42	6.33	10.29	10.29	26.17	16.81	23.04	19.40
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.58	0.51	0.38	1.60	1.61	0.13	0.20	1.15	1.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.32	0.15	0.13	0.45	0.45	0.06	0.20	0.52	0.67
d, Delay for Lane Group [s/veh]	6.39	12.86	11.93	6.71	11.90	11.90	26.29	17.01	24.19	21.14
Lane Group LOS	A	B	B	A	B	B	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.03	1.84	0.78	0.46	3.11	3.11	0.16	1.04	2.56	3.62
50th-Percentile Queue Length [ft/ln]	0.74	45.93	19.53	11.53	77.83	77.68	4.07	26.02	63.95	90.41
95th-Percentile Queue Length [veh/ln]	0.05	3.31	1.41	0.83	5.60	5.59	0.29	1.87	4.60	6.51
95th-Percentile Queue Length [ft/ln]	1.33	82.67	35.16	20.75	140.09	139.83	7.32	46.83	115.12	162.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.39	12.86	11.93	6.71	11.90	11.90	26.29	17.01	17.01	24.19	21.14	21.14
Movement LOS	A	B	B	A	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	12.62			11.37			18.00			22.35		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	14.67											
Intersection LOS	B											
Intersection V/C	0.398											

Emissions

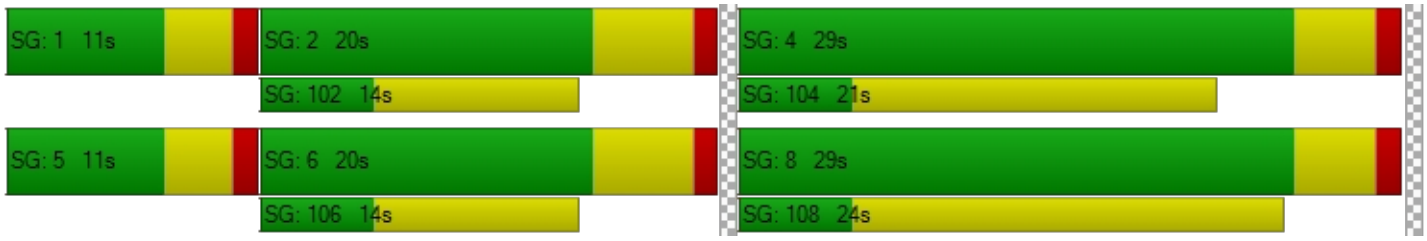
Vehicle Miles Traveled [mph]	0.52	33.89	7.32	3.04	13.26	13.23	0.28	2.33	15.89	24.33
Stops [stops/h]	1.77	220.45	46.88	27.67	186.79	186.44	9.76	62.44	153.49	216.98
Fuel consumption [US gal/h]	0.05	4.57	0.96	0.51	3.28	3.28	0.11	0.69	2.25	3.19
CO [g/h]	3.16	319.30	67.14	35.39	229.40	228.96	7.97	48.50	157.16	223.07
NOx [g/h]	0.61	62.12	13.06	6.89	44.63	44.55	1.55	9.44	30.58	43.40
VOC [g/h]	0.73	74.00	15.56	8.20	53.17	53.06	1.85	11.24	36.42	51.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	3.046	2.719	1.969	2.183
Crosswalk LOS	C	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	487	487	813	813
d_b, Bicycle Delay [s]	17.18	17.18	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.235	2.512	1.960	2.576
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	18.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	2	371	713	4	2	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	198	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	509	911	4	2	4
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	136	244	1	1	1
Total Analysis Volume [veh/h]	2	546	976	4	2	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	10.16	0.00	0.00	0.00	18.75	12.01
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.21	0.00	0.00	0.00	1.16	1.16
d_A, Approach Delay [s/veh]	0.04		0.00		14.26	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.429

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	282	264	80	622	17	26	92	12	167	39	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	0	0	198	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	420	264	80	820	17	26	92	12	167	39	67
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	111	70	21	217	4	7	24	3	44	10	18
Total Analysis Volume [veh/h]	1	444	279	85	868	18	28	97	13	177	41	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	25	0	11	25	0	11	26	0	13	28	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	46	36	36	46	42	42	19	6	19	12	12
g / C, Green / Cycle	0.61	0.48	0.48	0.61	0.55	0.55	0.26	0.09	0.26	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.00	0.23	0.23	0.10	0.26	0.26	0.02	0.07	0.13	0.02	0.05
s, saturation flow rate [veh/h]	435	1683	1469	819	1683	1671	1274	1649	1402	1683	1431
c, Capacity [veh/h]	396	812	709	528	930	924	445	145	434	270	230
d1, Uniform Delay [s]	7.00	13.02	13.05	7.25	10.19	10.19	21.14	33.43	23.48	27.09	27.81
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	1.98	2.30	0.65	1.76	1.77	0.06	7.92	0.61	0.26	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.47	0.48	0.16	0.48	0.48	0.06	0.76	0.41	0.15	0.31
d, Delay for Lane Group [s/veh]	7.00	15.00	15.35	7.91	11.95	11.96	21.20	41.35	24.09	27.35	28.57
Lane Group LOS	A	B	B	A	B	B	C	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.01	4.26	3.82	0.53	4.05	4.02	0.37	2.22	2.59	0.63	1.14
50th-Percentile Queue Length [ft/ln]	0.13	106.55	95.51	13.14	101.26	100.62	9.18	55.54	64.68	15.83	28.49
95th-Percentile Queue Length [veh/ln]	0.01	7.65	6.88	0.95	7.29	7.24	0.66	4.00	4.66	1.14	2.05
95th-Percentile Queue Length [ft/ln]	0.23	191.19	171.91	23.65	182.27	181.12	16.52	99.97	116.43	28.50	51.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.00	15.05	15.35	7.91	11.96	11.96	21.20	41.35	41.35	24.09	27.35	28.57
Movement LOS	A	B	B	A	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	15.15			11.60			37.26			25.65		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	16.40											
Intersection LOS	B											
Intersection V/C	0.429											

Emissions

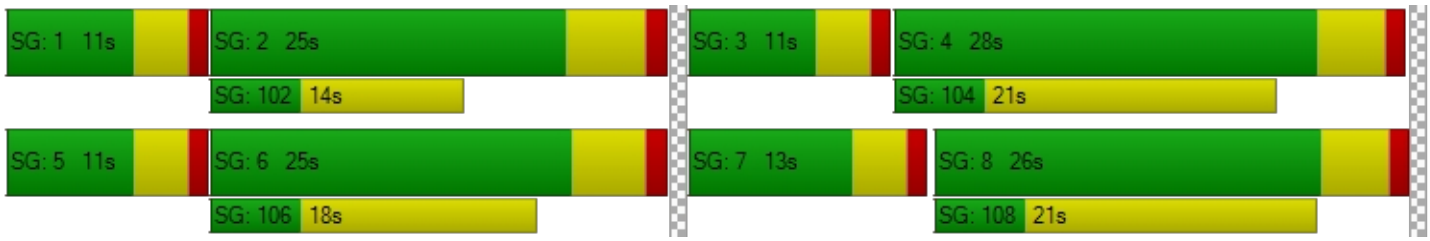
Vehicle Miles Traveled [mph]	0.04	15.17	13.35	6.43	33.64	33.40	0.72	2.82	14.86	3.44	5.96
Stops [stops/h]	0.25	204.58	183.37	25.22	194.42	193.19	17.63	106.63	124.19	30.40	54.71
Fuel consumption [US gal/h]	0.00	3.29	2.95	0.61	4.20	4.17	0.25	1.63	2.17	0.54	0.96
CO [g/h]	0.34	229.99	205.90	42.99	293.32	291.41	17.32	114.00	151.38	37.59	67.13
NOx [g/h]	0.07	44.75	40.06	8.36	57.07	56.70	3.37	22.18	29.45	7.31	13.06
VOC [g/h]	0.08	53.30	47.72	9.96	67.98	67.54	4.01	26.42	35.08	8.71	15.56

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.726	2.693	1.998	2.367
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	531	523	568	621
d_b, Bicycle Delay [s]	20.24	20.46	19.22	17.82
l_b,int, Bicycle LOS Score for Intersection	2.371	2.575	2.002	2.251
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	26.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.084

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	537	4	14	770	4	14	0	11	2	0	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	0	0	198	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	675	4	14	968	4	14	0	11	2	0	26
Peak Hour Factor	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	182	1	4	260	1	4	0	3	1	0	7
Total Analysis Volume [veh/h]	8	727	4	15	1042	4	15	0	12	2	0	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.02	0.01	0.00	0.08	0.00	0.02	0.01	0.00	0.04
d_M, Delay for Movement [s/veh]	10.51	0.00	0.00	9.21	0.00	0.00	26.78	26.09	13.94	20.54	24.80	11.05
Movement LOS	B	A	A	A	A	A	D	D	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.05	0.00	0.00	0.36	0.36	0.36	0.17	0.17	0.17
95th-Percentile Queue Length [ft/ln]	0.92	0.00	0.00	1.32	0.00	0.00	8.93	8.93	8.93	4.17	4.17	4.17
d_A, Approach Delay [s/veh]	0.11			0.13			21.07			11.69		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	0.61											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.357

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	485	25	43	737	6	13	10	20	16	5	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	0	0	198	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	623	25	43	935	6	13	10	20	16	5	50
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	172	7	12	258	2	4	3	6	4	1	14
Total Analysis Volume [veh/h]	11	687	28	47	1031	7	14	11	22	18	6	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	11	27	0	11	51	0	11	51	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	78	69	69	78	72	72	12	5	12	6	6
g / C, Green / Cycle	0.78	0.69	0.69	0.78	0.72	0.72	0.12	0.05	0.12	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.21	0.06	0.31	0.31	0.01	0.02	0.01	0.00	0.04
s, saturation flow rate [veh/h]	544	1683	1660	748	1683	1679	1346	1506	1381	1683	1431
c, Capacity [veh/h]	462	1162	1146	625	1217	1214	266	81	251	99	84
d1, Uniform Delay [s]	3.37	6.09	6.10	2.95	5.55	5.55	38.93	45.77	39.04	44.46	46.07
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.69	0.70	0.23	1.10	1.10	0.08	3.27	0.12	0.25	8.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.31	0.31	0.08	0.43	0.43	0.05	0.41	0.07	0.06	0.65
d, Delay for Lane Group [s/veh]	3.39	6.79	6.80	3.19	6.65	6.65	39.01	49.04	39.16	44.71	54.40
Lane Group LOS	A	A	A	A	A	A	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.04	2.72	2.69	0.18	3.80	3.79	0.31	0.87	0.40	0.15	1.54
50th-Percentile Queue Length [ft/ln]	0.88	68.10	67.32	4.57	94.95	94.75	7.84	21.78	10.12	3.71	38.48
95th-Percentile Queue Length [veh/ln]	0.06	4.90	4.85	0.33	6.84	6.82	0.56	1.57	0.73	0.27	2.77
95th-Percentile Queue Length [ft/ln]	1.58	122.57	121.17	8.22	170.92	170.56	14.11	39.21	18.21	6.68	69.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.39	6.79	6.80	3.19	6.65	6.65	39.01	49.04	49.04	39.16	44.71	54.40
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.74			6.50			46.05			50.19		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	9.33											
Intersection LOS	A											
Intersection V/C	0.357											

Emissions

Vehicle Miles Traveled [mph]	0.82	26.83	26.48	3.58	39.59	39.50	0.37	0.87	1.52	0.51	4.64
Stops [stops/h]	1.26	98.06	96.93	6.58	136.73	136.45	11.28	31.37	14.57	5.35	55.41
Fuel consumption [US gal/h]	0.05	2.26	2.23	0.22	3.24	3.23	0.17	0.49	0.27	0.10	1.03
CO [g/h]	3.38	157.77	155.88	15.13	226.54	226.05	11.95	34.15	18.71	6.84	72.01
NOx [g/h]	0.66	30.70	30.33	2.94	44.08	43.98	2.33	6.65	3.64	1.33	14.01
VOC [g/h]	0.78	36.56	36.13	3.51	52.50	52.39	2.77	7.92	4.34	1.59	16.69

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.717	2.727	1.978	2.219
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	438	438	928	928
d_b, Bicycle Delay [s]	30.50	30.50	14.36	14.36
l_b,int, Bicycle LOS Score for Intersection	2.373	2.669	1.852	1.904
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	504	12	5	742	15	0	0	12	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	0	0	198	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	642	12	5	940	15	0	0	12	0	0	14
Peak Hour Factor	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.9500	0.9500	0.8940	0.9500	0.9500	0.8940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	180	3	1	263	4	0	0	3	0	0	4
Total Analysis Volume [veh/h]	12	718	13	6	1051	17	0	0	13	0	0	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	10.66	0.00	0.00	9.17	0.00	0.00	0.00	0.00	12.54	0.00	0.00	10.85
Movement LOS	B	A	A	A	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.08
95th-Percentile Queue Length [ft/ln]	1.41	0.00	0.00	0.52	0.00	0.00	0.00	0.00	2.04	0.00	0.00	1.95
d_A, Approach Delay [s/veh]	0.17			0.05			12.54			10.85		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.28											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.140

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	345	33	29	665	59	143	191	138	114	17	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	121	13	0	192	5	17	3	17	16	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	466	46	29	857	64	160	194	155	130	21	41
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	129	13	8	238	18	44	54	43	36	6	11
Total Analysis Volume [veh/h]	69	518	51	32	952	71	178	216	172	144	23	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21	35	0	14	28	0	19	20	0	11	12	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	6	39	39	4	37	37	23	12	12	24	11
g / C, Green / Cycle	0.07	0.48	0.48	0.05	0.46	0.46	0.29	0.16	0.16	0.30	0.14
(v / s)_i Volume / Saturation Flow Rate	0.04	0.17	0.17	0.02	0.31	0.31	0.13	0.13	0.12	0.18	0.05
s, saturation flow rate [veh/h]	1603	1683	1631	1603	1683	1642	1390	1683	1431	781	1506
c, Capacity [veh/h]	114	814	788	73	771	753	486	262	223	411	204
d1, Uniform Delay [s]	36.09	12.88	12.89	37.16	16.95	16.95	22.56	32.70	32.40	22.25	31.35
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.19	0.11	0.11	0.21	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.15	1.21	1.26	4.03	4.62	4.73	0.81	6.41	5.59	0.97	0.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.35	0.36	0.44	0.67	0.67	0.37	0.82	0.77	0.35	0.34
d, Delay for Lane Group [s/veh]	41.23	14.09	14.15	41.20	21.57	21.69	23.37	39.11	37.99	23.23	32.32
Lane Group LOS	D	B	B	D	C	C	C	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.43	3.18	3.11	0.67	7.64	7.48	2.63	4.35	3.41	2.15	1.25
50th-Percentile Queue Length [ft/ln]	35.72	79.54	77.63	16.84	191.10	187.11	65.77	108.63	85.15	53.84	31.30
95th-Percentile Queue Length [veh/ln]	2.57	5.73	5.59	1.21	12.18	11.97	4.74	7.76	6.13	3.88	2.25
95th-Percentile Queue Length [ft/ln]	64.29	143.17	139.74	30.31	304.46	299.28	118.39	194.10	153.27	96.91	56.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.23	14.12	14.15	41.20	21.62	21.69	23.37	39.11	37.99	23.23	32.32	32.32
Movement LOS	D	B	B	D	C	C	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	17.05			22.22			33.82			26.17		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	23.88											
Intersection LOS	C											
Intersection V/C	1.140											

Emissions

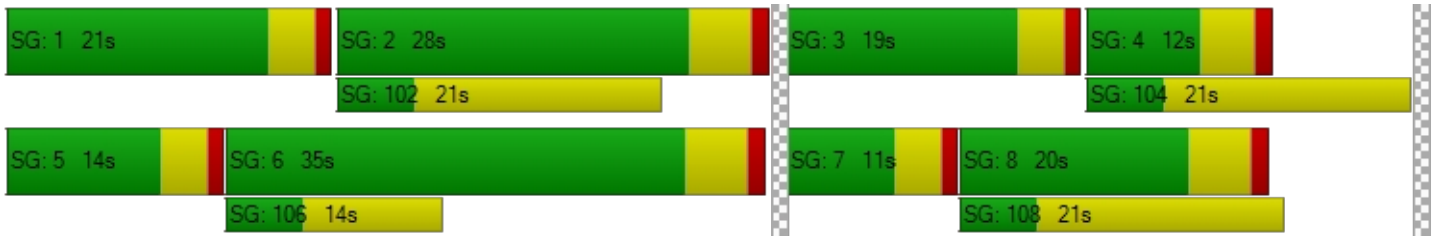
Vehicle Miles Traveled [mph]	5.45	22.77	22.15	2.54	41.16	40.18	40.79	49.50	39.41	23.08	11.06
Stops [stops/h]	64.29	143.17	139.74	30.31	343.99	336.80	118.39	195.54	153.27	96.91	56.34
Fuel consumption [US gal/h]	1.27	2.77	2.70	0.59	6.43	6.29	3.29	5.08	3.98	2.09	1.17
CO [g/h]	88.78	193.78	188.94	41.46	449.38	439.97	230.08	354.83	278.53	146.09	81.58
NOx [g/h]	17.27	37.70	36.76	8.07	87.43	85.60	44.76	69.04	54.19	28.42	15.87
VOC [g/h]	20.58	44.91	43.79	9.61	104.15	101.97	53.32	82.24	64.55	33.86	18.91

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.761	2.743	2.461	2.075
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	748	573	373	185
d_b, Bicycle Delay [s]	15.69	20.38	26.49	32.94
l_b,int, Bicycle LOS Score for Intersection	2.300	2.644	2.708	2.125
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	341	54	60	774	49	31	249	71	46	235	76
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	128	0	0	222	3	11	5	11	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	469	54	60	996	52	42	254	82	46	241	76
Peak Hour Factor	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	139	16	18	296	15	12	76	24	14	72	23
Total Analysis Volume [veh/h]	43	558	64	71	1184	62	50	302	98	55	287	90
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	31	0	20	40	0	11	18	0	11	18	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	4	39	39	6	41	41	5	12	12	5	12	12
g / C, Green / Cycle	0.05	0.49	0.49	0.07	0.51	0.51	0.06	0.15	0.15	0.06	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.03	0.17	0.04	0.04	0.37	0.04	0.03	0.12	0.13	0.03	0.12	0.12
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1545	1603	1683	1549
c, Capacity [veh/h]	87	1578	705	115	1633	729	95	255	234	100	262	241
d1, Uniform Delay [s]	36.75	12.47	10.79	36.08	15.26	10.06	36.55	32.83	32.94	36.43	32.23	32.34
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.27	0.62	0.26	5.36	2.84	0.23	4.48	6.04	7.34	4.71	4.10	4.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.35	0.09	0.62	0.73	0.09	0.53	0.81	0.83	0.55	0.74	0.76
d, Delay for Lane Group [s/veh]	41.02	13.10	11.04	41.45	18.10	10.29	41.03	38.87	40.28	41.14	36.33	37.21
Lane Group LOS	D	B	B	D	B	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.89	2.89	0.60	1.47	7.95	0.55	1.05	4.18	4.02	1.17	3.83	3.67
50th-Percentile Queue Length [ft/ln]	22.36	72.16	14.88	36.85	198.66	13.76	26.21	104.50	100.44	29.15	95.73	91.71
95th-Percentile Queue Length [veh/ln]	1.61	5.20	1.07	2.65	12.57	0.99	1.89	7.52	7.23	2.10	6.89	6.60
95th-Percentile Queue Length [ft/ln]	40.26	129.89	26.79	66.34	314.24	24.77	47.18	188.11	180.79	52.48	172.31	165.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.02	13.10	11.04	41.45	18.10	10.29	41.03	39.31	40.28	41.14	36.62	37.21
Movement LOS	D	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	14.70			18.99			39.72			37.32		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	24.02											
Intersection LOS	C											
Intersection V/C	0.556											

Emissions

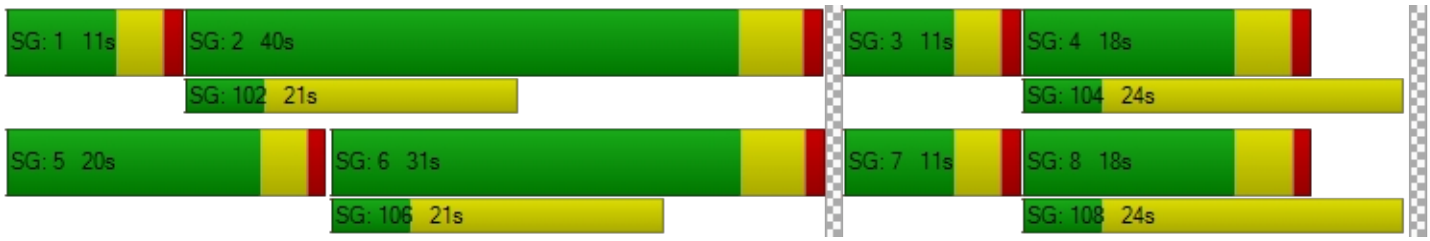
Vehicle Miles Traveled [mph]	3.45	44.78	5.14	5.61	93.48	4.90	11.37	46.88	44.08	8.95	31.56	29.77
Stops [stops/h]	40.26	259.78	26.79	66.34	715.19	24.77	47.18	188.11	180.79	52.48	172.31	165.09
Fuel consumption [US gal/h]	0.79	5.15	0.54	1.31	13.30	0.50	1.15	4.60	4.40	1.06	3.51	3.36
CO [g/h]	55.45	359.84	37.82	91.67	929.88	35.14	80.12	321.51	307.73	74.38	245.64	234.72
NOx [g/h]	10.79	70.01	7.36	17.84	180.92	6.84	15.59	62.55	59.87	14.47	47.79	45.67
VOC [g/h]	12.85	83.40	8.76	21.25	215.51	8.14	18.57	74.51	71.32	17.24	56.93	54.40

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.828	2.831	2.460	2.437
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	648	873	333	335
d_b, Bicycle Delay [s]	18.29	12.71	27.81	27.72
l_b,int, Bicycle LOS Score for Intersection	2.323	2.861	2.145	2.130
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	4.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	408	38	86	803	6	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	131	15	0	234	37	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	539	53	86	1037	43	19
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	163	16	26	313	13	6
Total Analysis Volume [veh/h]	652	64	104	1254	52	23
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	20	0	11	31	84	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	88	88	99	99	6	6
g / C, Green / Cycle	0.77	0.77	0.86	0.86	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.19	0.20	0.13	0.35	0.03	0.01
s, saturation flow rate [veh/h]	1870	1813	828	3560	1781	1589
c, Capacity [veh/h]	1432	1388	756	3059	101	90
d1, Uniform Delay [s]	3.91	3.94	1.50	1.76	52.72	51.93
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	0.45	0.38	0.41	4.04	1.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.26	0.14	0.41	0.52	0.26
d, Delay for Lane Group [s/veh]	4.33	4.39	1.88	2.17	56.76	53.41
Lane Group LOS	A	A	A	A	E	D
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.10	2.12	0.23	1.50	1.59	0.68
50th-Percentile Queue Length [ft/ln]	52.38	52.92	5.78	37.51	39.65	16.97
95th-Percentile Queue Length [veh/ln]	3.77	3.81	0.42	2.70	2.86	1.22
95th-Percentile Queue Length [ft/ln]	94.29	95.26	10.40	67.51	71.38	30.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.35	4.39	1.88	2.17	56.76	53.41
Movement LOS	A	A	A	A	E	D
d_A, Approach Delay [s/veh]	4.36		2.15		55.73	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	4.75					
Intersection LOS	A					
Intersection V/C	0.381					

Emissions

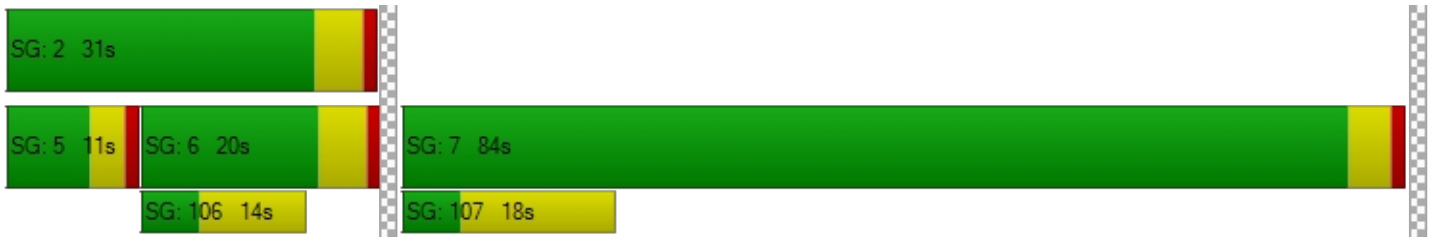
Vehicle Miles Traveled [mph]	26.49	26.49	8.35	100.63	8.57	3.79
Stops [stops/h]	65.59	66.27	7.23	93.93	49.65	21.25
Fuel consumption [US gal/h]	1.82	1.83	0.41	5.10	1.18	0.50
CO [g/h]	127.08	127.74	28.82	356.21	82.24	35.09
NOx [g/h]	24.72	24.85	5.61	69.31	16.00	6.83
VOC [g/h]	29.45	29.61	6.68	82.55	19.06	8.13

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	0.00	48.85
l_p,int, Pedestrian LOS Score for Intersectio	2.719	0.000	2.135
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	259	450	1381
d_b, Bicycle Delay [s]	43.57	34.52	5.51
l_b,int, Bicycle LOS Score for Intersection	2.365	2.894	1.774
Bicycle LOS	B	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	7.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.341

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	414	31	112	647	34	11	32	12	21	20	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	147	0	0	271	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	561	31	112	918	34	11	32	12	21	20	21
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	163	9	33	267	10	3	9	3	6	6	6
Total Analysis Volume [veh/h]	16	653	36	130	1069	40	13	37	14	24	23	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	17	0	11	17	0	0	57	0	0	57	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	69	59	59	69	63	63	6	6
g / C, Green / Cycle	0.82	0.69	0.69	0.82	0.74	0.74	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.03	0.19	0.19	0.15	0.30	0.30	0.04	0.04
s, saturation flow rate [veh/h]	585	1870	1836	882	1870	1846	1808	1766
c, Capacity [veh/h]	545	1292	1269	789	1391	1373	174	177
d1, Uniform Delay [s]	2.05	4.98	4.98	1.85	3.98	3.98	38.27	38.44
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.51	0.52	0.45	0.86	0.88	1.30	1.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.27	0.27	0.16	0.40	0.40	0.37	0.40
d, Delay for Lane Group [s/veh]	2.08	5.49	5.50	2.30	4.85	4.86	39.57	39.90
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.02	1.96	1.93	0.27	2.66	2.64	1.33	1.49
50th-Percentile Queue Length [ft/ln]	0.57	49.08	48.35	6.69	66.55	65.90	33.30	37.15
95th-Percentile Queue Length [veh/ln]	0.04	3.53	3.48	0.48	4.79	4.75	2.40	2.67
95th-Percentile Queue Length [ft/ln]	1.02	88.34	87.03	12.04	119.79	118.63	59.94	66.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.08	5.50	5.50	2.30	4.85	4.86	39.57	39.57	39.57	39.90	39.90	39.90
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	5.42			4.58			39.57			39.90		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	7.15											
Intersection LOS	A											
Intersection V/C	0.341											

Emissions

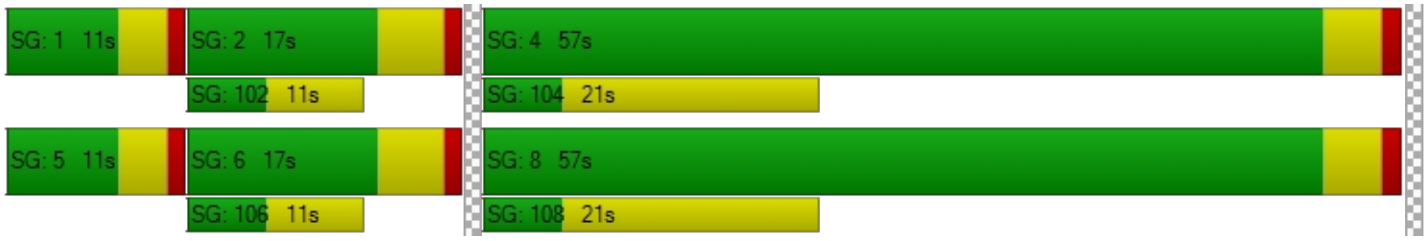
Vehicle Miles Traveled [mph]	1.21	26.21	25.77	9.62	41.26	40.78	1.67	11.85
Stops [stops/h]	0.96	83.14	81.91	11.33	112.74	111.65	56.41	62.94
Fuel consumption [US gal/h]	0.06	2.01	1.98	0.51	2.97	2.94	0.90	1.41
CO [g/h]	4.19	140.69	138.46	35.83	207.66	205.46	62.60	98.72
NOx [g/h]	0.82	27.37	26.94	6.97	40.40	39.97	12.18	19.21
VOC [g/h]	0.97	32.61	32.09	8.30	48.13	47.62	14.51	22.88

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.745	2.756	1.801	1.979
Crosswalk LOS	B	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	280	280	1231	1231
d_b, Bicycle Delay [s]	31.43	31.43	6.29	6.29
l_b,int, Bicycle LOS Score for Intersection	2.356	2.796	1.880	1.891
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	82.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.130

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	444	38	35	642	20	4	6	12	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	147	0	0	271	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	591	38	35	913	20	4	6	12	8	3	18
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	178	11	11	275	6	1	2	4	2	1	5
Total Analysis Volume [veh/h]	24	713	46	42	1101	24	5	7	14	10	4	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.09	0.13	0.03	0.13	0.07	0.04
d_M, Delay for Movement [s/veh]	11.07	0.00	0.00	9.46	0.00	0.00	77.97	82.76	23.46	60.48	78.45	18.38
Movement LOS	B	A	A	A	A	A	F	F	C	F	F	C
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.16	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90
95th-Percentile Queue Length [ft/ln]	3.03	0.00	0.00	3.90	0.00	0.00	22.48	22.48	22.48	22.50	22.50	22.50
d_A, Approach Delay [s/veh]	0.34			0.34			49.91			36.75		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	1.63											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.287

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	39	484	45	93	511	25	10	12	10	10	9	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	147	0	0	271	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	631	45	93	782	25	10	12	10	10	9	17
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	183	13	27	226	7	3	3	3	3	3	5
Total Analysis Volume [veh/h]	45	730	52	108	905	29	12	14	12	12	10	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	44	0	15	48	0	0	56	0	0	56	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	100	89	89	100	91	91	5	5	5
g / C, Green / Cycle	0.87	0.78	0.78	0.87	0.79	0.79	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.07	0.21	0.21	0.14	0.25	0.25	0.03	0.01	0.01
s, saturation flow rate [veh/h]	686	1870	1827	787	1870	1850	1220	1785	1589
c, Capacity [veh/h]	641	1450	1416	729	1473	1457	98	131	74
d1, Uniform Delay [s]	1.43	3.68	3.68	1.39	3.45	3.45	54.06	52.90	52.94
k, delay calibration	0.17	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.07	0.47	0.48	0.43	0.57	0.58	2.49	0.59	1.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.27	0.27	0.15	0.32	0.32	0.39	0.17	0.27
d, Delay for Lane Group [s/veh]	1.50	4.15	4.16	1.82	4.03	4.03	56.56	53.49	54.88
Lane Group LOS	A	A	A	A	A	A	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	2.21	2.17	0.21	2.52	2.49	1.16	0.64	0.60
50th-Percentile Queue Length [ft/ln]	1.53	55.35	54.21	5.18	62.88	62.27	29.12	16.03	15.09
95th-Percentile Queue Length [veh/ln]	0.11	3.99	3.90	0.37	4.53	4.48	2.10	1.15	1.09
95th-Percentile Queue Length [ft/ln]	2.75	99.64	97.59	9.32	113.19	112.08	52.41	28.85	27.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.50	4.15	4.16	1.82	4.03	4.03	56.56	56.56	56.56	53.49	53.49	54.88
Movement LOS	A	A	A	A	A	A	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	4.01			3.80			56.56			54.15		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	6.00											
Intersection LOS	A											
Intersection V/C	0.287											

Emissions

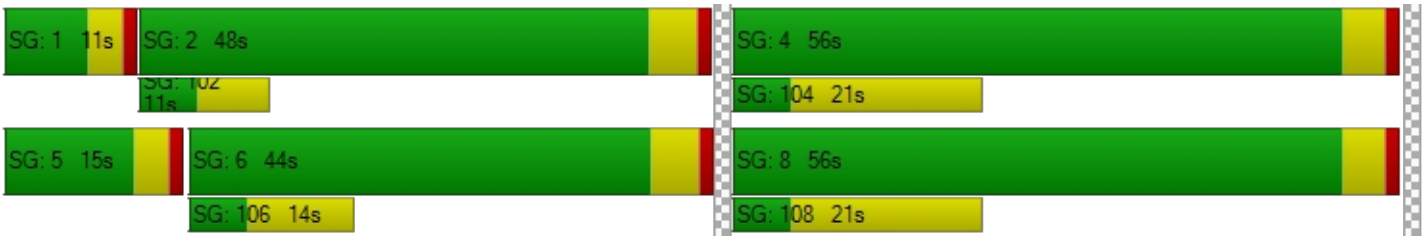
Vehicle Miles Traveled [mph]	3.38	29.69	29.01	8.12	35.29	34.91	1.12	0.66	0.60
Stops [stops/h]	1.91	69.31	67.89	6.48	78.74	77.97	36.46	20.07	18.89
Fuel consumption [US gal/h]	0.16	1.99	1.94	0.40	2.32	2.30	0.63	0.35	0.32
CO [g/h]	10.97	138.87	135.87	27.83	162.32	160.64	43.85	24.18	22.55
NOx [g/h]	2.13	27.02	26.43	5.41	31.58	31.25	8.53	4.71	4.39
VOC [g/h]	2.54	32.19	31.49	6.45	37.62	37.23	10.16	5.60	5.23

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	48.85	48.85	48.85
l_p,int, Pedestrian LOS Score for Intersectio	2.730	2.741	1.829	2.134
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	677	746	894	894
d_b, Bicycle Delay [s]	25.18	22.60	17.59	17.59
l_b,int, Bicycle LOS Score for Intersection	2.456	2.634	1.837	1.843
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	64.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.076

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	544	26	30	474	18	0	3	8	4	4	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	147	0	0	271	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	691	26	30	745	18	0	3	8	4	4	24
Peak Hour Factor	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	205	8	9	221	5	0	1	2	1	1	7
Total Analysis Volume [veh/h]	30	819	31	36	883	21	0	4	9	5	5	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.00	0.06	0.02	0.06	0.08	0.05
d_M, Delay for Movement [s/veh]	10.01	0.00	0.00	9.81	0.00	0.00	54.19	62.28	13.30	52.00	63.99	15.16
Movement LOS	B	A	A	A	A	A	F	F	B	F	F	C
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.14	0.00	0.00	0.25	0.25	0.25	0.66	0.66	0.66
95th-Percentile Queue Length [ft/ln]	3.13	0.00	0.00	3.60	0.00	0.00	6.25	6.25	6.25	16.48	16.48	16.48
d_A, Approach Delay [s/veh]	0.34			0.38			28.37			26.43		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	1.08											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	31.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	388	149	74	337	60	83	439	33	176	547	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	113	0	62	199	10	16	0	0	0	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	501	149	136	536	70	99	439	33	176	547	145
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	137	41	37	147	19	27	120	9	48	150	40
Total Analysis Volume [veh/h]	45	549	163	149	587	77	108	481	36	193	599	159
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	16	32	0	24	21	0	21	18	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	5	31	31	9	35	35	7	16	16	11	20	20
g / C, Green / Cycle	0.05	0.36	0.36	0.10	0.41	0.41	0.08	0.19	0.19	0.13	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.10	0.08	0.16	0.05	0.06	0.14	0.14	0.11	0.21	0.21
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1825	1781	1870	1736
c, Capacity [veh/h]	97	1282	572	184	1470	656	143	352	343	233	447	415
d1, Uniform Delay [s]	38.99	20.58	19.40	37.27	17.55	15.40	38.29	32.57	32.59	36.01	31.18	31.18
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.20	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.44	1.05	1.25	8.54	0.81	0.36	7.95	3.12	3.23	7.36	9.94	10.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.43	0.28	0.81	0.40	0.12	0.76	0.74	0.75	0.83	0.88	0.88
d, Delay for Lane Group [s/veh]	42.44	21.63	20.65	45.81	18.36	15.77	46.24	35.69	35.82	43.37	41.12	41.78
Lane Group LOS	D	C	C	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.97	4.01	2.34	3.37	3.94	0.94	2.46	5.18	5.08	4.25	8.62	8.08
50th-Percentile Queue Length [ft/ln]	24.24	100.18	58.41	84.35	98.62	23.41	61.43	129.48	127.04	106.17	215.38	201.91
95th-Percentile Queue Length [veh/ln]	1.75	7.21	4.21	6.07	7.10	1.69	4.42	8.91	8.78	7.63	13.43	12.74
95th-Percentile Queue Length [ft/ln]	43.63	180.32	105.14	151.83	177.51	42.14	110.58	222.79	219.47	190.66	335.73	318.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.44	21.63	20.65	45.81	18.36	15.77	46.24	35.75	35.82	43.37	41.34	41.78
Movement LOS	D	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	22.66			23.15			37.57			41.83		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.54											
Intersection LOS	C											
Intersection V/C	0.509											

Emissions

Vehicle Miles Traveled [mph]	1.70	20.74	6.16	11.40	44.93	5.89	4.24	10.26	10.04	7.16	14.58	13.54
Stops [stops/h]	41.06	339.43	98.96	142.90	334.14	39.67	104.07	219.36	215.23	179.86	364.88	342.06
Fuel consumption [US gal/h]	0.85	6.49	1.88	2.90	6.42	0.77	1.96	3.94	3.87	3.33	6.59	6.19
CO [g/h]	59.62	453.94	131.25	202.59	448.69	53.83	137.05	275.29	270.19	232.70	460.53	432.77
NOx [g/h]	11.60	88.32	25.54	39.42	87.30	10.47	26.66	53.56	52.57	45.28	89.60	84.20
VOC [g/h]	13.82	105.20	30.42	46.95	103.99	12.47	31.76	63.80	62.62	53.93	106.73	100.30

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.792	2.760	2.605	2.695
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	508	633	374	304
d_b, Bicycle Delay [s]	23.64	19.86	28.09	30.58
l_b,int, Bicycle LOS Score for Intersection	2.399	2.445	2.290	2.559
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.282

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	35	52	5	35	5	8	382	117	52	204	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	38	0	0	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	35	52	5	35	5	8	420	117	52	219	7
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	11	16	2	11	2	2	127	35	16	66	2
Total Analysis Volume [veh/h]	89	42	63	6	42	6	10	508	141	63	265	8
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	13	0	0	13	0	35	41	0	11	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	8	8	8	8	1	38	38	5	42	42
g / C, Green / Cycle	0.12	0.12	0.12	0.13	0.02	0.59	0.59	0.07	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.07	0.02	0.04	0.03	0.01	0.18	0.18	0.04	0.07	0.07
s, saturation flow rate [veh/h]	1357	1870	1589	1593	1781	1870	1732	1781	1870	1851
c, Capacity [veh/h]	153	218	185	182	35	1106	1025	131	1207	1194
d1, Uniform Delay [s]	28.12	25.94	26.41	25.69	31.42	6.61	6.62	28.93	4.41	4.41
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.49	0.42	1.08	0.90	4.42	0.71	0.77	2.75	0.19	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.19	0.34	0.30	0.29	0.30	0.31	0.48	0.11	0.11
d, Delay for Lane Group [s/veh]	31.61	26.37	27.48	26.59	35.84	7.31	7.39	31.68	4.60	4.61
Lane Group LOS	C	C	C	C	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.41	0.58	0.90	0.78	0.19	1.97	1.86	0.99	0.55	0.55
50th-Percentile Queue Length [ft/ln]	35.32	14.40	22.40	19.40	4.74	49.29	46.51	24.73	13.80	13.74
95th-Percentile Queue Length [veh/ln]	2.54	1.04	1.61	1.40	0.34	3.55	3.35	1.78	0.99	0.99
95th-Percentile Queue Length [ft/ln]	63.58	25.93	40.31	34.92	8.54	88.73	83.72	44.52	24.84	24.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.61	26.37	27.48	26.59	26.59	26.59	35.84	7.34	7.39	31.68	4.60	4.61
Movement LOS	C	C	C	C	C	C	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	29.14			26.59			7.78			9.68		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	12.44											
Intersection LOS	B											
Intersection V/C	0.282											

Emissions

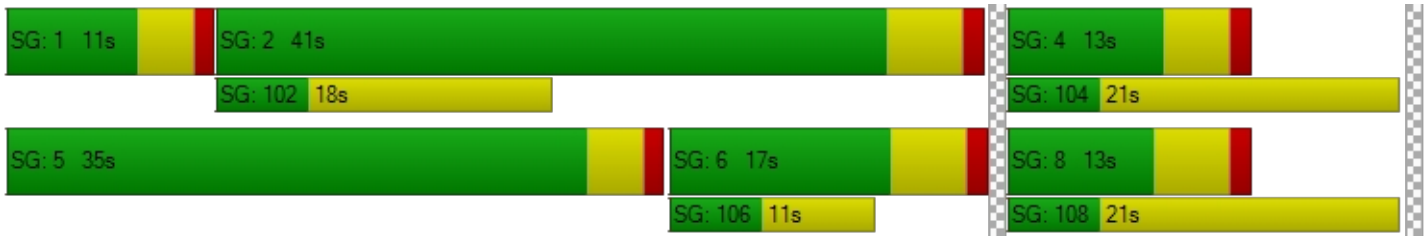
Vehicle Miles Traveled [mph]	7.25	3.42	5.13	1.48	0.32	10.60	9.90	14.44	31.37	31.19
Stops [stops/h]	78.25	31.91	49.62	42.98	10.51	109.21	103.04	54.79	30.57	30.44
Fuel consumption [US gal/h]	1.44	0.60	0.92	0.52	0.16	1.72	1.62	1.37	1.55	1.55
CO [g/h]	100.47	41.65	64.39	36.62	11.46	120.57	113.47	95.66	108.62	108.02
NOx [g/h]	19.55	8.10	12.53	7.12	2.23	23.46	22.08	18.61	21.13	21.02
VOC [g/h]	23.29	9.65	14.92	8.49	2.66	27.94	26.30	22.17	25.17	25.03

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.241	1.746	2.643	2.566
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	243	258	1105	366
d_b, Bicycle Delay [s]	25.08	24.64	6.51	21.69
l_b,int, Bicycle LOS Score for Intersection	2.094	1.863	2.318	2.051
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.346

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	148	58	21	197	4	1	222	180	42	126	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	2	0	0	0	0	26	0	2	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	148	60	21	197	4	1	248	180	44	137	19
Peak Hour Factor	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	44	18	6	59	1	0	74	54	13	41	6
Total Analysis Volume [veh/h]	81	177	72	25	236	5	1	297	216	53	164	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	18	0	11	18	0	27	35	0	11	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	21	14	14	21	12	0	35	35	5	40	40
g / C, Green / Cycle	0.28	0.19	0.19	0.28	0.15	0.00	0.46	0.46	0.06	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.05	0.02	0.13	0.00	0.15	0.15	0.03	0.05	0.05
s, saturation flow rate [veh/h]	1372	1870	1589	1280	1863	1781	1870	1615	1781	1870	1791
c, Capacity [veh/h]	389	358	304	409	286	8	862	744	112	988	947
d1, Uniform Delay [s]	20.82	27.07	25.67	19.82	30.85	37.20	12.75	12.82	33.96	8.78	8.79
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	1.06	0.40	0.06	6.61	7.47	0.96	1.16	3.11	0.19	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.49	0.24	0.06	0.84	0.13	0.31	0.32	0.48	0.10	0.10
d, Delay for Lane Group [s/veh]	21.08	28.13	26.07	19.88	37.47	44.66	13.71	13.98	37.07	8.97	9.00
Lane Group LOS	C	C	C	B	D	D	B	B	D	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.03	2.79	1.07	0.31	4.55	0.03	2.73	2.48	1.01	0.74	0.73
50th-Percentile Queue Length [ft/ln]	25.79	69.73	26.72	7.67	113.64	0.83	68.33	62.05	25.15	18.50	18.23
95th-Percentile Queue Length [veh/ln]	1.86	5.02	1.92	0.55	8.04	0.06	4.92	4.47	1.81	1.33	1.31
95th-Percentile Queue Length [ft/ln]	46.43	125.51	48.10	13.81	201.05	1.50	123.00	111.69	45.26	33.29	32.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.08	28.13	26.07	19.88	37.47	37.47	44.66	13.73	13.98	37.07	8.98	9.00
Movement LOS	C	C	C	B	D	D	D	B	B	D	A	A
d_A, Approach Delay [s/veh]	25.95			35.81			13.90			15.19		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	21.39											
Intersection LOS	C											
Intersection V/C	0.346											

Emissions

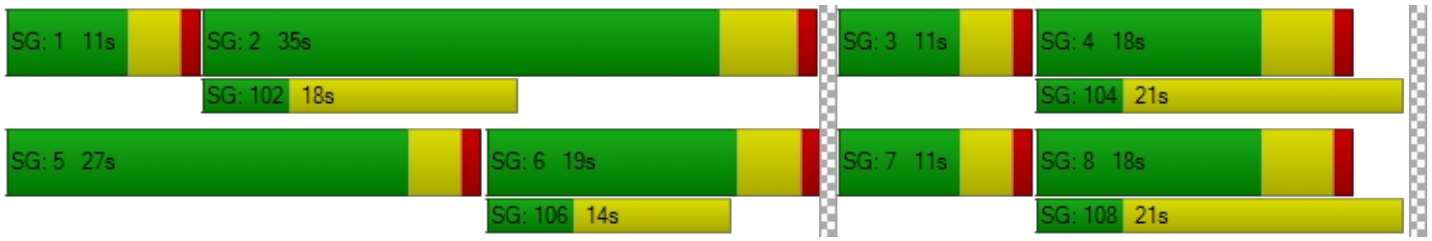
Vehicle Miles Traveled [mph]	2.88	6.30	2.56	2.04	19.63	0.03	7.71	6.87	12.05	21.46	21.06
Stops [stops/h]	49.52	133.88	51.30	14.73	218.19	1.60	131.20	119.14	48.28	35.51	35.01
Fuel consumption [US gal/h]	0.83	2.26	0.87	0.29	4.23	0.03	2.32	2.10	1.16	1.25	1.23
CO [g/h]	58.01	157.99	60.50	20.24	295.45	1.81	162.31	147.07	81.28	87.52	85.98
NOx [g/h]	11.29	30.74	11.77	3.94	57.48	0.35	31.58	28.61	15.81	17.03	16.73
VOC [g/h]	13.44	36.62	14.02	4.69	68.47	0.42	37.62	34.08	18.84	20.28	19.93

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.361	2.110	2.512	2.424
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	344	344	789	381
d_b, Bicycle Delay [s]	25.71	25.71	13.74	24.56
l_b,int, Bicycle LOS Score for Intersection	2.319	2.213	2.198	1.972
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	0	7	0	0	12	0	345	40	21	290	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	163	0	0	0	0	0	0	7	57	0	20	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	211	0	7	0	0	12	0	352	97	21	310	44
Peak Hour Factor	0.9340	0.9500	0.9340	0.9500	0.9500	0.9340	0.9500	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	0	2	0	0	3	0	94	26	6	83	12
Total Analysis Volume [veh/h]	226	0	7	0	0	13	0	377	104	22	332	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	19	0	0	0	0	26	0	19	0	11	30	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	11	11	2	41	41	48	48
g / C, Green / Cycle	0.15	0.15	0.02	0.55	0.55	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.13	0.00	0.01	0.13	0.14	0.02	0.21
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1737	997	1830
c, Capacity [veh/h]	269	240	38	1031	958	703	1170
d1, Uniform Delay [s]	30.94	27.14	36.00	8.67	8.77	5.22	6.16
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.88	0.05	5.07	0.53	0.63	0.02	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.03	0.34	0.23	0.25	0.03	0.32
d, Delay for Lane Group [s/veh]	37.82	27.18	41.08	9.20	9.40	5.23	6.89
Lane Group LOS	D	C	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.40	0.11	0.29	1.93	1.96	0.11	2.44
50th-Percentile Queue Length [ft/ln]	110.11	2.72	7.15	48.23	49.12	2.65	61.05
95th-Percentile Queue Length [veh/ln]	7.85	0.20	0.52	3.47	3.54	0.19	4.40
95th-Percentile Queue Length [ft/ln]	196.15	4.90	12.88	86.82	88.42	4.78	109.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.82	0.00	27.18	0.00	0.00	41.08	0.00	9.27	9.40	5.23	6.89	6.89
Movement LOS	D		C			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	37.51			41.08			9.30			6.80		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	14.60											
Intersection LOS	B											
Intersection V/C	0.342											

Emissions

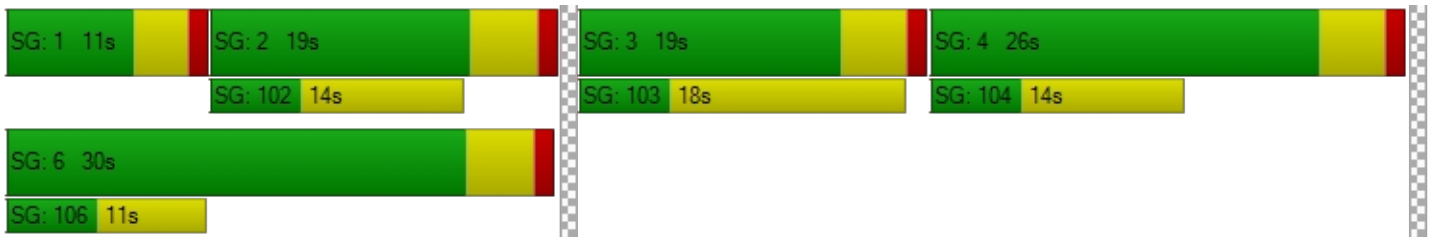
Vehicle Miles Traveled [mph]	16.95	0.52	0.32	18.41	18.41	3.32	57.16
Stops [stops/h]	211.41	5.23	13.73	92.60	94.32	5.10	117.22
Fuel consumption [US gal/h]	3.31	0.08	0.18	1.72	1.74	0.19	3.53
CO [g/h]	231.55	5.76	12.27	120.23	121.57	13.15	246.91
NOx [g/h]	45.05	1.12	2.39	23.39	23.65	2.56	48.04
VOC [g/h]	53.66	1.33	2.84	27.86	28.17	3.05	57.22

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.048	1.732	2.274	2.315
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	384	571	381	675
d_b, Bicycle Delay [s]	24.48	19.15	24.56	16.47
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.171	2.436
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	51	4	4	65	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	163	0	0	57	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	214	4	4	122	1	2
Peak Hour Factor	0.8890	0.8890	0.8890	0.8890	0.8890	0.8890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	1	1	34	0	1
Total Analysis Volume [veh/h]	241	4	4	137	1	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.73	0.00	10.89	9.54
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.23	0.00	0.31	0.31
d_A, Approach Delay [s/veh]	0.00		0.22		9.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.16					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.278

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	6	2	10	37	17	40	29	13	2	85	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	163	0	0	57	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	169	2	10	94	17	40	29	13	2	85	10
Peak Hour Factor	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	48	1	3	27	5	11	8	4	1	24	3
Total Analysis Volume [veh/h]	16	191	2	11	106	19	45	33	15	2	96	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	631	693	623	696	727	739
Degree of Utilization, x	0.03	0.28	0.02	0.18	0.13	0.15

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.08	1.14	0.05	0.65	0.44	0.52
95th-Percentile Queue Length [ft]	1.95	28.42	1.35	16.26	10.94	12.89
Approach Delay [s/veh]	9.78		8.96		8.68	8.71
Approach LOS	A		A		A	A
Intersection Delay [s/veh]	9.18					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.281

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	4	15	9	38	5	7	18	8	7	11	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	163	0	0	57	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	167	15	9	95	5	7	18	8	7	11	10
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	47	4	3	27	1	2	5	2	2	3	3
Total Analysis Volume [veh/h]	15	188	17	10	107	6	8	20	9	8	12	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	655	730	667	734	857	684	690
Degree of Utilization, x	0.02	0.28	0.02	0.15	0.01	0.05	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.07	1.15	0.05	0.51	0.02	0.17	0.14
95th-Percentile Queue Length [ft]	1.76	28.80	1.14	12.71	0.53	4.28	3.52
Approach Delay [s/veh]	9.47		8.34			8.57	8.46
Approach LOS	A		A			A	A
Intersection Delay [s/veh]	8.97						
Intersection LOS	A						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.426

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	11	10	11	24	29	14	241	28	177	338	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	39	17	0	0	17	0	0	20	163
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	11	10	50	41	29	14	258	28	177	358	186
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	3	3	14	11	8	4	70	8	48	98	51
Total Analysis Volume [veh/h]	15	12	11	55	45	32	15	282	31	193	391	203
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	28	0	0	28	0	11	26	0	11	26	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	7	7	7	7	49	38	49	44
g / C, Green / Cycle	0.10	0.10	0.10	0.10	0.76	0.59	0.76	0.67
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.04	0.05	0.02	0.19	0.18	0.37
s, saturation flow rate [veh/h]	1190	1552	1249	1568	806	1654	1075	1587
c, Capacity [veh/h]	156	158	197	160	599	977	864	1061
d1, Uniform Delay [s]	30.45	26.61	29.48	27.57	3.71	6.72	2.71	5.72
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	0.42	0.77	2.25	0.08	0.87	0.60	2.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.15	0.28	0.48	0.03	0.32	0.22	0.56
d, Delay for Lane Group [s/veh]	30.71	27.03	30.25	29.82	3.79	7.58	3.31	7.85
Lane Group LOS	C	C	C	C	A	A	A	A
Critical Lane Group	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	0.34	0.86	1.20	0.04	2.06	0.52	3.77
50th-Percentile Queue Length [ft/ln]	5.88	8.38	21.43	29.96	0.97	51.43	13.04	94.23
95th-Percentile Queue Length [veh/ln]	0.42	0.60	1.54	2.16	0.07	3.70	0.94	6.78
95th-Percentile Queue Length [ft/ln]	10.58	15.08	38.57	53.94	1.75	92.57	23.48	169.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.71	27.03	27.03	30.25	29.82	29.82	3.79	7.58	7.58	3.31	7.85	7.85
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	28.48			30.00			7.41			6.74		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	9.94											
Intersection LOS	A											
Intersection V/C	0.426											

Emissions

Vehicle Miles Traveled [mph]	1.21	1.86	4.33	6.06	2.40	50.16	28.88	88.88
Stops [stops/h]	13.02	18.57	47.47	66.38	2.16	113.93	28.89	208.75
Fuel consumption [US gal/h]	0.20	0.28	0.72	0.99	0.13	3.18	1.54	5.75
CO [g/h]	13.86	19.67	50.01	69.51	8.94	221.99	107.62	401.73
NOx [g/h]	2.70	3.83	9.73	13.52	1.74	43.19	20.94	78.16
VOC [g/h]	3.21	4.56	11.59	16.11	2.07	51.45	24.94	93.10

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.349	2.038	2.154	2.425
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	720	720	658	658
d_b, Bicycle Delay [s]	13.31	13.31	14.62	14.62
l_b,int, Bicycle LOS Score for Intersection	1.837	1.992	2.315	3.073
Bicycle LOS	A	A	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.249

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	10	150	38	12	315	37	120	320	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	17	0	0	5	0	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	10	167	38	12	320	37	120	326	24
Peak Hour Factor	0.9500	0.9500	0.9500	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	3	50	11	4	96	11	36	98	7
Total Analysis Volume [veh/h]	0	0	0	12	201	46	14	386	45	145	393	29
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	30	0	11	19	0	11	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		7	7	44	33	33	44	38	38
g / C, Green / Cycle		0.12	0.12	0.73	0.55	0.55	0.73	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.08	0.08	0.02	0.13	0.13	0.14	0.13	0.13
s, saturation flow rate [veh/h]		1675	1582	927	1683	1622	1004	1683	1643
c, Capacity [veh/h]		200	189	790	932	899	836	1069	1044
d1, Uniform Delay [s]		25.23	25.30	2.39	6.85	6.87	2.68	4.57	4.57
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.40	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.60	4.15	0.04	0.59	0.62	0.36	0.42	0.43
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.65	0.68	0.02	0.23	0.24	0.17	0.20	0.20
d, Delay for Lane Group [s/veh]		28.83	29.45	2.43	7.44	7.49	3.03	4.98	5.00
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.91	1.89	0.04	1.35	1.32	0.38	0.95	0.94
50th-Percentile Queue Length [ft/ln]		47.83	47.25	0.89	33.66	32.99	9.55	23.84	23.46
95th-Percentile Queue Length [veh/ln]		3.44	3.40	0.06	2.42	2.38	0.69	1.72	1.69
95th-Percentile Queue Length [ft/ln]		86.10	85.06	1.60	60.59	59.39	17.19	42.91	42.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.83	29.08	29.45	2.43	7.46	7.49	3.03	4.99	5.00
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			29.14			7.31			4.49		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.50											
Intersection LOS	B											
Intersection V/C	0.249											

Emissions

Vehicle Miles Traveled [mph]		10.61	10.33	2.28	35.51	34.60	21.76	31.99	31.35
Stops [stops/h]		114.80	113.41	2.13	80.78	79.18	22.92	57.21	56.29
Fuel consumption [US gal/h]		1.69	1.67	0.12	2.24	2.18	1.16	1.87	1.84
CO [g/h]		117.96	116.40	8.21	156.41	152.64	80.82	131.01	128.51
NOx [g/h]		22.95	22.65	1.60	30.43	29.70	15.72	25.49	25.00
VOC [g/h]		27.34	26.98	1.90	36.25	35.38	18.73	30.36	29.78

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.169	2.016	2.424	2.437
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	847	480	480
d_b, Bicycle Delay [s]	30.00	9.98	17.33	17.33
l_b,int, Bicycle LOS Score for Intersection	4.132	1.988	2.141	2.242
Bicycle LOS	D	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.153

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	97	55	0	126	31	37	69	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	31	97	55	0	126	31	37	69	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.8850	0.8850	0.8850	0.9500	0.8850	0.8850	0.8850	0.8850	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	9	27	16	0	36	9	10	19	0
Total Analysis Volume [veh/h]	0	0	0	35	110	62	0	142	35	42	78	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	24	0	0	26	0	0	26	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		7	7	7	34	34	34
g / C, Green / Cycle		0.13	0.13	0.13	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate		0.04	0.04	0.04	0.11	0.04	0.05
s, saturation flow rate [veh/h]		1643	1683	1431	1626	1086	1683
c, Capacity [veh/h]		224	229	195	1102	778	1141
d1, Uniform Delay [s]		19.52	19.50	19.50	2.91	4.51	2.72
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.83	0.79	0.93	0.31	0.13	0.12
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.32	0.32	0.32	0.16	0.05	0.07
d, Delay for Lane Group [s/veh]		20.34	20.29	20.43	3.22	4.64	2.84
Lane Group LOS		C	C	C	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.76	0.76	0.66	0.41	0.15	0.16
50th-Percentile Queue Length [ft/ln]		18.96	19.09	16.44	10.14	3.85	4.11
95th-Percentile Queue Length [veh/ln]		1.37	1.37	1.18	0.73	0.28	0.30
95th-Percentile Queue Length [ft/ln]		34.13	34.35	29.59	18.26	6.92	7.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.34	20.31	20.43	0.00	3.22	3.22	4.64	2.84	0.00
Movement LOS				C	C	C		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			20.35			3.22			3.47		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.32											
Intersection LOS	B											
Intersection V/C	0.153											

Emissions

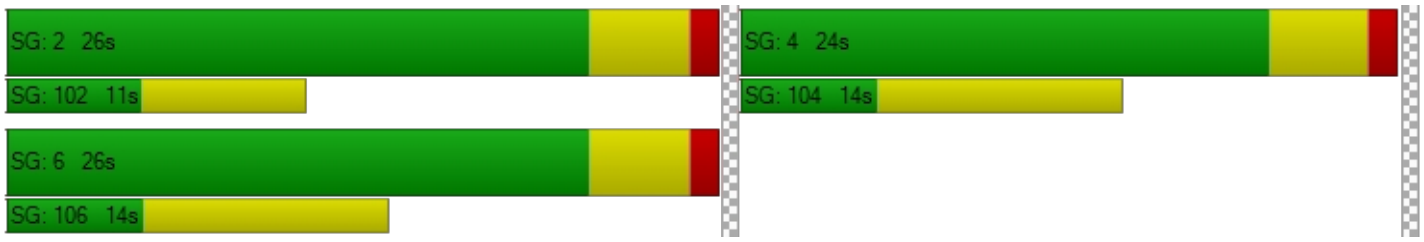
Vehicle Miles Traveled [mph]		5.44	5.49	4.67	29.55	6.14	11.41
Stops [stops/h]		54.61	54.97	47.34	29.21	11.08	11.84
Fuel consumption [US gal/h]		0.75	0.76	0.65	1.49	0.35	0.58
CO [g/h]		52.63	53.02	45.41	104.44	24.73	40.55
NOx [g/h]		10.24	10.32	8.83	20.32	4.81	7.89
VOC [g/h]		12.20	12.29	10.52	24.20	5.73	9.40

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.836	1.967	1.840	2.007
Crosswalk LOS	A	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	776	852	852
d_b, Bicycle Delay [s]	25.00	9.36	8.24	8.24
l_b,int, Bicycle LOS Score for Intersection	4.132	1.945	2.066	1.972
Bicycle LOS	D	A	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.210

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	93	0	43	0	0	5	0	285	81	50	250	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	7	0	0	0	0	7	0	8	20	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	0	50	0	0	5	0	292	81	58	270	0
Peak Hour Factor	0.9530	0.9500	0.9530	0.9500	0.9500	0.9530	0.9500	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	0	13	0	0	1	0	77	21	15	71	0
Total Analysis Volume [veh/h]	98	0	52	0	0	5	0	306	85	61	283	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	14	0	0	0	0	25	0	25	0	11	36	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	7	7	1	45	45	54	54
g / C, Green / Cycle	0.09	0.09	0.01	0.60	0.60	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.06	0.03	0.00	0.10	0.11	0.06	0.15
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1737	1095	1870
c, Capacity [veh/h]	160	142	18	1124	1044	873	1350
d1, Uniform Delay [s]	32.89	32.13	36.77	6.66	6.72	3.16	3.42
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.80	1.56	8.17	0.34	0.40	0.03	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.37	0.28	0.17	0.19	0.07	0.21
d, Delay for Lane Group [s/veh]	36.69	33.70	44.95	7.00	7.12	3.19	3.77
Lane Group LOS	D	C	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.81	0.91	0.13	1.28	1.30	0.19	1.10
50th-Percentile Queue Length [ft/ln]	45.33	22.86	3.27	32.10	32.61	4.76	27.38
95th-Percentile Queue Length [veh/ln]	3.26	1.65	0.24	2.31	2.35	0.34	1.97
95th-Percentile Queue Length [ft/ln]	81.59	41.15	5.89	57.77	58.70	8.57	49.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.69	0.00	33.70	0.00	0.00	44.95	0.00	7.04	7.12	3.19	3.77	3.77
Movement LOS	D		C			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	35.65			44.95			7.06			3.67		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	10.78											
Intersection LOS	B											
Intersection V/C	0.210											

Emissions

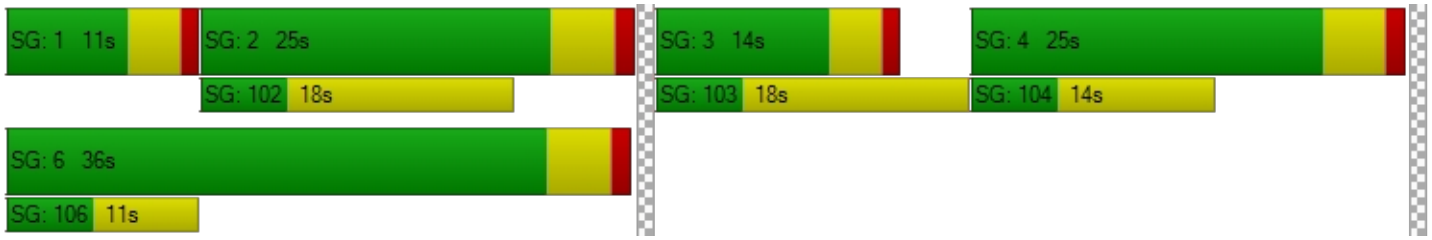
Vehicle Miles Traveled [mph]	7.40	3.93	0.13	29.49	29.49	2.07	9.59
Stops [stops/h]	87.03	43.89	6.28	61.62	62.61	9.14	52.56
Fuel consumption [US gal/h]	1.67	0.84	0.08	1.83	1.84	0.18	0.90
CO [g/h]	116.63	58.47	5.30	128.12	128.83	12.25	63.09
NOx [g/h]	22.69	11.38	1.03	24.93	25.07	2.38	12.27
VOC [g/h]	27.03	13.55	1.23	29.69	29.86	2.84	14.62

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.262	1.709	2.185	2.295
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	267	544	541	835
d_b, Bicycle Delay [s]	28.17	19.87	19.95	12.73
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.097	2.342
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	131	4	1	131	1	0	0	8	3	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	8	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	138	4	1	139	1	0	0	8	3	1	2
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	36	1	0	36	0	0	0	2	1	0	1
Total Analysis Volume [veh/h]	8	142	4	1	143	1	0	0	8	3	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.52	0.00	0.00	7.51	0.00	0.00	10.21	11.02	8.72	10.25	11.02	8.74
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.33	0.17	0.00	0.04	0.02	0.00	0.62	0.62	0.62	0.61	0.61	0.61
d_A, Approach Delay [s/veh]	0.39			0.05			8.72			9.87		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.63											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.039

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	139	16	6	131	6	3	5	37	14	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	8	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	146	16	6	139	6	3	5	37	14	1	2
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	43	5	2	41	2	1	1	11	4	0	1
Total Analysis Volume [veh/h]	67	171	19	7	163	7	4	6	43	16	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.05	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	7.64	0.00	0.00	7.61	0.00	0.00	13.30	13.51	9.47	14.09	13.45	9.55
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.12	0.12	0.12	0.01	0.01	0.01	0.23	0.23	0.23	0.14	0.14	0.14
95th-Percentile Queue Length [ft/ln]	2.96	2.96	2.96	0.30	0.30	0.30	5.75	5.75	5.75	3.39	3.39	3.39
d_A, Approach Delay [s/veh]	1.99			0.30			10.22			13.58		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.70											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	27.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	108	26	28	192	25	8	207	46	311	507	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	87	0	0	0	0	8	7	37	12	10	89	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	108	26	28	192	33	15	244	58	321	596	134
Peak Hour Factor	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	33	8	8	58	10	5	74	18	97	180	40
Total Analysis Volume [veh/h]	106	130	31	34	232	40	18	295	70	388	720	162
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	13	0	11	13	0	11	26	0	30	45	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	19	11	11	19	8	8	2	26	26	21	45	45
g / C, Green / Cycle	0.24	0.14	0.14	0.24	0.11	0.11	0.03	0.33	0.33	0.27	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.02	0.03	0.08	0.08	0.01	0.11	0.11	0.24	0.43	0.11
s, saturation flow rate [veh/h]	1266	1683	1431	1257	1683	1599	1603	1683	1574	1603	1683	1431
c, Capacity [veh/h]	345	231	196	341	178	169	49	552	516	426	946	804
d1, Uniform Delay [s]	25.38	32.26	30.43	24.16	34.86	34.94	38.01	20.33	20.39	28.43	13.42	8.66
k, delay calibration	0.15	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.26	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.71	2.14	0.37	0.13	7.11	8.22	4.50	1.66	1.84	15.83	5.77	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.56	0.16	0.10	0.78	0.80	0.37	0.34	0.35	0.91	0.76	0.20
d, Delay for Lane Group [s/veh]	26.09	34.41	30.80	24.29	41.97	43.16	42.51	21.98	22.23	44.26	19.18	9.22
Lane Group LOS	C	C	C	C	D	D	D	C	C	D	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.64	2.40	0.53	0.49	2.87	2.84	0.41	2.83	2.74	8.75	10.12	1.38
50th-Percentile Queue Length [ft/ln]	41.09	59.92	13.21	12.35	71.67	70.96	10.14	70.73	68.45	218.77	253.09	34.40
95th-Percentile Queue Length [veh/ln]	2.96	4.31	0.95	0.89	5.16	5.11	0.73	5.09	4.93	13.60	15.34	2.48
95th-Percentile Queue Length [ft/ln]	73.96	107.86	23.78	22.24	129.00	127.72	18.25	127.32	123.22	340.05	383.54	61.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.09	34.41	30.80	24.29	42.45	43.16	42.51	22.07	22.23	44.26	19.18	9.22
Movement LOS	C	C	C	C	D	D	D	C	C	D	B	A
d_A, Approach Delay [s/veh]	30.69			40.53			23.06			25.58		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	27.81											
Intersection LOS	C											
Intersection V/C	0.580											

Emissions

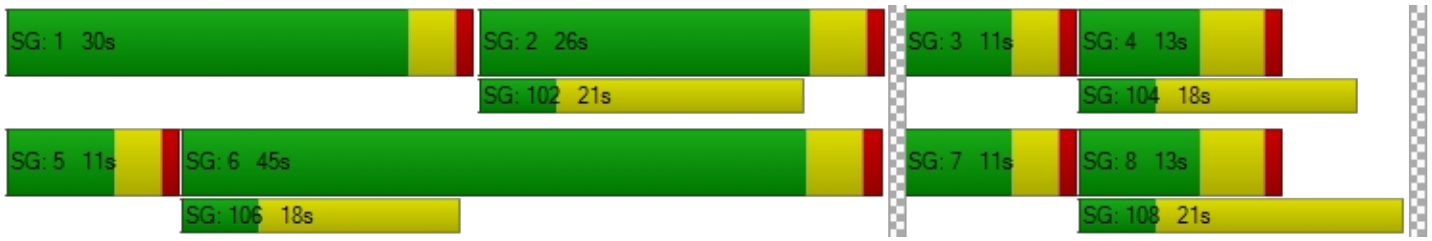
Vehicle Miles Traveled [mph]	8.62	10.57	2.52	2.66	10.79	10.50	2.69	27.89	26.72	19.16	35.55	8.00
Stops [stops/h]	73.96	107.86	23.78	22.24	129.00	127.72	18.25	127.32	123.22	393.78	455.56	61.92
Fuel consumption [US gal/h]	1.45	2.12	0.47	0.44	2.56	2.54	0.35	2.58	2.48	6.46	6.79	0.98
CO [g/h]	101.18	148.48	32.80	30.53	178.89	177.46	24.24	180.11	173.50	451.47	474.71	68.18
NOx [g/h]	19.69	28.89	6.38	5.94	34.80	34.53	4.72	35.04	33.76	87.84	92.36	13.27
VOC [g/h]	23.45	34.41	7.60	7.08	41.46	41.13	5.62	41.74	40.21	104.63	110.02	15.80

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.513	2.302	2.400	2.621
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	198	198	535	1008
d_b, Bicycle Delay [s]	32.49	32.49	21.46	9.85
l_b,int, Bicycle LOS Score for Intersection	2.215	2.026	2.090	3.870
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.431

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	67	97	56	472	26	2	233	113	282	434	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	15	12	10	0	0	5	0	47	6	87
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	67	112	68	482	26	2	238	113	329	440	167
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	21	35	21	149	8	1	73	35	102	136	52
Total Analysis Volume [veh/h]	17	83	138	84	595	32	2	294	140	406	543	206
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	23	0	11	23	0	28	29	0	27	28	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	26	15	15	26	19	19	0	36	36	14	50	50
g / C, Green / Cycle	0.28	0.17	0.17	0.28	0.21	0.21	0.00	0.40	0.40	0.16	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.10	0.07	0.19	0.19	0.00	0.09	0.10	0.13	0.23	0.23
s, saturation flow rate [veh/h]	872	3204	1431	1221	1683	1653	1603	3204	1431	3113	1683	1527
c, Capacity [veh/h]	232	552	246	441	359	352	9	1295	578	494	937	851
d1, Uniform Delay [s]	24.81	31.66	34.13	24.31	34.30	34.31	44.53	17.58	17.70	36.64	11.51	11.52
k, delay calibration	0.11	0.11	0.11	0.11	0.21	0.21	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.12	1.99	0.21	12.40	12.71	10.92	0.41	0.99	3.50	1.37	1.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.15	0.56	0.19	0.88	0.88	0.21	0.23	0.24	0.82	0.42	0.42
d, Delay for Lane Group [s/veh]	24.94	31.79	36.13	24.51	46.70	47.03	55.45	17.99	18.69	40.14	12.89	13.04
Lane Group LOS	C	C	D	C	D	D	E	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.26	0.76	2.82	1.33	7.68	7.58	0.07	2.05	2.06	4.53	4.65	4.27
50th-Percentile Queue Length [ft/ln]	6.56	18.97	70.56	33.36	191.99	189.60	1.82	51.32	51.43	113.27	116.13	106.68
95th-Percentile Queue Length [veh/ln]	0.47	1.37	5.08	2.40	12.22	12.10	0.13	3.69	3.70	8.02	8.18	7.66
95th-Percentile Queue Length [ft/ln]	11.80	34.15	127.01	60.05	305.61	302.51	3.28	92.37	92.57	200.54	204.50	191.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.94	31.79	36.13	24.51	46.85	47.03	55.45	17.99	18.69	40.14	12.93	13.04
Movement LOS	C	C	D	C	D	D	E	B	B	D	B	B
d_A, Approach Delay [s/veh]	33.81			44.22			18.39			22.51		
Approach LOS	C			D			B			C		
d_I, Intersection Delay [s/veh]	28.94											
Intersection LOS	C											
Intersection V/C	0.431											

Emissions

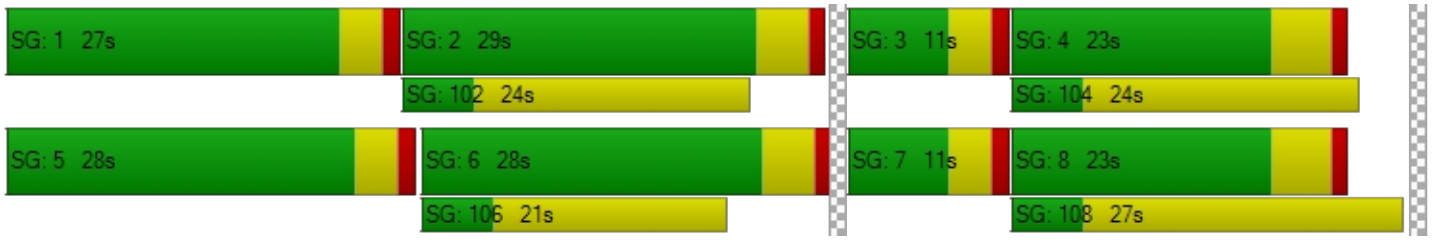
Vehicle Miles Traveled [mph]	1.32	6.44	10.71	6.83	25.70	25.27	0.30	44.13	21.01	29.31	28.30	25.77
Stops [stops/h]	10.49	60.70	112.89	53.38	307.19	303.36	2.92	164.21	82.28	362.46	185.81	170.69
Fuel consumption [US gal/h]	0.22	1.24	2.27	1.08	6.29	6.22	0.05	3.69	1.79	6.02	3.01	2.76
CO [g/h]	15.06	86.59	158.78	75.55	439.94	434.76	3.30	257.99	125.35	421.10	210.65	193.01
NOx [g/h]	2.93	16.85	30.89	14.70	85.60	84.59	0.64	50.20	24.39	81.93	40.98	37.55
VOC [g/h]	3.49	20.07	36.80	17.51	101.96	100.76	0.77	59.79	29.05	97.59	48.82	44.73

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.716	2.529	2.599	2.813
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	398	398	542	520
d_b, Bicycle Delay [s]	28.88	28.88	23.91	24.64
l_b,int, Bicycle LOS Score for Intersection	1.970	2.361	2.134	2.727
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.275

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	211	5	316	301	109	14	87	27	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	38	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	211	5	354	301	109	14	87	27	0	0	0
Peak Hour Factor	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	63	1	106	90	33	4	26	8	0	0	0
Total Analysis Volume [veh/h]	53	252	6	423	360	130	17	104	32	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	29	17	0	36	24	0	0	12	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	4	33	33	12	40	40	7	7	7	
g / C, Green / Cycle	0.07	0.51	0.51	0.18	0.62	0.62	0.10	0.10	0.10	
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.08	0.14	0.15	0.15	0.01	0.06	0.02	
s, saturation flow rate [veh/h]	1603	1683	1669	3113	1683	1532	1603	1683	1431	
c, Capacity [veh/h]	110	855	848	557	1040	947	162	170	144	
d1, Uniform Delay [s]	29.14	8.53	8.53	25.35	5.60	5.60	26.55	28.00	26.87	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.22	0.38	0.38	2.16	0.57	0.62	0.28	3.54	0.76	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.48	0.15	0.15	0.76	0.25	0.25	0.11	0.61	0.22	
d, Delay for Lane Group [s/veh]	32.36	8.91	8.91	27.52	6.16	6.22	26.83	31.53	27.63	
Lane Group LOS	C	A	A	C	A	A	C	C	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.85	0.90	0.89	3.04	1.30	1.20	0.24	1.65	0.47	
50th-Percentile Queue Length [ft/ln]	21.27	22.42	22.35	75.90	32.56	30.03	6.05	41.17	11.69	
95th-Percentile Queue Length [veh/ln]	1.53	1.61	1.61	5.47	2.34	2.16	0.44	2.96	0.84	
95th-Percentile Queue Length [ft/ln]	38.29	40.36	40.23	136.63	58.61	54.05	10.89	74.10	21.04	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.36	8.91	8.91	27.52	6.18	6.22	26.83	31.53	27.63	0.00	0.00	0.00
Movement LOS	C	A	A	C	A	A	C	C	C			
d_A, Approach Delay [s/veh]	12.91			16.07			30.20			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	16.93											
Intersection LOS	B											
Intersection V/C	0.275											

Emissions

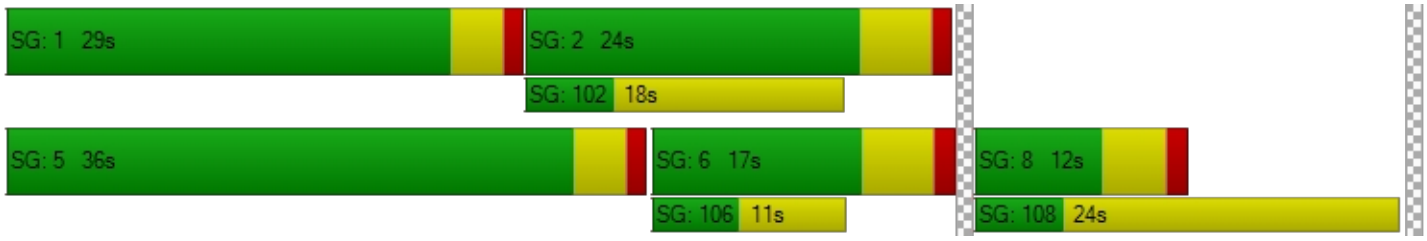
Vehicle Miles Traveled [mph]	2.10	5.13	5.10	31.06	18.83	17.15	2.49	15.21	4.68
Stops [stops/h]	47.12	49.67	49.51	336.32	72.13	66.52	13.40	91.20	25.90
Fuel consumption [US gal/h]	0.78	0.80	0.80	6.08	1.58	1.45	0.27	1.80	0.52
CO [g/h]	54.77	56.15	55.95	425.12	110.58	101.33	18.82	125.65	36.05
NOx [g/h]	10.66	10.92	10.89	82.71	21.51	19.72	3.66	24.45	7.01
VOC [g/h]	12.69	13.01	12.97	98.53	25.63	23.49	4.36	29.12	8.36

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.445	2.662	2.198	1.960
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	366	582	225	0
d_b, Bicycle Delay [s]	21.69	16.35	25.61	32.50
l_b,int, Bicycle LOS Score for Intersection	2.031	2.527	2.026	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	124	827	0	260	126	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	57	0	37	42	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	884	0	297	168	0
Peak Hour Factor	0.8530	0.8530	0.9500	0.8530	0.8530	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	259	0	87	49	0
Total Analysis Volume [veh/h]	165	1036	0	348	197	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	27	0	0	23	23	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	50	50	50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	22	22	19	19
g / C, Green / Cycle	0.44	0.44	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.10	0.41	0.11	0.06
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	714	1128	1219	1219
d1, Uniform Delay [s]	8.57	13.01	10.76	10.22
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	3.55	0.59	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.92	0.29	0.16
d, Delay for Lane Group [s/veh]	8.73	16.56	11.35	10.51
Lane Group LOS	A	B	B	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.88	4.59	1.21	0.65
50th-Percentile Queue Length [ft/ln]	22.00	114.86	30.32	16.17
95th-Percentile Queue Length [veh/ln]	1.58	8.11	2.18	1.16
95th-Percentile Queue Length [ft/ln]	39.59	202.74	54.58	29.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.73	16.56	0.00	11.35	10.51	0.00
Movement LOS	A	B		B	B	
d_A, Approach Delay [s/veh]	15.48		11.35		10.51	
Approach LOS	B		B		B	
d_I, Intersection Delay [s/veh]	14.10					
Intersection LOS	B					
Intersection V/C	0.518					

Emissions

Vehicle Miles Traveled [mph]	13.83	86.85	17.18	9.45
Stops [stops/h]	63.35	661.59	174.67	93.13
Fuel consumption [US gal/h]	1.30	11.78	2.48	1.32
CO [g/h]	90.66	823.24	173.08	92.61
NOx [g/h]	17.64	160.17	33.68	18.02
VOC [g/h]	21.01	190.79	40.11	21.46

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.443	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	920	732	732
d_b, Bicycle Delay [s]	7.29	10.05	10.05
l_b,int, Bicycle LOS Score for Intersection	1.774	2.061	1.937
Bicycle LOS	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.414

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	74	171	43	0	0	0	213	165	0	0	50	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	20	0	0	0	17	36	0	11	42	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	191	63	0	0	0	230	201	0	11	92	109
Peak Hour Factor	0.9110	0.9110	0.9110	0.9500	0.9500	0.9500	0.9110	0.9110	0.9500	0.9500	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	52	17	0	0	0	63	55	0	3	25	30
Total Analysis Volume [veh/h]	81	210	69	0	0	0	252	221	0	12	101	120
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	17	0	0	0	0	17	33	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	50	50		50	50	50	50
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	10	10		10	30	16	16
g / C, Green / Cycle	0.21	0.21		0.19	0.60	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17		0.16	0.07	0.06	0.08
s, saturation flow rate [veh/h]	1603	1613		1603	3204	1683	1431
c, Capacity [veh/h]	334	336		307	1908	545	464
d1, Uniform Delay [s]	16.49	18.94		19.39	4.39	12.15	12.47
k, delay calibration	0.11	0.17		0.13	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	7.95		6.35	0.12	0.75	1.35
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.83		0.82	0.12	0.19	0.26
d, Delay for Lane Group [s/veh]	16.87	26.88		25.74	4.52	12.90	13.82
Lane Group LOS	B	C		C	A	B	B
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.71	3.40		3.04	0.36	0.81	1.02
50th-Percentile Queue Length [ft/ln]	17.69	85.09		76.04	8.91	20.24	25.57
95th-Percentile Queue Length [veh/ln]	1.27	6.13		5.47	0.64	1.46	1.84
95th-Percentile Queue Length [ft/ln]	31.84	153.17		136.87	16.04	36.44	46.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.87	26.88	26.88	0.00	0.00	0.00	25.74	4.52	0.00	0.00	12.90	13.82
Movement LOS	B	C	C				C	A			B	B
d_A, Approach Delay [s/veh]	24.63			0.00			15.83			13.40		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	18.32											
Intersection LOS	B											
Intersection V/C	0.414											

Emissions

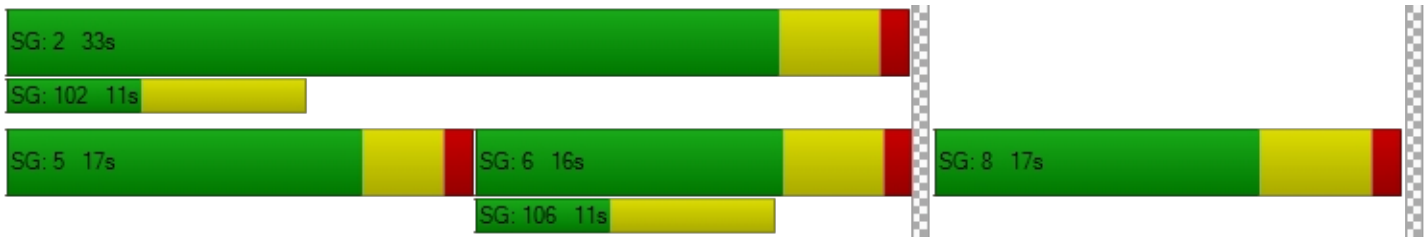
Vehicle Miles Traveled [mph]	7.06	24.31		12.09	10.60	3.70	4.39
Stops [stops/h]	50.94	245.07		218.99	51.33	58.30	73.64
Fuel consumption [US gal/h]	0.93	4.30		3.03	0.92	0.74	0.93
CO [g/h]	65.02	300.30		211.65	64.54	51.69	64.67
NOx [g/h]	12.65	58.43		41.18	12.56	10.06	12.58
VOC [g/h]	15.07	69.60		49.05	14.96	11.98	14.99

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.890	1.969	0.000	0.000
Crosswalk LOS	A	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	476	0	1132	452
d_b, Bicycle Delay [s]	14.52	25.00	4.71	14.98
l_b,int, Bicycle LOS Score for Intersection	2.368	4.132	2.164	1.956
Bicycle LOS	B	D	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.378

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	331	94	231	0	0	0	80	308	0	0	468	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	57	17	17	0	0	11	3	29	0	0	71	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	388	111	248	0	0	11	83	337	0	0	539	116
Peak Hour Factor	0.8760	0.8760	0.8760	0.9500	0.9500	0.9500	0.8760	0.8760	0.9500	0.9500	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	111	32	71	0	0	3	24	96	0	0	154	33
Total Analysis Volume [veh/h]	443	127	283	0	0	12	95	385	0	0	615	132
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	15	30	0	0	15	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	27	27	27		6	24	14	14
g / C, Green / Cycle	0.44	0.44	0.44		0.09	0.39	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.18		0.03	0.11	0.17	0.08
s, saturation flow rate [veh/h]	1781	1819	1589		3459	3560	3560	1589
c, Capacity [veh/h]	789	806	704		330	1408	801	357
d1, Uniform Delay [s]	11.07	11.05	11.33		25.23	12.30	21.79	19.66
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	1.23	1.71		0.47	0.10	1.59	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.36	0.40		0.29	0.27	0.77	0.37
d, Delay for Lane Group [s/veh]	12.35	12.27	13.03		25.71	12.40	23.38	20.29
Lane Group LOS	B	B	B		C	B	C	C
Critical Lane Group	No	No	Yes		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.36	2.37	2.45		0.63	1.63	3.82	1.47
50th-Percentile Queue Length [ft/ln]	58.92	59.17	61.35		15.73	40.63	95.49	36.85
95th-Percentile Queue Length [veh/ln]	4.24	4.26	4.42		1.13	2.93	6.88	2.65
95th-Percentile Queue Length [ft/ln]	106.06	106.50	110.42		28.32	73.13	171.88	66.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.32	12.27	13.03	0.00	0.00	0.00	25.71	12.40	0.00	0.00	23.38	20.29
Movement LOS	B	B	B				C	B			C	C
d_A, Approach Delay [s/veh]	12.55			0.00			15.03			22.83		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	16.82											
Intersection LOS	B											
Intersection V/C	0.378											

Emissions

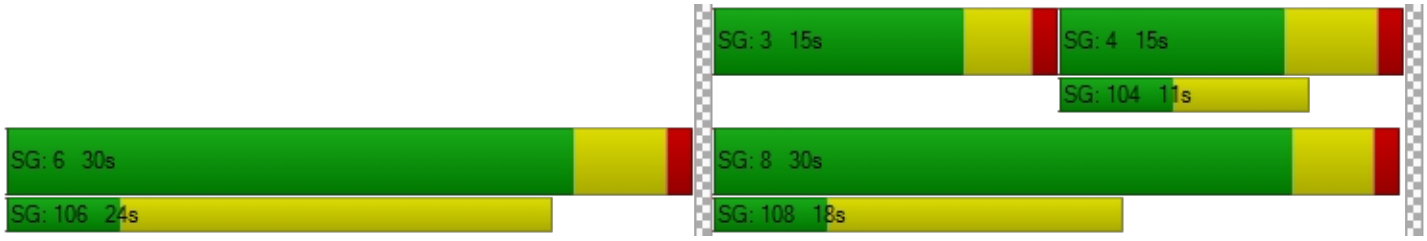
Vehicle Miles Traveled [mph]	11.10	11.21	11.08		6.86	27.79	31.10	6.68
Stops [stops/h]	141.41	142.01	147.23		75.52	195.01	458.35	88.45
Fuel consumption [US gal/h]	2.20	2.21	2.28		1.10	2.97	7.56	1.46
CO [g/h]	153.75	154.52	159.39		76.55	207.57	528.33	102.39
NOx [g/h]	29.91	30.06	31.01		14.89	40.39	102.79	19.92
VOC [g/h]	35.63	35.81	36.94		17.74	48.11	122.45	23.73

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.354	1.868	2.642	0.000
Crosswalk LOS	B	A	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	330
d_b, Bicycle Delay [s]	10.27	30.00	9.98	20.92
l_b,int, Bicycle LOS Score for Intersection	3.181	4.132	2.170	2.390
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\2 Background PM.pdf

Scenario 4 Background PM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	WB Right	0.667	25.3	C
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	SB Left	0.559	21.6	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	WB Left	0.550	12.6	B
4	Main St @ First St	Signalized	HCM 7th Edition	EB Left	0.878	19.9	B
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.046	22.4	C
6	Main St @ Third St	Signalized	HCM 7th Edition	WB Right	0.652	33.3	C
7	Market St @ First St	Signalized	HCM 7th Edition	EB Left	0.456	15.0	B
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.051	26.5	D
9	Market St @ Third St	Signalized	HCM 7th Edition	SB Left	0.668	25.6	C
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	EB Left	0.052	26.7	D
11	Market St @ Fifth St	Signalized	HCM 7th Edition	WB Right	0.372	9.9	A
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	WB Right	0.109	13.6	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.681	31.4	C
14	Market St @ University Ave	Signalized	HCM 7th Edition	SB Left	0.615	29.4	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Right	0.380	7.2	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	EB Thru	0.366	8.8	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	WB Left	0.067	67.6	F
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Right	0.386	9.8	A

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	EB Thru	0.208	92.3	F
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	WB Left	0.586	32.1	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.365	15.6	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.411	22.2	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.464	13.5	B
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.012	12.2	B
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	SB Thru	0.417	10.7	B
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	SB Thru	0.359	10.0	A
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	SB Left	0.421	15.1	B
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.325	10.1	B
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Left	0.211	9.2	A
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.421	13.6	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.005	11.6	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.069	14.7	B
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	WB Left	0.436	24.9	C
34	Lime St @ University Ave	Signalized	HCM 7th Edition	NB Right	0.674	31.1	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Left	0.559	22.8	C
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	SB Right	0.397	11.3	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.729	34.7	C
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.544	18.1	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	280	415	0	0	700	164	0	0	0	34	107	286
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	48	0	0	27	0	0	0	0	36	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	338	463	0	0	727	164	0	0	0	70	107	286
Peak Hour Factor	0.9350	0.9350	0.9500	0.9500	0.9350	0.9350	0.9500	0.9500	0.9500	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	90	124	0	0	194	44	0	0	0	19	29	76
Total Analysis Volume [veh/h]	361	495	0	0	778	175	0	0	0	75	114	306
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	29	43	0	0	14	0	0	0	0	0	27	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	70	70	70	70		70	70
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	16	44	24	24		16	16
g / C, Green / Cycle	0.23	0.63	0.34	0.34		0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.20	0.14	0.25	0.27		0.10	0.19
s, saturation flow rate [veh/h]	1781	3560	1870	1756		1834	1589
c, Capacity [veh/h]	416	2237	632	593		414	359
d1, Uniform Delay [s]	25.79	5.61	20.60	21.07		23.38	25.97
k, delay calibration	0.13	0.50	0.50	0.50		0.11	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	6.57	0.23	8.16	11.03		0.79	7.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.22	0.75	0.80		0.46	0.85
d, Delay for Lane Group [s/veh]	32.36	5.84	28.76	32.10		24.17	33.19
Lane Group LOS	C	A	C	C		C	C
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	6.10	1.25	7.66	8.19		2.61	5.25
50th-Percentile Queue Length [ft/ln]	152.60	31.29	191.58	204.76		65.21	131.22
95th-Percentile Queue Length [veh/ln]	10.16	2.25	12.20	12.88		4.70	9.01
95th-Percentile Queue Length [ft/ln]	253.90	56.32	305.08	322.10		117.38	225.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.36	5.84	0.00	0.00	30.05	32.10	0.00	0.00	0.00	24.17	24.17	33.19
Movement LOS	C	A			C	C				C	C	C
d_A, Approach Delay [s/veh]	17.03			30.43			0.00			29.75		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	25.30											
Intersection LOS	C											
Intersection V/C	0.667											

Emissions

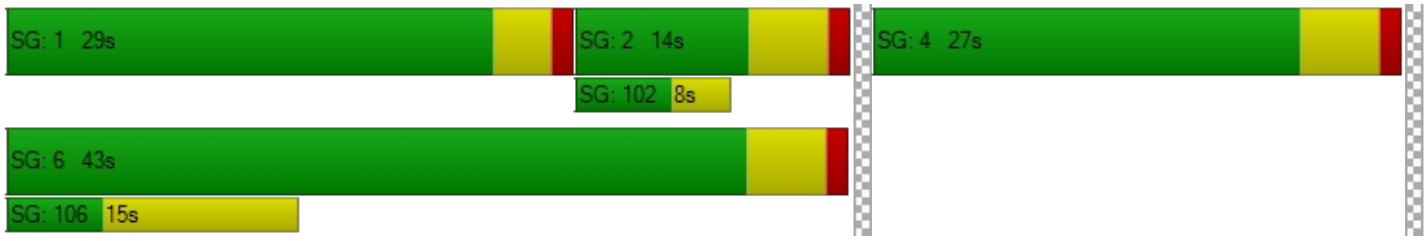
Vehicle Miles Traveled [mph]	21.48	29.45	17.64	17.64		6.93	11.23
Stops [stops/h]	313.92	128.72	394.11	421.22		134.15	269.94
Fuel consumption [US gal/h]	5.56	2.68	6.43	6.95		2.20	4.52
CO [g/h]	388.43	187.28	449.12	485.99		153.96	316.29
NOx [g/h]	75.57	36.44	87.38	94.56		29.96	61.54
VOC [g/h]	90.02	43.40	104.09	112.63		35.68	73.30

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.046	2.117
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1083	254	0	626
d_b, Bicycle Delay [s]	7.36	26.67	35.00	16.53
l_b,int, Bicycle LOS Score for Intersection	2.266	2.346	4.132	2.376
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.559

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	608	180	391	337	0	87	29	174	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	106	58	0	63	0	0	0	36	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	714	238	391	400	0	87	29	210	0	0	0
Peak Hour Factor	0.9500	0.9880	0.9880	0.9880	0.9880	0.9500	0.9880	0.9880	0.9880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	181	60	99	101	0	22	7	53	0	0	0
Total Analysis Volume [veh/h]	0	723	241	396	405	0	88	29	213	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	24	42	0	0	28	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	27	27	17	48	12	12	
g / C, Green / Cycle	0.38	0.38	0.25	0.69	0.17	0.17	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.15	0.22	0.11	0.06	0.13	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1802	1589	
c, Capacity [veh/h]	1357	606	442	2445	302	267	
d1, Uniform Delay [s]	16.82	15.80	25.43	3.88	25.93	28.00	
k, delay calibration	0.50	0.50	0.27	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.50	1.95	14.46	0.15	0.81	5.48	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.53	0.40	0.90	0.17	0.39	0.80	
d, Delay for Lane Group [s/veh]	18.32	17.75	39.89	4.02	26.74	33.47	
Lane Group LOS	B	B	D	A	C	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.32	2.86	7.64	0.73	1.71	3.62	
50th-Percentile Queue Length [ft/ln]	108.12	71.47	190.89	18.22	42.63	90.59	
95th-Percentile Queue Length [veh/ln]	7.74	5.15	12.17	1.31	3.07	6.52	
95th-Percentile Queue Length [ft/ln]	193.38	128.65	304.19	32.80	76.73	163.05	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	18.32	17.75	39.89	4.02	0.00	26.74	26.74	33.47	0.00	0.00	0.00
Movement LOS		B	B	D	A		C	C	C			
d_A, Approach Delay [s/veh]	18.18			21.76			31.09			0.00		
Approach LOS	B			C			C			A		
d_I, Intersection Delay [s/veh]	21.58											
Intersection LOS	C											
Intersection V/C	0.559											

Emissions

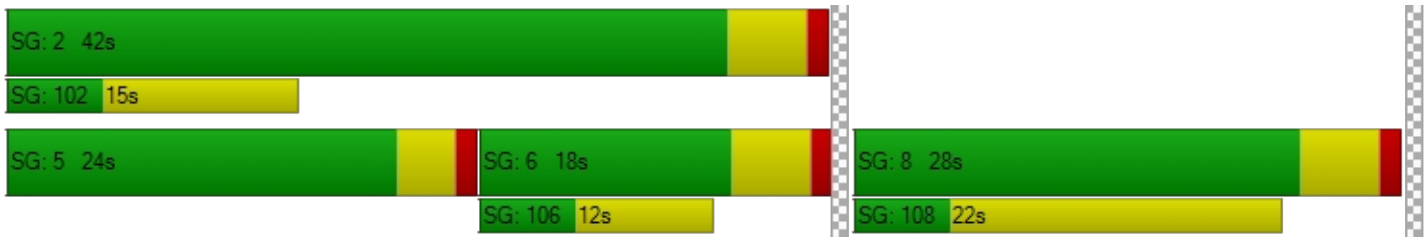
Vehicle Miles Traveled [mph]	98.59	32.86	23.56	24.09	3.57	6.50	
Stops [stops/h]	444.82	147.03	392.69	74.96	87.69	186.35	
Fuel consumption [US gal/h]	9.80	3.23	7.07	1.81	1.43	3.10	
CO [g/h]	684.93	225.69	493.91	126.79	100.11	216.69	
NOx [g/h]	133.26	43.91	96.10	24.67	19.48	42.16	
VOC [g/h]	158.74	52.31	114.47	29.39	23.20	50.22	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.649	0.000	2.054	2.028
Crosswalk LOS	B	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	369	1054	654	0
d_b, Bicycle Delay [s]	23.29	7.83	15.85	35.00
l_b,int, Bicycle LOS Score for Intersection	2.355	2.220	1.832	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.550

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	476	28	136	285	9	65	202	25	54	31	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	164	0	0	98	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	640	28	136	383	9	65	202	25	54	31	117
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	173	8	37	104	2	18	55	7	15	8	32
Total Analysis Volume [veh/h]	6	692	30	147	414	10	70	218	27	58	34	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	11	21	0	0	23	0	0	23	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	13	13	13	13
g / C, Green / Cycle	0.58	0.58	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.39	0.38	0.06	0.13	0.05	0.10
s, saturation flow rate [veh/h]	1856	1488	1226	1834	1135	1642
c, Capacity [veh/h]	1214	1032	275	442	224	395
d1, Uniform Delay [s]	7.49	7.15	22.69	18.29	24.40	17.56
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.20	2.14	0.48	1.09	0.60	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.55	0.25	0.55	0.26	0.40
d, Delay for Lane Group [s/veh]	9.69	9.29	23.18	19.38	25.00	18.22
Lane Group LOS	A	A	C	B	C	B
Critical Lane Group	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.64	3.46	0.84	2.66	0.73	1.66
50th-Percentile Queue Length [ft/ln]	115.89	86.49	21.01	66.59	18.31	41.48
95th-Percentile Queue Length [veh/ln]	8.17	6.23	1.51	4.79	1.32	2.99
95th-Percentile Queue Length [ft/ln]	204.16	155.68	37.82	119.86	32.96	74.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.69	9.69	9.69	9.29	9.29	9.29	23.18	19.38	19.38	25.00	18.22	18.22
Movement LOS	A	A	A	A	A	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	9.69			9.29			20.22			20.03		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.61											
Intersection LOS	B											
Intersection V/C	0.550											

Emissions

Vehicle Miles Traveled [mph]	323.28	77.86	1.98	6.94	1.63	4.49
Stops [stops/h]	303.41	226.45	55.01	174.35	47.94	108.61
Fuel consumption [US gal/h]	16.04	5.75	0.63	1.95	0.55	1.21
CO [g/h]	1121.17	401.98	44.06	136.10	38.60	84.71
NOx [g/h]	218.14	78.21	8.57	26.48	7.51	16.48
VOC [g/h]	259.84	93.16	10.21	31.54	8.95	19.63

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	2.471	2.569	3.051	2.894
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	978	978	669	669
d_b, Bicycle Delay [s]	7.18	7.18	12.18	12.18
l_b,int, Bicycle LOS Score for Intersection	2.761	2.502	2.079	1.919
Bicycle LOS	C	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.878

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	330	10	6	264	65	84	68	145	31	52	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	83	19	0	0	15	83	145	0	172	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	349	10	6	279	148	229	68	317	31	52	11
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	93	3	2	74	39	61	18	84	8	14	3
Total Analysis Volume [veh/h]	93	372	11	6	297	158	244	72	338	33	55	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	11	21	0	0	38	0	0	38	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	0.00	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	29	40	29	21	21	21
g / C, Green / Cycle	0.56	0.41	0.56	0.41	0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.42	0.01	0.21	0.10	0.18	0.25	0.13
s, saturation flow rate [veh/h]	1110	1589	1455	1589	1334	1632	789
c, Capacity [veh/h]	735	647	867	647	311	486	303
d1, Uniform Delay [s]	13.36	12.40	8.43	13.67	24.71	23.07	19.10
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.11	0.05	1.11	0.90	4.36	4.11	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.02	0.35	0.24	0.78	0.84	0.33
d, Delay for Lane Group [s/veh]	17.47	12.45	9.54	14.57	29.07	27.18	19.73
Lane Group LOS	B	B	A	B	C	C	B
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.07	0.10	2.21	1.64	4.08	6.58	1.22
50th-Percentile Queue Length [ft/ln]	101.77	2.55	55.16	40.95	101.98	164.53	30.44
95th-Percentile Queue Length [veh/ln]	7.33	0.18	3.97	2.95	7.34	10.79	2.19
95th-Percentile Queue Length [ft/ln]	183.19	4.58	99.28	73.71	183.56	269.71	54.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.47	17.47	12.45	9.54	9.54	14.57	29.07	27.18	27.18	19.73	19.73	19.73
Movement LOS	B	B	B	A	A	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	17.35			11.26			27.88			19.73		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	19.91											
Intersection LOS	B											
Intersection V/C	0.878											

Emissions

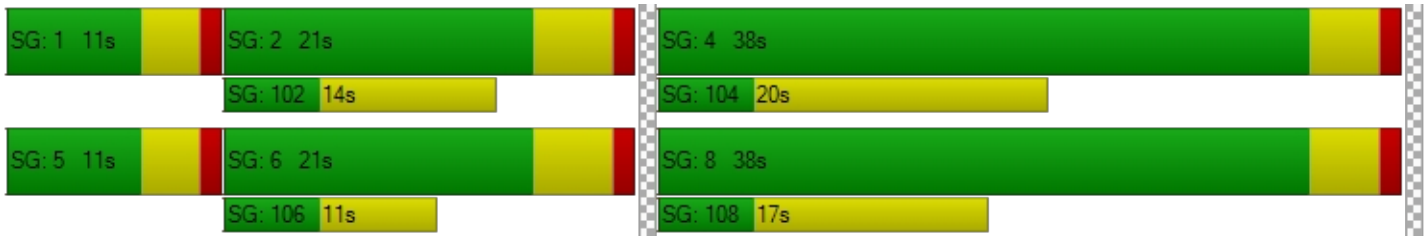
Vehicle Miles Traveled [mph]	35.09	0.83	134.55	70.16	20.19	33.92	2.83
Stops [stops/h]	209.36	5.24	113.47	84.23	209.78	338.46	62.62
Fuel consumption [US gal/h]	4.56	0.10	6.57	3.78	3.16	5.09	0.77
CO [g/h]	319.09	6.91	459.27	263.97	220.61	355.89	53.74
NOx [g/h]	62.08	1.35	89.36	51.36	42.92	69.24	10.46
VOC [g/h]	73.95	1.60	106.44	61.18	51.13	82.48	12.46

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.410	2.777	2.851	2.212
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	769	769	954	954
d_b, Bicycle Delay [s]	13.27	13.27	9.57	9.57
l_b,int, Bicycle LOS Score for Intersection	2.559	2.535	2.853	1.939
Bicycle LOS	B	B	C	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	22.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	340	7	5	432	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	103	0	0	187	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	443	7	5	619	9	5
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	2	1	166	2	1
Total Analysis Volume [veh/h]	475	8	5	664	10	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.05	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.34	0.00	22.37	11.89
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.17	0.17
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.21	0.21	4.32	4.32
d_A, Approach Delay [s/veh]	0.00		0.06		18.88	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.28					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	7	6	17	299	4	140	146	687	10	13	283	203
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	187	0	0	0	0	0	0	0	103
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	6	17	486	4	140	146	687	10	13	283	306
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	4	126	1	36	38	179	3	3	74	80
Total Analysis Volume [veh/h]	7	6	18	506	4	146	152	715	10	14	294	318
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	11	43	0	11	43	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	4.55	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	30	19	29	29	22	46	40	46	35
g / C, Green / Cycle	0.35	0.22	0.34	0.34	0.26	0.54	0.47	0.54	0.42
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.17	0.26	0.10	0.17	0.43	0.02	0.40
s, saturation flow rate [veh/h]	1164	1486	1358	1073	1431	895	1679	737	1542
c, Capacity [veh/h]	243	333	569	516	369	330	795	261	643
d1, Uniform Delay [s]	30.16	25.99	21.60	23.48	26.06	17.35	20.72	15.89	23.97
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.34	0.11	0.36
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.42	2.12	4.08	3.15	4.58	12.20	0.08	20.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.07	0.40	0.54	0.40	0.46	0.91	0.05	0.95
d, Delay for Lane Group [s/veh]	30.38	26.41	23.72	27.55	29.21	21.93	32.92	15.97	44.48
Lane Group LOS	C	C	C	C	C	C	C	B	D
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.11	0.43	3.67	4.95	2.66	1.74	14.87	0.12	14.71
50th-Percentile Queue Length [ft/ln]	2.66	10.79	91.81	123.73	66.56	43.58	371.80	2.94	367.71
95th-Percentile Queue Length [veh/ln]	0.19	0.78	6.61	8.60	4.79	3.14	21.20	0.21	21.00
95th-Percentile Queue Length [ft/ln]	4.80	19.43	165.26	214.94	119.82	78.45	529.91	5.29	524.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.38	26.41	26.41	25.81	27.55	29.21	21.93	32.92	32.92	15.97	44.48	44.48
Movement LOS	C	C	C	C	C	C	C	C	C	B	D	D
d_A, Approach Delay [s/veh]	27.31			26.58			31.02			43.84		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	33.30											
Intersection LOS	C											
Intersection V/C	0.652											

Emissions

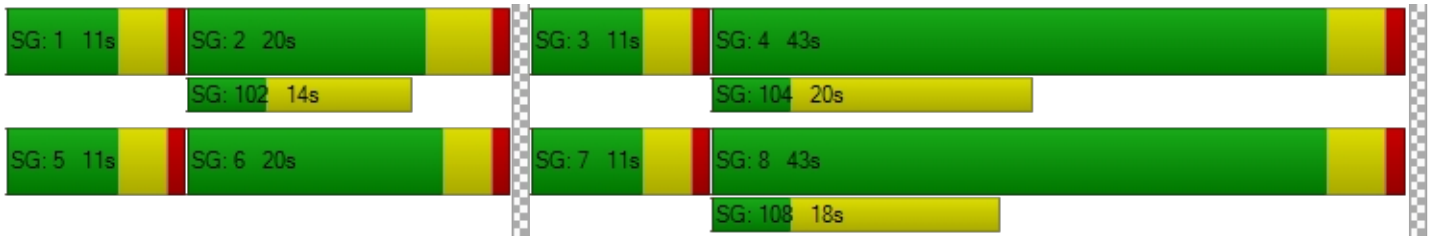
Vehicle Miles Traveled [mph]	0.17	0.57	17.35	21.20	11.03	12.76	60.88	1.07	46.86
Stops [stops/h]	4.51	18.28	155.54	209.61	112.77	73.84	629.87	4.98	622.95
Fuel consumption [US gal/h]	0.06	0.19	2.94	3.96	2.14	1.61	10.84	0.12	10.91
CO [g/h]	4.09	12.96	205.47	276.57	149.34	112.66	757.96	8.19	762.62
NOx [g/h]	0.80	2.52	39.98	53.81	29.06	21.92	147.47	1.59	148.38
VOC [g/h]	0.95	3.00	47.62	64.10	34.61	26.11	175.66	1.90	176.74

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.147	2.547	2.379	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	376	609	901	901
d_b, Bicycle Delay [s]	28.01	20.55	12.83	12.83
l_b,int, Bicycle LOS Score for Intersection	1.825	2.856	3.221	2.807
Bicycle LOS	A	C	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.456

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	619	71	115	983	24	21	103	15	47	47	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	65	145	172	99	0	0	0	0	59	0	107
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	684	216	287	1082	24	21	103	15	106	47	140
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	188	59	79	297	7	6	28	4	29	13	38
Total Analysis Volume [veh/h]	21	751	237	315	1188	26	23	113	16	116	52	154
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	25	25	36	30	30	14	14	14	14
g / C, Green / Cycle	0.60	0.42	0.42	0.60	0.50	0.50	0.23	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.21	0.15	0.36	0.33	0.33	0.02	0.07	0.09	0.12
s, saturation flow rate [veh/h]	609	3560	1589	870	1870	1856	1176	1830	1261	1652
c, Capacity [veh/h]	441	1497	668	622	939	932	212	421	285	380
d1, Uniform Delay [s]	6.42	12.77	11.84	7.13	11.02	11.03	25.99	19.14	24.97	20.33
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	1.20	1.47	2.93	3.45	3.50	0.22	0.41	0.94	1.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.50	0.35	0.51	0.65	0.65	0.11	0.31	0.41	0.54
d, Delay for Lane Group [s/veh]	6.47	13.97	13.31	10.06	14.47	14.53	26.21	19.55	25.91	21.54
Lane Group LOS	A	B	B	B	B	B	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.08	3.26	2.04	1.76	5.38	5.37	0.31	1.46	1.58	2.52
50th-Percentile Queue Length [ft/ln]	1.88	81.56	50.91	44.01	134.46	134.17	7.77	36.48	39.62	63.03
95th-Percentile Queue Length [veh/ln]	0.14	5.87	3.67	3.17	9.18	9.17	0.56	2.63	2.85	4.54
95th-Percentile Queue Length [ft/ln]	3.38	146.81	91.64	79.21	229.55	229.16	13.99	65.67	71.32	113.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.47	13.97	13.31	10.06	14.50	14.53	26.21	19.55	19.55	25.91	21.54	21.54
Movement LOS	A	B	B	B	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	13.66			13.59			20.56			23.11		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.98											
Intersection LOS	B											
Intersection V/C	0.456											

Emissions

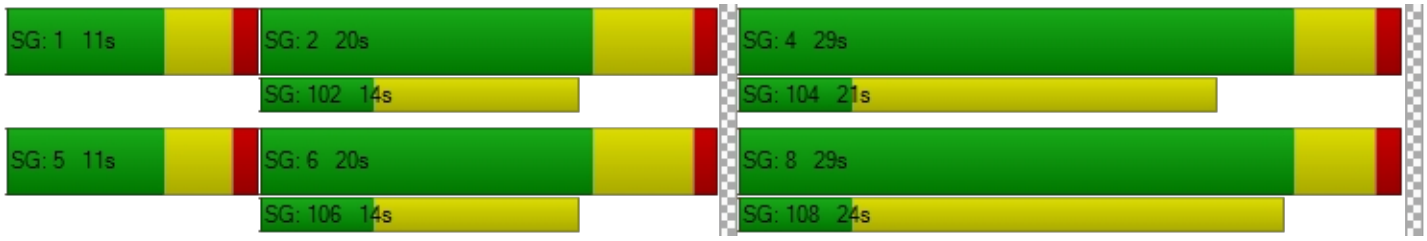
Vehicle Miles Traveled [mph]	1.57	56.07	17.69	10.40	20.10	20.00	0.53	2.97	9.60	17.04
Stops [stops/h]	4.50	391.51	122.18	105.62	322.70	322.02	18.66	87.56	95.09	151.28
Fuel consumption [US gal/h]	0.13	7.99	2.48	2.06	5.68	5.67	0.22	0.98	1.41	2.25
CO [g/h]	8.95	558.50	173.09	143.67	397.21	396.38	15.24	68.70	98.42	157.26
NOx [g/h]	1.74	108.66	33.68	27.95	77.28	77.12	2.97	13.37	19.15	30.60
VOC [g/h]	2.07	129.44	40.12	33.30	92.06	91.86	3.53	15.92	22.81	36.45

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	3.103	2.952	2.005	2.391
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	487	487	813	813
d_b, Bicycle Delay [s]	17.18	17.18	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.606	3.035	2.025	2.305
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	26.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.051

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	11	700	1035	6	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	210	158	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	910	1193	6	9	5
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	239	314	2	2	1
Total Analysis Volume [veh/h]	12	957	1254	6	9	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.05	0.01
d_M, Delay for Movement [s/veh]	11.72	0.00	0.00	0.00	26.53	14.57
Movement LOS	B	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.07	0.00	0.00	0.00	0.20	0.20
95th-Percentile Queue Length [ft/ln]	1.68	0.00	0.00	0.00	5.00	5.00
d_A, Approach Delay [s/veh]	0.15		0.00		22.26	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.20					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	25.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	557	311	398	606	28	30	133	13	177	104	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	210	0	0	158	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	767	311	398	764	28	30	133	13	177	104	125
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	196	79	102	195	7	8	34	3	45	27	32
Total Analysis Volume [veh/h]	11	783	317	406	780	29	31	136	13	181	106	128
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	24	0	13	26	0	11	27	0	11	27	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	46	33	33	45	40	40	19	8	19	12	12
g / C, Green / Cycle	0.61	0.44	0.44	0.61	0.53	0.53	0.26	0.11	0.26	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.34	0.34	0.55	0.24	0.24	0.03	0.09	0.14	0.06	0.09
s, saturation flow rate [veh/h]	476	1683	1520	738	1683	1662	1188	1657	1340	1683	1431
c, Capacity [veh/h]	421	733	662	446	895	884	393	188	396	273	232
d1, Uniform Delay [s]	7.10	18.18	18.20	16.69	10.83	10.84	21.03	32.37	23.43	28.09	28.91
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	8.37	9.26	25.24	1.66	1.69	0.08	7.24	0.83	0.90	2.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.79	0.79	0.91	0.45	0.45	0.08	0.79	0.46	0.39	0.55
d, Delay for Lane Group [s/veh]	7.12	26.55	27.46	41.93	12.50	12.52	21.11	39.61	24.26	28.99	30.95
Lane Group LOS	A	C	C	D	B	B	C	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	9.30	8.58	5.78	3.85	3.81	0.41	2.93	2.65	1.72	2.18
50th-Percentile Queue Length [ft/ln]	1.46	232.42	214.58	144.54	96.19	95.22	10.14	73.28	66.20	42.92	54.51
95th-Percentile Queue Length [veh/ln]	0.11	14.30	13.39	9.73	6.93	6.86	0.73	5.28	4.77	3.09	3.92
95th-Percentile Queue Length [ft/ln]	2.64	357.44	334.70	243.13	173.15	171.39	18.24	131.91	119.17	77.26	98.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.12	26.79	27.46	41.93	12.51	12.52	21.11	39.61	39.61	24.26	28.99	30.95
Movement LOS	A	C	C	D	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	26.79			22.34			36.43			27.53		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	25.64											
Intersection LOS	C											
Intersection V/C	0.668											

Emissions

Vehicle Miles Traveled [mph]	0.43	22.78	20.61	30.72	30.79	30.43	0.79	3.82	15.20	8.90	10.75
Stops [stops/h]	2.81	446.25	411.99	277.52	184.69	182.82	19.46	140.70	127.11	82.41	104.65
Fuel consumption [US gal/h]	0.05	7.34	6.80	7.29	3.95	3.91	0.27	2.14	2.22	1.45	1.83
CO [g/h]	3.75	513.34	475.66	509.63	276.26	273.36	19.11	149.28	155.28	101.15	127.69
NOx [g/h]	0.73	99.88	92.55	99.15	53.75	53.19	3.72	29.04	30.21	19.68	24.84
VOC [g/h]	0.87	118.97	110.24	118.11	64.03	63.35	4.43	34.60	35.99	23.44	29.59

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.803	2.861	2.047	2.699
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	504	549	595	595
d_b, Bicycle Delay [s]	20.98	19.73	18.52	18.52
l_b,int, Bicycle LOS Score for Intersection	2.691	2.776	2.071	2.459
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	26.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	879	1	5	780	6	9	0	13	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	210	0	0	158	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	1089	1	5	938	6	9	0	13	0	0	14
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	284	0	1	245	2	2	0	3	0	0	4
Total Analysis Volume [veh/h]	23	1136	1	5	978	6	9	0	14	0	0	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.01	0.01	0.00	0.05	0.00	0.03	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	10.34	0.00	0.00	10.95	0.00	0.00	26.72	30.52	12.93	29.74	30.21	12.99
Movement LOS	B	A	A	B	A	A	D	D	B	D	D	B
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.02	0.00	0.00	0.25	0.25	0.25	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	2.55	0.00	0.00	0.62	0.00	0.00	6.34	6.34	6.34	2.49	2.49	2.49
d_A, Approach Delay [s/veh]	0.20			0.06			18.33			12.99		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	0.42											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.372

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	801	30	82	734	19	14	9	17	19	21	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	210	0	0	158	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1011	30	82	892	19	14	9	17	19	21	49
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	257	8	21	227	5	4	2	4	5	5	12
Total Analysis Volume [veh/h]	18	1027	30	83	907	19	14	9	17	19	21	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	125
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	57	0	11	57	0	11	45	0	12	46	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	102	92	92	102	95	95	13	6	13	6	6
g / C, Green / Cycle	0.82	0.73	0.73	0.82	0.76	0.76	0.11	0.05	0.11	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.03	0.32	0.32	0.14	0.28	0.28	0.01	0.02	0.01	0.01	0.03
s, saturation flow rate [veh/h]	598	1683	1666	575	1683	1671	1341	1509	1391	1683	1431
c, Capacity [veh/h]	516	1231	1219	489	1276	1267	215	71	214	88	75
d1, Uniform Delay [s]	2.80	6.58	6.58	3.57	5.05	5.05	50.39	57.78	50.56	56.84	58.16
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	1.10	1.12	0.75	0.81	0.81	0.13	3.17	0.18	1.38	9.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.43	0.43	0.17	0.36	0.36	0.07	0.37	0.09	0.24	0.67
d, Delay for Lane Group [s/veh]	2.83	7.69	7.70	4.32	5.85	5.86	50.52	60.95	50.74	58.22	67.96
Lane Group LOS	A	A	A	A	A	A	D	E	D	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.06	5.18	5.13	0.39	3.66	3.64	0.41	0.87	0.56	0.68	1.77
50th-Percentile Queue Length [ft/ln]	1.57	129.55	128.37	9.65	91.56	90.95	10.22	21.70	13.92	16.93	44.30
95th-Percentile Queue Length [veh/ln]	0.11	8.92	8.85	0.69	6.59	6.55	0.74	1.56	1.00	1.22	3.19
95th-Percentile Queue Length [ft/ln]	2.83	222.88	221.28	17.37	164.81	163.71	18.39	39.06	25.05	30.48	79.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.83	7.69	7.70	4.32	5.86	5.86	50.52	60.95	60.95	50.74	58.22	67.96
Movement LOS	A	A	A	A	A	A	D	E	E	D	E	E
d_A, Approach Delay [s/veh]	7.61			5.73			57.30			62.05		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	9.86											
Intersection LOS	A											
Intersection V/C	0.372											

Emissions

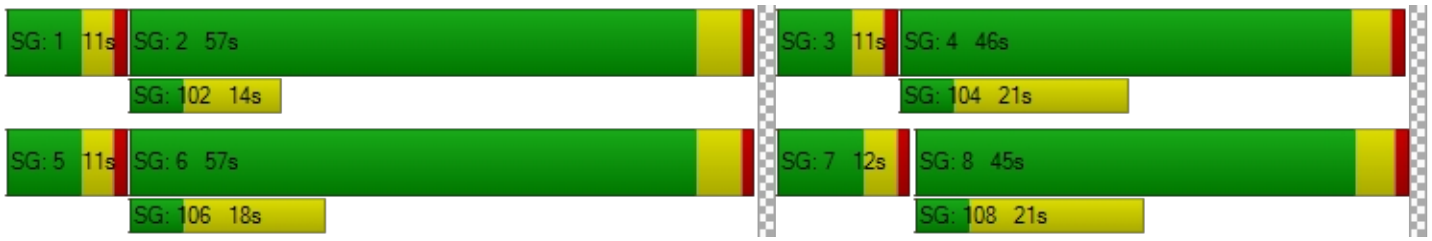
Vehicle Miles Traveled [mph]	1.34	39.60	39.21	6.32	35.41	35.15	0.37	0.68	1.60	1.77	4.22
Stops [stops/h]	1.81	149.24	147.88	11.12	105.48	104.78	11.77	25.00	16.03	19.51	51.03
Fuel consumption [US gal/h]	0.08	3.46	3.43	0.40	2.70	2.68	0.21	0.45	0.33	0.40	1.08
CO [g/h]	5.25	242.05	239.81	27.79	188.47	187.18	14.37	31.39	23.05	28.19	75.29
NOx [g/h]	1.02	47.09	46.66	5.41	36.67	36.42	2.80	6.11	4.49	5.49	14.65
VOC [g/h]	1.22	56.10	55.58	6.44	43.68	43.38	3.33	7.27	5.34	6.53	17.45

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.82	53.82	53.82	53.82
l_p,int, Pedestrian LOS Score for Intersectio	2.778	2.796	2.004	2.280
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	830	646	662
d_b, Bicycle Delay [s]	21.37	21.37	28.63	27.96
l_b,int, Bicycle LOS Score for Intersection	2.661	2.606	1.840	1.923
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.109

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	823	36	19	683	42	0	0	49	0	0	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	210	0	0	158	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	1033	36	19	841	42	0	0	49	0	0	48
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9500	0.9500	0.9460	0.9500	0.9500	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	273	10	5	222	11	0	0	13	0	0	13
Total Analysis Volume [veh/h]	35	1092	38	20	889	44	0	0	52	0	0	51
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.10	0.00	0.00	0.11
d_M, Delay for Movement [s/veh]	10.18	0.00	0.00	11.06	0.00	0.00	0.00	0.00	12.33	0.00	0.00	13.63
Movement LOS	B	A	A	B	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.36
95th-Percentile Queue Length [ft/ln]	3.77	0.00	0.00	2.52	0.00	0.00	0.00	0.00	7.90	0.00	0.00	9.11
d_A, Approach Delay [s/veh]	0.31			0.23			12.33			13.63		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.86											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.681

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	101	622	89	72	587	73	219	298	184	66	223	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	202	25	0	141	17	7	6	7	22	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	118	824	114	72	728	90	226	304	191	88	229	53
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	218	30	19	192	24	60	80	50	23	61	14
Total Analysis Volume [veh/h]	125	871	121	76	770	95	239	321	202	93	242	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15	31	0	11	27	0	12	27	0	11	26	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	8	32	32	6	30	30	28	18	18	29	17
g / C, Green / Cycle	0.10	0.40	0.40	0.07	0.37	0.37	0.35	0.23	0.23	0.36	0.21
(v / s)_i Volume / Saturation Flow Rate	0.08	0.30	0.30	0.05	0.26	0.26	0.20	0.19	0.14	0.14	0.18
s, saturation flow rate [veh/h]	1603	1683	1612	1603	1683	1619	1196	1683	1431	643	1629
c, Capacity [veh/h]	155	670	642	115	628	605	385	380	323	395	340
d1, Uniform Delay [s]	35.40	20.72	20.72	36.17	21.28	21.28	21.27	29.64	27.93	18.96	30.66
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.18	0.11	0.11	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.42	7.75	8.10	6.30	6.43	6.67	7.33	8.30	1.99	0.30	12.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.76	0.76	0.66	0.70	0.70	0.62	0.85	0.63	0.24	0.88
d, Delay for Lane Group [s/veh]	44.82	28.47	28.82	42.47	27.71	27.95	28.60	37.94	29.92	19.26	42.69
Lane Group LOS	D	C	C	D	C	C	C	D	C	B	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.71	8.87	8.56	1.60	7.57	7.32	3.96	6.47	3.50	1.18	6.58
50th-Percentile Queue Length [ft/ln]	67.67	221.68	214.12	39.98	189.26	183.10	98.88	161.72	87.39	29.47	164.58
95th-Percentile Queue Length [veh/ln]	4.87	13.75	13.36	2.88	12.08	11.76	7.12	10.64	6.29	2.12	10.79
95th-Percentile Queue Length [ft/ln]	121.80	343.77	334.11	71.97	302.07	294.05	177.98	266.00	157.30	53.04	269.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.82	28.62	28.82	42.47	27.81	27.95	28.60	37.94	29.92	19.26	42.69	42.69
Movement LOS	D	C	C	D	C	C	C	D	C	B	D	D
d_A, Approach Delay [s/veh]	30.45			29.01			32.89			37.12		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	31.42											
Intersection LOS	C											
Intersection V/C	0.681											

Emissions

Vehicle Miles Traveled [mph]	9.87	39.98	38.34	6.04	35.05	33.72	54.77	73.56	46.29	14.90	47.75
Stops [stops/h]	121.80	399.02	385.42	71.97	340.68	329.58	177.98	291.10	157.30	53.04	296.24
Fuel consumption [US gal/h]	2.43	7.46	7.21	1.43	6.38	6.18	4.82	7.47	4.18	1.24	5.87
CO [g/h]	170.01	521.39	503.84	99.85	446.24	431.73	336.72	522.26	292.01	86.55	410.50
NOx [g/h]	33.08	101.44	98.03	19.43	86.82	84.00	65.51	101.61	56.81	16.84	79.87
VOC [g/h]	39.40	120.84	116.77	23.14	103.42	100.06	78.04	121.04	67.68	20.06	95.14

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.822	2.852	2.574	2.182
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	648	548	548	535
d_b, Bicycle Delay [s]	18.29	21.10	21.10	21.46
l_b,int, Bicycle LOS Score for Intersection	2.696	2.550	3.031	2.419
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	609	132	173	632	56	48	400	79	67	278	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	240	0	0	158	12	5	9	5	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	849	132	173	790	68	53	409	84	67	286	116
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	230	36	47	214	18	14	111	23	18	78	31
Total Analysis Volume [veh/h]	86	921	143	188	857	74	57	444	91	73	310	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	27	0	18	33	0	11	29	0	11	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	6	33	33	12	39	39	5	17	17	6	17	17
g / C, Green / Cycle	0.07	0.39	0.39	0.14	0.46	0.46	0.06	0.19	0.19	0.07	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.05	0.29	0.10	0.12	0.27	0.05	0.04	0.16	0.16	0.05	0.13	0.14
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1585	1603	1683	1521
c, Capacity [veh/h]	116	1249	557	221	1459	651	99	328	309	109	341	308
d1, Uniform Delay [s]	38.65	22.22	17.59	35.78	17.21	13.29	38.81	32.91	32.97	38.67	31.23	31.34
k, delay calibration	0.11	0.50	0.50	0.20	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.99	3.92	1.11	15.38	1.74	0.35	5.24	5.63	6.25	6.87	2.23	2.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.74	0.26	0.85	0.59	0.11	0.58	0.84	0.84	0.67	0.66	0.68
d, Delay for Lane Group [s/veh]	47.65	26.14	18.70	51.16	18.95	13.65	44.05	38.55	39.22	45.54	33.46	33.97
Lane Group LOS	D	C	B	D	B	B	D	D	D	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.00	7.97	1.96	4.62	6.04	0.82	1.28	5.80	5.57	1.69	4.45	4.15
50th-Percentile Queue Length [ft/ln]	49.95	199.19	49.09	115.46	150.98	20.57	32.08	145.05	139.30	42.21	111.20	103.85
95th-Percentile Queue Length [veh/ln]	3.60	12.60	3.53	8.14	10.07	1.48	2.31	9.75	9.44	3.04	7.91	7.48
95th-Percentile Queue Length [ft/ln]	89.91	314.92	88.36	203.57	251.73	37.02	57.74	243.81	236.08	75.97	197.66	186.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.65	26.14	18.70	51.16	18.95	13.65	44.05	38.80	39.22	45.54	33.59	33.97
Movement LOS	D	C	B	D	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	26.83			24.01			39.37			35.40		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	29.39											
Intersection LOS	C											
Intersection V/C	0.615											

Emissions

Vehicle Miles Traveled [mph]	6.90	73.90	11.47	14.84	67.66	5.84	12.96	62.38	59.29	11.87	36.86	34.06
Stops [stops/h]	84.62	674.89	83.16	195.60	511.55	34.84	54.35	245.73	235.99	71.50	188.38	175.94
Fuel consumption [US gal/h]	1.73	12.79	1.61	3.99	9.73	0.69	1.34	6.08	5.83	1.48	3.92	3.65
CO [g/h]	121.16	894.20	112.34	279.16	680.21	48.25	94.00	424.79	407.18	103.78	274.21	255.43
NOx [g/h]	23.57	173.98	21.86	54.32	132.34	9.39	18.29	82.65	79.22	20.19	53.35	49.70
VOC [g/h]	28.08	207.24	26.04	64.70	157.64	11.18	21.78	98.45	94.37	24.05	63.55	59.20

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.863	2.873	2.506	2.507
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	515	656	572	574
d_b, Bicycle Delay [s]	23.42	19.18	21.67	21.60
l_b,int, Bicycle LOS Score for Intersection	2.723	2.697	2.262	2.194
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	7.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.380

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	751	42	38	717	43	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	251	41	0	163	23	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1002	83	38	880	66	77
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	270	22	10	237	18	21
Total Analysis Volume [veh/h]	1081	90	41	949	71	83
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	40	0	11	51	34	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	60	60	68	68	7	7
g / C, Green / Cycle	0.71	0.71	0.80	0.80	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.31	0.32	0.07	0.27	0.04	0.05
s, saturation flow rate [veh/h]	1870	1821	600	3560	1781	1589
c, Capacity [veh/h]	1319	1284	535	2861	146	131
d1, Uniform Delay [s]	5.38	5.44	2.80	2.23	37.28	37.77
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.09	1.17	0.28	0.31	2.47	5.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.46	0.08	0.33	0.48	0.63
d, Delay for Lane Group [s/veh]	6.46	6.61	3.08	2.55	39.75	42.79
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.65	3.72	0.10	1.10	1.51	1.85
50th-Percentile Queue Length [ft/ln]	91.37	92.88	2.61	27.38	37.70	46.23
95th-Percentile Queue Length [veh/ln]	6.58	6.69	0.19	1.97	2.71	3.33
95th-Percentile Queue Length [ft/ln]	164.46	167.18	4.70	49.29	67.87	83.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.53	6.61	3.08	2.55	39.75	42.79
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	6.54		2.57		41.39	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	7.16					
Intersection LOS	A					
Intersection V/C	0.380					

Emissions

Vehicle Miles Traveled [mph]	43.32	43.32	3.29	76.15	11.70	13.68
Stops [stops/h]	154.79	157.35	4.43	92.77	63.87	78.32
Fuel consumption [US gal/h]	3.59	3.62	0.18	4.09	1.35	1.64
CO [g/h]	250.60	253.21	12.89	286.05	94.06	114.52
NOx [g/h]	48.76	49.26	2.51	55.65	18.30	22.28
VOC [g/h]	58.08	58.68	2.99	66.29	21.80	26.54

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	0.00	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.753	0.000	2.059
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	821	1080	692
d_b, Bicycle Delay [s]	14.76	8.99	18.18
l_b,int, Bicycle LOS Score for Intersection	2.740	2.591	1.774
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.366

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	723	26	60	660	26	34	50	16	24	27	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	293	0	0	186	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1016	26	60	846	26	34	50	16	24	27	49
Peak Hour Factor	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	267	7	16	222	7	9	13	4	6	7	13
Total Analysis Volume [veh/h]	15	1067	27	63	889	27	36	53	17	25	28	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	17	0	11	17	0	0	47	0	0	47	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	59	50	50	59	53	53	6	6
g / C, Green / Cycle	0.79	0.66	0.66	0.79	0.71	0.71	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.02	0.29	0.29	0.09	0.25	0.25	0.06	0.06
s, saturation flow rate [veh/h]	687	1870	1854	669	1870	1851	1734	1771
c, Capacity [veh/h]	616	1239	1229	589	1320	1306	212	210
d1, Uniform Delay [s]	2.22	6.04	6.04	2.81	4.31	4.31	33.40	33.37
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.15	1.16	0.37	0.73	0.74	1.83	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.44	0.44	0.11	0.35	0.35	0.50	0.50
d, Delay for Lane Group [s/veh]	2.24	7.19	7.20	3.18	5.04	5.04	35.23	35.17
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.02	3.43	3.40	0.15	2.10	2.08	1.93	1.89
50th-Percentile Queue Length [ft/ln]	0.58	85.65	85.01	3.72	52.45	51.98	48.37	47.37
95th-Percentile Queue Length [veh/ln]	0.04	6.17	6.12	0.27	3.78	3.74	3.48	3.41
95th-Percentile Queue Length [ft/ln]	1.05	154.17	153.03	6.70	94.41	93.56	87.06	85.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.24	7.20	7.20	3.18	5.04	5.04	35.23	35.23	35.23	35.17	35.17	35.17
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.13			4.92			35.23			35.17		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	8.75											
Intersection LOS	A											
Intersection V/C	0.366											

Emissions

Vehicle Miles Traveled [mph]	1.13	41.44	41.09	4.66	34.06	33.71	2.76	17.36
Stops [stops/h]	1.12	164.45	163.23	7.14	100.70	99.79	92.87	90.94
Fuel consumption [US gal/h]	0.06	3.62	3.59	0.27	2.53	2.50	1.39	1.96
CO [g/h]	4.08	253.06	251.08	19.02	176.68	174.97	96.93	137.12
NOx [g/h]	0.79	49.24	48.85	3.70	34.38	34.04	18.86	26.68
VOC [g/h]	0.95	58.65	58.19	4.41	40.95	40.55	22.46	31.78

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.792	2.829	1.809	1.890
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	317	317	1128	1128
d_b, Bicycle Delay [s]	26.54	26.54	7.13	7.13
l_b,int, Bicycle LOS Score for Intersection	2.689	2.582	1.949	1.946
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	67.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	733	4	3	699	7	7	0	40	4	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	293	0	0	186	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	1026	4	3	885	7	7	0	40	4	0	20
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	281	1	1	242	2	2	0	11	1	0	5
Total Analysis Volume [veh/h]	12	1123	4	3	968	8	8	0	44	4	0	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.00	0.01	0.00	0.11	0.00	0.08	0.07	0.00	0.05
d_M, Delay for Movement [s/veh]	10.21	0.00	0.00	10.88	0.00	0.00	59.46	83.34	15.18	67.63	82.26	14.70
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.00	0.01	0.00	0.00	0.72	0.72	0.72	0.38	0.38	0.38
95th-Percentile Queue Length [ft/ln]	1.30	0.00	0.00	0.37	0.00	0.00	17.95	17.95	17.95	9.53	9.53	9.53
d_A, Approach Delay [s/veh]	0.11			0.03			21.99			22.84		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	0.86											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.386

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	625	12	32	705	14	34	38	65	19	14	71
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	293	0	0	186	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	918	12	32	891	14	34	38	65	19	14	71
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	252	3	9	244	4	9	10	18	5	4	19
Total Analysis Volume [veh/h]	16	1007	13	35	977	15	37	42	71	21	15	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	35	35	42	37	37	8	8	8
g / C, Green / Cycle	0.71	0.59	0.59	0.71	0.61	0.61	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.27	0.27	0.05	0.27	0.27	0.11	0.02	0.05
s, saturation flow rate [veh/h]	672	1870	1862	700	1870	1860	1421	1475	1589
c, Capacity [veh/h]	576	1102	1097	590	1148	1141	260	287	207
d1, Uniform Delay [s]	3.19	6.96	6.96	3.37	6.10	6.10	25.45	23.13	23.85
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.40	1.41	0.19	1.19	1.20	2.01	0.19	1.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.46	0.46	0.06	0.43	0.43	0.58	0.13	0.38
d, Delay for Lane Group [s/veh]	3.21	8.36	8.37	3.56	7.29	7.30	27.46	23.32	24.98
Lane Group LOS	A	A	A	A	A	A	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.03	3.06	3.05	0.09	2.64	2.63	2.14	0.45	1.03
50th-Percentile Queue Length [ft/ln]	0.79	76.53	76.24	2.37	66.04	65.74	53.51	11.24	25.87
95th-Percentile Queue Length [veh/ln]	0.06	5.51	5.49	0.17	4.75	4.73	3.85	0.81	1.86
95th-Percentile Queue Length [ft/ln]	1.42	137.75	137.23	4.26	118.87	118.33	96.32	20.22	46.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.21	8.36	8.37	3.56	7.30	7.30	27.46	27.46	27.46	23.32	23.32	24.98
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.28			7.17			27.46			24.45		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.82											
Intersection LOS	A											
Intersection V/C	0.386											

Emissions

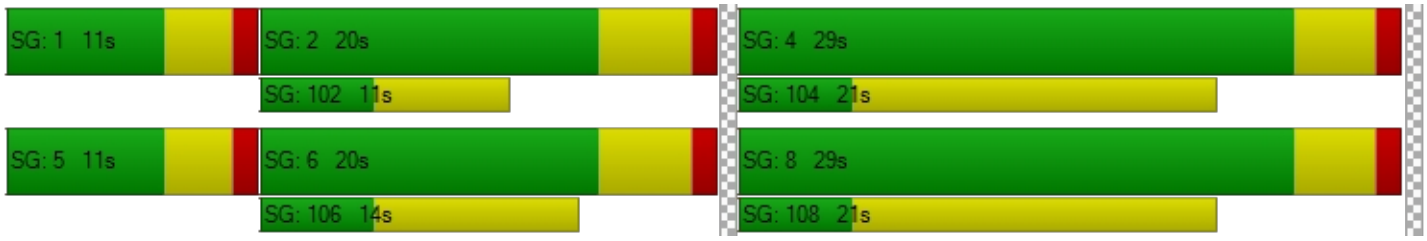
Vehicle Miles Traveled [mph]	1.20	38.37	38.20	2.63	37.38	37.18	4.40	1.07	2.33
Stops [stops/h]	1.90	183.67	182.97	5.68	158.49	157.77	128.43	26.97	62.08
Fuel consumption [US gal/h]	0.07	3.71	3.70	0.17	3.35	3.34	1.53	0.32	0.74
CO [g/h]	4.93	259.59	258.53	11.77	234.51	233.38	106.87	22.55	51.68
NOx [g/h]	0.96	50.51	50.30	2.29	45.63	45.41	20.79	4.39	10.06
VOC [g/h]	1.14	60.16	59.92	2.73	54.35	54.09	24.77	5.23	11.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.789	2.822	1.790	2.007
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	497	497	813	813
d_b, Bicycle Delay [s]	16.95	16.95	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.629	2.621	2.022	1.962
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	92.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.208

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	603	15	28	742	8	4	9	53	2	4	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	293	0	0	186	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	896	15	28	928	8	4	9	53	2	4	51
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	246	4	8	255	2	1	2	15	1	1	14
Total Analysis Volume [veh/h]	7	986	17	31	1021	9	4	10	58	2	4	56
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.05	0.01	0.00	0.07	0.21	0.11	0.04	0.08	0.11
d_M, Delay for Movement [s/veh]	10.43	0.00	0.00	10.49	0.00	0.00	82.40	92.29	24.49	83.02	83.54	16.04
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	C
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.14	0.00	0.00	1.74	1.74	1.74	0.88	0.88	0.88
95th-Percentile Queue Length [ft/ln]	0.79	0.00	0.00	3.54	0.00	0.00	43.53	43.53	43.53	21.98	21.98	21.98
d_A, Approach Delay [s/veh]	0.07			0.31			37.13			22.55		
Approach LOS	A			A			E			C		
d_I, Intersection Delay [s/veh]	2.03											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	465	151	150	593	37	66	408	49	176	446	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	272	0	41	125	20	14	0	0	0	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	737	151	191	718	57	80	408	49	176	446	92
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	201	41	52	196	16	22	111	13	48	122	25
Total Analysis Volume [veh/h]	58	804	165	208	783	62	87	445	53	192	486	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	17	33	0	13	30	0	16	33	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	5	33	33	12	40	40	6	15	15	11	20	20
g / C, Green / Cycle	0.06	0.37	0.37	0.14	0.45	0.45	0.07	0.16	0.16	0.13	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.03	0.23	0.10	0.12	0.22	0.04	0.05	0.14	0.14	0.11	0.16	0.16
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1801	1781	1870	1761
c, Capacity [veh/h]	107	1304	582	243	1588	709	124	308	297	226	416	392
d1, Uniform Delay [s]	41.12	23.34	20.16	38.02	17.70	14.37	40.97	36.29	36.32	38.44	32.43	32.45
k, delay calibration	0.11	0.50	0.50	0.27	0.50	0.50	0.11	0.11	0.11	0.26	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.27	2.19	1.22	18.44	1.10	0.24	7.09	5.38	5.74	18.30	2.41	2.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.62	0.28	0.86	0.49	0.09	0.70	0.82	0.82	0.85	0.72	0.73
d, Delay for Lane Group [s/veh]	45.39	25.53	21.38	56.46	18.80	14.61	48.06	41.67	42.06	56.75	34.84	35.03
Lane Group LOS	D	C	C	E	B	B	D	D	D	E	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.34	6.88	2.50	5.60	5.62	0.74	2.09	5.66	5.52	5.18	6.15	5.82
50th-Percentile Queue Length [ft/ln]	33.39	172.09	62.43	139.90	140.61	18.50	52.19	141.51	137.90	129.43	153.70	145.57
95th-Percentile Queue Length [veh/ln]	2.40	11.19	4.49	9.48	9.51	1.33	3.76	9.56	9.37	8.91	10.21	9.78
95th-Percentile Queue Length [ft/ln]	60.11	279.66	112.37	236.88	237.85	33.29	93.94	239.05	234.19	222.72	255.37	244.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.39	25.53	21.38	56.46	18.80	14.61	48.06	41.84	42.06	56.75	34.91	35.03
Movement LOS	D	C	C	E	B	B	D	D	D	E	C	D
d_A, Approach Delay [s/veh]	25.98			25.99			42.79			40.32		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.08											
Intersection LOS	C											
Intersection V/C	0.586											

Emissions

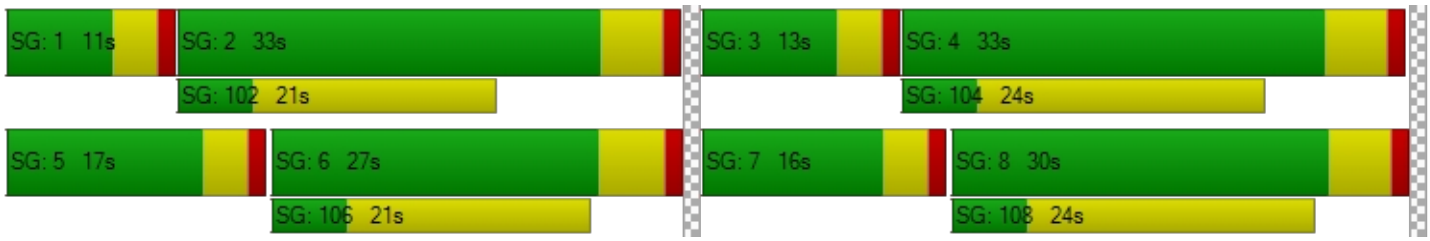
Vehicle Miles Traveled [mph]	2.19	30.38	6.23	15.92	59.93	4.75	3.42	9.93	9.62	7.12	11.19	10.56
Stops [stops/h]	53.43	550.68	99.88	223.83	449.96	29.59	83.50	226.41	220.64	207.09	245.93	232.92
Fuel consumption [US gal/h]	1.14	10.67	1.92	4.68	8.66	0.59	1.61	4.23	4.12	4.05	4.41	4.18
CO [g/h]	79.62	746.15	134.37	327.12	605.60	41.09	112.47	295.41	288.25	282.81	308.50	292.33
NOx [g/h]	15.49	145.17	26.14	63.65	117.83	7.99	21.88	57.48	56.08	55.03	60.02	56.88
VOC [g/h]	18.45	172.93	31.14	75.81	140.35	9.52	26.07	68.46	66.81	65.54	71.50	67.75

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.900	2.842	2.572	2.664
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	620	553	620
d_b, Bicycle Delay [s]	25.99	21.42	23.54	21.42
l_b,int, Bicycle LOS Score for Intersection	2.621	2.643	2.257	2.416
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.365

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	148	101	74	2	94	19	19	570	121	65	297	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	20	0	0	40	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	148	101	74	2	94	19	19	590	121	65	337	19
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	26	19	1	25	5	5	154	32	17	88	5
Total Analysis Volume [veh/h]	155	106	77	2	98	20	20	617	127	68	353	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	27	0	0	27	0	18	27	0	11	20	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	14	14	14	15	2	31	31	5	34	34
g / C, Green / Cycle	0.22	0.22	0.22	0.23	0.03	0.48	0.48	0.08	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.12	0.06	0.05	0.07	0.01	0.20	0.21	0.04	0.10	0.10
s, saturation flow rate [veh/h]	1274	1870	1589	1813	1781	1870	1761	1781	1870	1835
c, Capacity [veh/h]	235	410	349	431	63	908	855	136	985	967
d1, Uniform Delay [s]	25.53	21.00	20.82	20.79	30.58	10.81	10.82	28.81	8.09	8.10
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.14	0.33	0.32	0.35	2.82	1.44	1.53	2.79	0.43	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.26	0.22	0.28	0.32	0.42	0.42	0.50	0.19	0.19
d, Delay for Lane Group [s/veh]	28.67	21.33	21.13	21.14	33.40	12.25	12.35	31.60	8.52	8.54
Lane Group LOS	C	C	C	C	C	B	B	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.35	1.27	0.92	1.49	0.34	3.34	3.18	1.07	1.25	1.24
50th-Percentile Queue Length [ft/ln]	58.73	31.74	22.94	37.26	8.48	83.58	79.50	26.63	31.28	30.94
95th-Percentile Queue Length [veh/ln]	4.23	2.29	1.65	2.68	0.61	6.02	5.72	1.92	2.25	2.23
95th-Percentile Queue Length [ft/ln]	105.71	57.13	41.30	67.08	15.27	150.44	143.10	47.93	56.30	55.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.67	21.33	21.13	21.14	21.14	21.14	33.40	12.29	12.35	31.60	8.53	8.54
Movement LOS	C	C	C	C	C	C	C	B	B	C	A	A
d_A, Approach Delay [s/veh]	24.65			21.14			12.85			12.09		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.64											
Intersection LOS	B											
Intersection V/C	0.365											

Emissions

Vehicle Miles Traveled [mph]	12.63	8.64	6.27	3.30	0.63	12.08	11.41	15.58	43.02	42.45
Stops [stops/h]	130.10	70.31	50.83	82.56	18.80	185.16	176.13	58.99	69.29	68.54
Fuel consumption [US gal/h]	2.36	1.32	0.95	0.98	0.30	2.81	2.67	1.47	2.49	2.46
CO [g/h]	165.24	92.13	66.58	68.60	21.07	196.22	186.48	103.10	173.81	171.65
NOx [g/h]	32.15	17.93	12.95	13.35	4.10	38.18	36.28	20.06	33.82	33.40
VOC [g/h]	38.30	21.35	15.43	15.90	4.88	45.48	43.22	23.89	40.28	39.78

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.295	1.808	2.799	2.708
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	674	689	674	458
d_b, Bicycle Delay [s]	14.29	13.96	14.29	19.31
l_b,int, Bicycle LOS Score for Intersection	2.332	1.972	2.404	2.138
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.411

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	184	299	68	37	237	5	6	329	184	44	284	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	0	16	0	3	29	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	299	71	37	237	5	6	345	184	47	313	23
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	78	19	10	62	1	2	91	48	12	82	6
Total Analysis Volume [veh/h]	193	314	75	39	249	5	6	362	193	49	328	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13	29	0	11	27	0	15	24	0	11	20	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	24	16	16	24	12	1	32	32	4	36	36
g / C, Green / Cycle	0.32	0.22	0.22	0.32	0.16	0.01	0.42	0.42	0.06	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.14	0.17	0.05	0.03	0.14	0.00	0.16	0.16	0.03	0.09	0.10
s, saturation flow rate [veh/h]	1394	1870	1589	1186	1864	1781	1870	1656	1781	1870	1826
c, Capacity [veh/h]	455	410	348	376	307	23	788	698	107	894	872
d1, Uniform Delay [s]	19.87	27.48	24.00	18.39	30.27	36.65	14.87	14.93	34.06	11.29	11.30
k, delay calibration	0.46	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.62	3.02	0.31	0.12	5.60	5.69	1.33	1.56	3.01	0.50	0.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.77	0.22	0.10	0.83	0.26	0.37	0.38	0.46	0.20	0.20
d, Delay for Lane Group [s/veh]	22.50	30.50	24.30	18.51	35.88	42.34	16.21	16.49	37.07	11.79	11.82
Lane Group LOS	C	C	C	B	D	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.70	5.31	1.07	0.45	4.68	0.14	3.30	3.03	0.93	1.69	1.66
50th-Percentile Queue Length [ft/ln]	67.58	132.70	26.63	11.23	117.06	3.52	82.47	75.77	23.28	42.13	41.59
95th-Percentile Queue Length [veh/ln]	4.87	9.09	1.92	0.81	8.23	0.25	5.94	5.46	1.68	3.03	2.99
95th-Percentile Queue Length [ft/ln]	121.64	227.16	47.93	20.22	205.78	6.33	148.45	136.38	41.90	75.83	74.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.50	30.50	24.30	18.51	35.88	35.88	42.34	16.26	16.49	37.07	11.81	11.82
Movement LOS	C	C	C	B	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	27.05			33.56			16.62			14.89		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	22.25											
Intersection LOS	C											
Intersection V/C	0.411											

Emissions

Vehicle Miles Traveled [mph]	6.87	11.18	2.67	3.18	20.69	0.17	8.28	7.49	11.14	40.34	39.71
Stops [stops/h]	129.75	254.78	51.12	21.57	224.75	6.75	158.35	145.47	44.70	80.89	79.84
Fuel consumption [US gal/h]	2.12	4.29	0.86	0.43	4.33	0.12	2.81	2.58	1.08	2.53	2.50
CO [g/h]	148.28	299.97	59.92	30.07	302.90	8.68	196.68	180.45	75.16	177.07	174.46
NOx [g/h]	28.85	58.36	11.66	5.85	58.93	1.69	38.27	35.11	14.62	34.45	33.94
VOC [g/h]	34.36	69.52	13.89	6.97	70.20	2.01	45.58	41.82	17.42	41.04	40.43

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.429	2.174	2.627	2.477
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	637	584	496	408
d_b, Bicycle Delay [s]	17.41	18.80	21.21	23.76
l_b,int, Bicycle LOS Score for Intersection	2.734	2.257	2.237	2.105
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	0	48	0	0	16	0	953	40	18	480	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	87	0	0	0	0	0	0	18	170	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	144	0	48	0	0	16	0	971	210	18	496	93
Peak Hour Factor	0.9270	0.9500	0.9270	0.9500	0.9500	0.9270	0.9500	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	0	13	0	0	4	0	262	57	5	134	25
Total Analysis Volume [veh/h]	155	0	52	0	0	17	0	1047	227	19	535	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	23	0	0	0	0	22	0	24	0	11	35	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	9	9	2	48	48	55	55
g / C, Green / Cycle	0.11	0.11	0.03	0.60	0.60	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.09	0.03	0.01	0.34	0.36	0.03	0.35
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1759	544	1819
c, Capacity [veh/h]	201	180	46	1129	1062	401	1245
d1, Uniform Delay [s]	34.47	32.54	38.12	9.53	9.85	6.49	6.13
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.12	0.88	4.84	2.04	2.50	0.05	1.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.29	0.37	0.56	0.60	0.05	0.51
d, Delay for Lane Group [s/veh]	40.60	33.42	42.96	11.57	12.35	6.53	7.62
Lane Group LOS	D	C	D	B	B	A	A
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.24	0.96	0.39	6.34	6.63	0.08	4.53
50th-Percentile Queue Length [ft/ln]	80.96	24.03	9.69	158.42	165.65	2.11	113.15
95th-Percentile Queue Length [veh/ln]	5.83	1.73	0.70	10.46	10.85	0.15	8.02
95th-Percentile Queue Length [ft/ln]	145.73	43.25	17.43	261.62	271.19	3.79	200.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.60	0.00	33.42	0.00	0.00	42.96	0.00	11.88	12.35	6.53	7.62	7.62
Movement LOS	D		C			D		B	B	A	A	A
d_A, Approach Delay [s/veh]	38.79			42.96			11.96			7.59		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	13.46											
Intersection LOS	B											
Intersection V/C	0.464											

Emissions

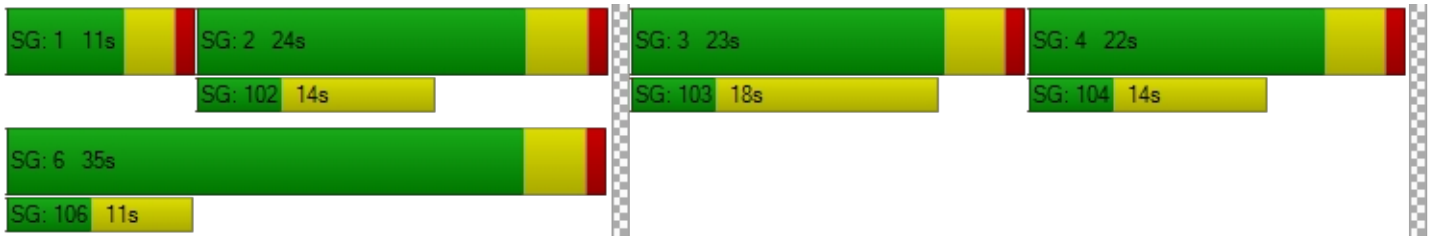
Vehicle Miles Traveled [mph]	11.62	3.90	0.41	48.77	48.77	2.87	95.78
Stops [stops/h]	145.73	43.25	17.43	285.15	298.17	3.79	203.67
Fuel consumption [US gal/h]	2.36	0.69	0.23	5.08	5.26	0.16	6.05
CO [g/h]	165.12	48.57	16.37	355.33	367.44	11.48	423.09
NOx [g/h]	32.13	9.45	3.18	69.13	71.49	2.23	82.32
VOC [g/h]	38.27	11.26	3.79	82.35	85.16	2.66	98.06

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.076	1.758	2.580	2.554
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	435	483	758
d_b, Bicycle Delay [s]	23.72	24.49	23.03	15.44
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.825	2.853
Bicycle LOS	A	A	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	6	7	52	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	87	0	0	170	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	6	7	222	5	8
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	2	2	69	2	3
Total Analysis Volume [veh/h]	230	8	9	278	6	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.73	0.00	12.25	9.61
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.51	0.00	1.86	1.86
d_A, Approach Delay [s/veh]	0.00		0.24		10.60	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	38	3	5	46	7	46	66	35	2	56	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	87	0	0	170	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	125	3	5	216	7	46	66	35	2	56	20
Peak Hour Factor	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	38	1	2	66	2	14	20	11	1	17	6
Total Analysis Volume [veh/h]	15	153	4	6	265	9	56	81	43	2	69	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	587	642	600	657	692	683
Degree of Utilization, x	0.03	0.24	0.01	0.42	0.26	0.14

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.08	0.96	0.03	2.06	1.04	0.49
95th-Percentile Queue Length [ft]	1.96	23.91	0.76	51.43	25.92	12.20
Approach Delay [s/veh]	10.02		11.97		10.02	9.14
Approach LOS	B		B		B	A
Intersection Delay [s/veh]	10.65					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.359

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	40	39	20	9	58	11	15	38	21	7	28	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	87	0	0	170	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	126	20	9	228	11	15	38	21	7	28	6
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	35	6	2	63	3	4	11	6	2	8	2
Total Analysis Volume [veh/h]	44	139	22	10	252	12	17	42	23	8	31	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	598	663	639	702	813	641	627
Degree of Utilization, x	0.07	0.24	0.02	0.36	0.01	0.13	0.07

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.24	0.95	0.05	1.63	0.04	0.44	0.24
95th-Percentile Queue Length [ft]	5.95	23.70	1.19	40.84	1.12	10.93	5.92
Approach Delay [s/veh]	9.72		10.44			9.43	9.19
Approach LOS	A		B			A	A
Intersection Delay [s/veh]	9.97						
Intersection LOS	A						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	26	22	18	55	29	42	393	49	52	315	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	112	58	0	0	31	0	0	28	87
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	26	22	130	113	29	42	424	49	52	343	112
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	7	6	34	29	7	11	109	13	13	88	29
Total Analysis Volume [veh/h]	13	27	23	134	116	30	43	437	51	54	354	115
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	24	0	0	24	0	11	25	0	11	25	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	12	12	12	12	38	30	38	31
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.64	0.50	0.64	0.51
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.11	0.09	0.05	0.30	0.06	0.29
s, saturation flow rate [veh/h]	1118	1557	1219	1624	944	1653	943	1613
c, Capacity [veh/h]	222	323	295	338	616	831	612	827
d1, Uniform Delay [s]	25.07	19.45	24.71	20.69	5.20	10.52	5.35	10.06
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.22	1.09	0.88	0.22	3.03	0.06	2.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.15	0.45	0.43	0.07	0.59	0.09	0.57
d, Delay for Lane Group [s/veh]	25.17	19.67	25.80	21.56	5.42	13.55	5.41	12.87
Lane Group LOS	C	B	C	C	A	B	A	B
Critical Lane Group	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.17	0.56	1.84	1.77	0.19	4.60	0.20	4.26
50th-Percentile Queue Length [ft/ln]	4.27	14.11	45.93	44.33	4.65	114.97	4.96	106.61
95th-Percentile Queue Length [veh/ln]	0.31	1.02	3.31	3.19	0.34	8.12	0.36	7.65
95th-Percentile Queue Length [ft/ln]	7.69	25.39	82.67	79.79	8.38	202.89	8.93	191.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.17	19.67	19.67	25.80	21.56	21.56	5.42	13.55	13.55	5.41	12.87	12.87
Movement LOS	C	B	B	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	20.81			23.59			12.90			12.10		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.10											
Intersection LOS	B											
Intersection V/C	0.421											

Emissions

Vehicle Miles Traveled [mph]	1.05	4.04	10.55	11.49	6.89	78.20	8.08	70.18
Stops [stops/h]	10.26	33.86	110.22	106.39	11.17	275.93	11.91	255.85
Fuel consumption [US gal/h]	0.15	0.51	1.60	1.57	0.40	5.92	0.47	5.37
CO [g/h]	10.71	35.78	111.90	109.44	27.97	413.90	32.75	375.08
NOx [g/h]	2.08	6.96	21.77	21.29	5.44	80.53	6.37	72.98
VOC [g/h]	2.48	8.29	25.93	25.36	6.48	95.93	7.59	86.93

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.211	2.080	2.191	2.529
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	647	647	680	680
d_b, Bicycle Delay [s]	13.74	13.74	13.07	13.07
l_b,int, Bicycle LOS Score for Intersection	1.878	2.236	2.650	2.637
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.325

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	34	99	38	21	633	53	46	432	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	58	0	0	9	0	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	34	157	38	21	642	53	46	440	27
Peak Hour Factor	0.9500	0.9500	0.9500	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	9	44	11	6	179	15	13	123	8
Total Analysis Volume [veh/h]	0	0	0	38	175	42	23	717	59	51	491	30
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	30	0	11	19	0	11	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		7	7	44	36	36	44	38	38
g / C, Green / Cycle		0.12	0.12	0.73	0.60	0.60	0.73	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate		0.08	0.08	0.03	0.23	0.23	0.07	0.16	0.16
s, saturation flow rate [veh/h]		1659	1590	872	1683	1638	760	1683	1649
c, Capacity [veh/h]		196	188	742	1001	974	640	1050	1029
d1, Uniform Delay [s]		25.29	25.34	2.46	6.43	6.44	2.92	5.03	5.03
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.70	4.11	0.08	1.16	1.19	0.05	0.57	0.59
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.66	0.67	0.03	0.39	0.39	0.08	0.25	0.25
d, Delay for Lane Group [s/veh]		28.99	29.45	2.54	7.59	7.63	2.97	5.60	5.62
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.88	1.87	0.06	2.41	2.36	0.11	1.28	1.27
50th-Percentile Queue Length [ft/ln]		47.10	46.69	1.48	60.37	59.05	2.67	32.09	31.66
95th-Percentile Queue Length [veh/ln]		3.39	3.36	0.11	4.35	4.25	0.19	2.31	2.28
95th-Percentile Queue Length [ft/ln]		84.78	84.04	2.67	108.67	106.29	4.81	57.76	56.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.99	29.21	29.45	2.54	7.61	7.63	2.97	5.61	5.62
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			29.21			7.46			5.37		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.14											
Intersection LOS	B											
Intersection V/C	0.325											

Emissions

Vehicle Miles Traveled [mph]		10.41	10.21	3.74	63.94	62.30	7.66	39.43	38.77
Stops [stops/h]		113.04	112.06	3.55	144.89	141.72	6.42	77.02	75.98
Fuel consumption [US gal/h]		1.66	1.65	0.19	4.04	3.94	0.40	2.37	2.33
CO [g/h]		116.12	115.02	13.55	282.29	275.38	27.94	165.52	162.89
NOx [g/h]		22.59	22.38	2.64	54.92	53.58	5.44	32.20	31.69
VOC [g/h]		26.91	26.66	3.14	65.42	63.82	6.47	38.36	37.75

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.059	2.026	2.497	2.496
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	847	480	480
d_b, Bicycle Delay [s]	30.00	9.98	17.33	17.33
l_b,int, Bicycle LOS Score for Intersection	4.132	1.984	2.433	2.246
Bicycle LOS	D	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.211

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	45	61	37	0	201	16	7	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	45	61	37	0	201	16	7	53	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.7720	0.7720	0.7720	0.9500	0.7720	0.7720	0.7720	0.7720	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	15	20	12	0	65	5	2	17	0
Total Analysis Volume [veh/h]	0	0	0	58	79	48	0	260	21	9	69	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	23	0	0	27	0	0	27	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		7	7	7	34	34	34
g / C, Green / Cycle		0.13	0.13	0.13	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate		0.04	0.04	0.03	0.17	0.01	0.04
s, saturation flow rate [veh/h]		1614	1683	1431	1661	988	1683
c, Capacity [veh/h]		215	224	190	1131	698	1146
d1, Uniform Delay [s]		19.62	19.60	19.44	3.06	4.88	2.65
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.84	0.77	0.69	0.53	0.03	0.10
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.32	0.31	0.25	0.25	0.01	0.06
d, Delay for Lane Group [s/veh]		20.46	20.37	20.13	3.59	4.91	2.75
Lane Group LOS		C	C	C	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.72	0.73	0.50	0.68	0.04	0.14
50th-Percentile Queue Length [ft/ln]		17.95	18.13	12.59	16.98	0.89	3.54
95th-Percentile Queue Length [veh/ln]		1.29	1.31	0.91	1.22	0.06	0.25
95th-Percentile Queue Length [ft/ln]		32.31	32.63	22.67	30.57	1.60	6.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.46	20.38	20.13	0.00	3.59	3.59	4.91	2.75	0.00
Movement LOS				C	C	C		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			20.34			3.59			3.00		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.20											
Intersection LOS	A											
Intersection V/C	0.211											

Emissions

Vehicle Miles Traveled [mph]		5.13	5.20	3.62	46.92	1.32	10.09
Stops [stops/h]		51.69	52.20	36.27	48.91	2.56	10.18
Fuel consumption [US gal/h]		0.71	0.72	0.50	2.41	0.08	0.51
CO [g/h]		49.76	50.34	34.85	168.24	5.41	35.68
NOx [g/h]		9.68	9.79	6.78	32.73	1.05	6.94
VOC [g/h]		11.53	11.67	8.08	38.99	1.25	8.27

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.751	1.961	1.879	2.039
Crosswalk LOS	A	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	736	892	892
d_b, Bicycle Delay [s]	25.00	9.99	7.67	7.67
l_b,int, Bicycle LOS Score for Intersection	4.132	1.927	2.238	1.903
Bicycle LOS	D	A	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	144	0	68	0	0	7	0	960	81	108	389	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	12	0	0	0	0	18	0	11	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	144	0	80	0	0	7	0	978	81	119	405	0
Peak Hour Factor	0.9580	0.9500	0.9580	0.9500	0.9500	0.9580	0.9500	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	0	21	0	0	2	0	255	21	31	106	0
Total Analysis Volume [veh/h]	150	0	84	0	0	7	0	1021	85	124	423	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	22	0	0	0	0	19	0	23	0	11	34	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	8	8	1	42	42	52	52
g / C, Green / Cycle	0.11	0.11	0.01	0.56	0.56	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.08	0.05	0.00	0.30	0.30	0.17	0.23
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1821	716	1870
c, Capacity [veh/h]	201	180	22	1040	1012	536	1301
d1, Uniform Delay [s]	32.22	31.15	36.61	10.50	10.62	5.87	4.49
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.40	1.89	7.73	1.95	2.12	1.01	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.47	0.31	0.53	0.55	0.23	0.33
d, Delay for Lane Group [s/veh]	37.61	33.04	44.35	12.45	12.74	6.88	5.16
Lane Group LOS	D	C	D	B	B	A	A
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.82	1.46	0.17	5.55	5.64	0.61	2.12
50th-Percentile Queue Length [ft/ln]	70.50	36.44	4.35	138.66	140.92	15.21	52.99
95th-Percentile Queue Length [veh/ln]	5.08	2.62	0.31	9.41	9.53	1.09	3.82
95th-Percentile Queue Length [ft/ln]	126.90	65.59	7.82	235.22	238.26	27.37	95.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.61	0.00	33.04	0.00	0.00	44.35	0.00	12.58	12.74	6.88	5.16	5.16
Movement LOS	D		C			D		B	B	A	A	A
d_A, Approach Delay [s/veh]	35.97			44.35			12.60			5.55		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	13.57											
Intersection LOS	B											
Intersection V/C	0.421											

Emissions

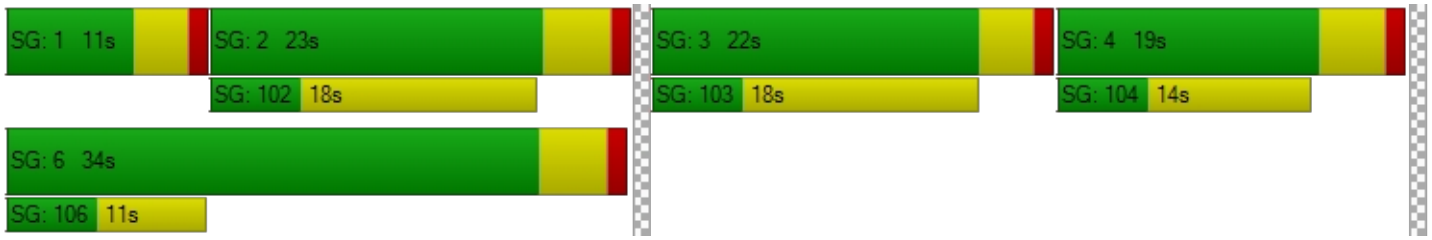
Vehicle Miles Traveled [mph]	11.33	6.35	0.19	83.41	83.41	4.20	14.33
Stops [stops/h]	135.36	69.97	8.35	266.23	270.57	29.20	101.73
Fuel consumption [US gal/h]	2.60	1.33	0.10	6.31	6.36	0.51	1.60
CO [g/h]	181.61	93.16	7.25	440.78	444.74	35.50	111.57
NOx [g/h]	35.34	18.13	1.41	85.76	86.53	6.91	21.71
VOC [g/h]	42.09	21.59	1.68	102.15	103.07	8.23	25.86

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.352	1.710	2.481	2.526
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	384	488	781
d_b, Bicycle Delay [s]	21.66	24.48	21.43	13.92
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.686	2.677
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	222	1	2	173	2	3	0	13	3	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	0	0	11	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	234	1	2	184	2	3	0	13	3	0	2
Peak Hour Factor	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	65	0	1	51	1	1	0	4	1	0	1
Total Analysis Volume [veh/h]	3	261	1	2	205	2	3	0	14	3	0	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.65	0.00	0.00	7.77	0.00	0.00	11.30	12.54	8.95	11.62	12.50	9.07
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.13	0.06	0.00	0.08	0.04	0.00	1.55	1.55	1.55	0.58	0.58	0.58
d_A, Approach Delay [s/veh]	0.09			0.07			9.37			10.60		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.51											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	14.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.069

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	189	11	2	184	4	10	2	58	26	6	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	0	0	11	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	201	11	2	195	4	10	2	58	26	6	15
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	54	3	1	52	1	3	1	16	7	2	4
Total Analysis Volume [veh/h]	34	216	12	2	209	4	11	2	62	28	6	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.07	0.07	0.01	0.02
d_M, Delay for Movement [s/veh]	7.69	0.00	0.00	7.69	0.00	0.00	13.65	13.55	9.92	14.69	13.75	10.23
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	B
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.00	0.00	0.00	0.35	0.35	0.35	0.34	0.34	0.34
95th-Percentile Queue Length [ft/ln]	1.46	1.46	1.46	0.08	0.08	0.08	8.66	8.66	8.66	8.44	8.44	8.44
d_A, Approach Delay [s/veh]	1.00			0.07			10.56			13.15		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.87											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	183	112	55	276	27	11	355	86	140	355	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	47	0	0	0	0	11	12	100	30	14	56	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	183	112	55	276	38	23	455	116	154	411	155
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	48	30	15	73	10	6	120	31	41	108	41
Total Analysis Volume [veh/h]	90	193	118	58	291	40	24	480	122	162	434	164
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	11	27	0	11	26	0	16	31	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	21	12	12	21	11	11	3	36	36	10	43	43
g / C, Green / Cycle	0.26	0.15	0.15	0.26	0.13	0.13	0.04	0.45	0.45	0.12	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.08	0.11	0.08	0.05	0.10	0.10	0.01	0.18	0.19	0.10	0.26	0.11
s, saturation flow rate [veh/h]	1199	1683	1431	1180	1683	1613	1603	1683	1567	1603	1683	1431
c, Capacity [veh/h]	356	246	209	337	226	217	59	753	701	195	893	759
d1, Uniform Delay [s]	23.57	32.93	31.77	23.19	33.30	33.36	37.66	14.99	15.02	34.34	11.88	9.96
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.17	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	5.43	2.37	0.24	4.77	5.25	4.40	1.67	1.82	13.17	1.89	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.78	0.56	0.17	0.74	0.75	0.41	0.41	0.42	0.83	0.49	0.22
d, Delay for Lane Group [s/veh]	23.94	38.36	34.15	23.43	38.08	38.61	42.06	16.65	16.83	47.51	13.77	10.61
Lane Group LOS	C	D	C	C	D	D	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.31	3.83	2.18	0.83	3.31	3.25	0.53	4.01	3.80	3.71	4.87	1.53
50th-Percentile Queue Length [ft/ln]	32.73	95.78	54.48	20.64	82.68	81.19	13.23	100.13	94.90	92.78	121.76	38.29
95th-Percentile Queue Length [veh/ln]	2.36	6.90	3.92	1.49	5.95	5.85	0.95	7.21	6.83	6.68	8.49	2.76
95th-Percentile Queue Length [ft/ln]	58.92	172.40	98.06	37.16	148.83	146.15	23.82	180.24	170.82	167.01	212.24	68.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.94	38.36	34.15	23.43	38.30	38.61	42.06	16.72	16.83	47.51	13.77	10.61
Movement LOS	C	D	C	C	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	33.88			36.12			17.71			20.28		
Approach LOS	C			D			B			C		
d_I, Intersection Delay [s/veh]	24.88											
Intersection LOS	C											
Intersection V/C	0.436											

Emissions

Vehicle Miles Traveled [mph]	7.32	15.69	9.59	4.54	13.13	12.78	3.59	46.44	43.63	8.00	21.43	8.10
Stops [stops/h]	58.92	172.40	98.06	37.16	148.83	146.15	23.82	180.24	170.82	167.01	219.16	68.92
Fuel consumption [US gal/h]	1.16	3.40	1.92	0.73	2.92	2.87	0.46	3.83	3.62	2.82	3.31	1.07
CO [g/h]	81.11	237.73	134.42	50.96	204.09	200.54	32.03	267.86	252.78	197.00	231.34	74.68
NOx [g/h]	15.78	46.25	26.15	9.91	39.71	39.02	6.23	52.12	49.18	38.33	45.01	14.53
VOC [g/h]	18.80	55.10	31.15	11.81	47.30	46.48	7.42	62.08	58.59	45.66	53.61	17.31

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.518	2.346	2.389	2.586
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	548	548	535	658
d_b, Bicycle Delay [s]	21.10	21.10	21.46	18.02
l_b,int, Bicycle LOS Score for Intersection	2.436	2.095	2.290	3.028
Bicycle LOS	B	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	31.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	247	374	102	370	40	8	675	93	202	420	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	41	30	14	0	0	9	0	37	8	47
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	247	415	132	384	40	8	684	93	239	428	122
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	66	110	35	102	11	2	182	25	64	114	32
Total Analysis Volume [veh/h]	28	263	441	140	409	43	9	728	99	254	455	130
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	33	0	11	33	0	12	29	0	12	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	38	28	28	38	31	31	1	25	25	8	31	31
g / C, Green / Cycle	0.45	0.33	0.33	0.45	0.37	0.37	0.02	0.29	0.29	0.09	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.31	0.16	0.14	0.14	0.01	0.23	0.07	0.08	0.18	0.18
s, saturation flow rate [veh/h]	952	3204	1431	881	1683	1628	1603	3204	1431	3113	1683	1556
c, Capacity [veh/h]	466	1045	466	481	614	594	27	937	418	293	622	575
d1, Uniform Delay [s]	13.44	21.03	27.91	14.16	19.85	19.86	41.30	27.55	22.87	37.98	20.62	20.63
k, delay calibration	0.11	0.11	0.37	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.13	24.87	0.33	0.38	0.39	6.89	6.31	1.33	7.67	2.73	2.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.25	0.95	0.29	0.37	0.38	0.33	0.78	0.24	0.87	0.49	0.49
d, Delay for Lane Group [s/veh]	13.49	21.16	52.78	14.49	20.22	20.26	48.19	33.86	24.20	45.65	23.36	23.59
Lane Group LOS	B	C	D	B	C	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.29	1.85	11.38	1.55	3.22	3.13	0.24	7.44	1.65	2.90	5.00	4.67
50th-Percentile Queue Length [ft/ln]	7.17	46.31	284.59	38.76	80.40	78.27	5.96	185.99	41.23	72.56	125.00	116.67
95th-Percentile Queue Length [veh/ln]	0.52	3.33	16.92	2.79	5.79	5.64	0.43	11.91	2.97	5.22	8.67	8.21
95th-Percentile Queue Length [ft/ln]	12.90	83.35	422.92	69.77	144.72	140.88	10.72	297.82	74.21	130.60	216.68	205.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.49	21.16	52.78	14.49	20.24	20.26	48.19	33.86	24.20	45.65	23.43	23.59
Movement LOS	B	C	D	B	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	39.92			18.88			32.87			30.18		
Approach LOS	D			B			C			C		
d_I, Intersection Delay [s/veh]	31.08											
Intersection LOS	C											
Intersection V/C	0.674											

Emissions

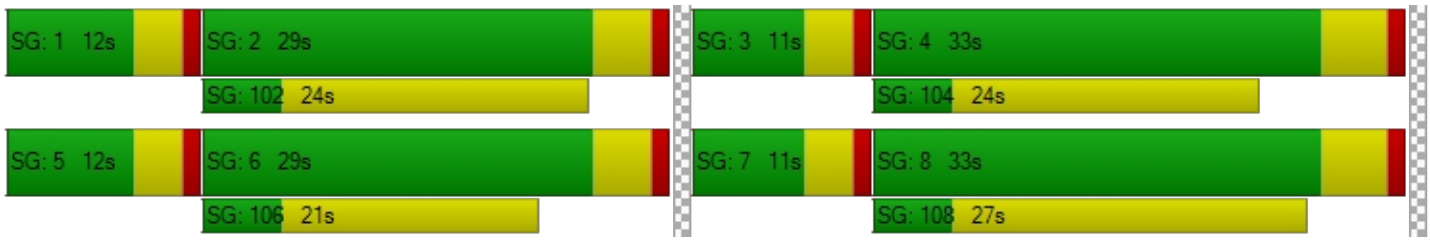
Vehicle Miles Traveled [mph]	2.17	20.40	34.21	11.38	18.63	18.11	1.35	109.27	14.86	18.34	21.93	20.30
Stops [stops/h]	12.14	156.90	482.13	65.66	136.21	132.59	10.09	630.17	69.84	245.84	211.77	197.65
Fuel consumption [US gal/h]	0.25	3.09	9.67	1.34	2.68	2.61	0.19	12.35	1.42	4.13	3.24	3.02
CO [g/h]	17.54	216.00	675.67	93.70	187.19	182.15	13.12	863.07	99.52	288.47	226.63	211.20
NOx [g/h]	3.41	42.03	131.46	18.23	36.42	35.44	2.55	167.92	19.36	56.13	44.09	41.09
VOC [g/h]	4.07	50.06	156.59	21.72	43.38	42.21	3.04	200.02	23.06	66.86	52.52	48.95

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.735	2.525	2.651	2.912
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	656	656	574	574
d_b, Bicycle Delay [s]	19.18	19.18	21.60	21.60
l_b,int, Bicycle LOS Score for Intersection	2.378	2.262	2.464	2.466
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.559

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	385	54	496	314	23	76	217	58	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	86	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	385	54	582	314	23	76	217	58	0	0	0
Peak Hour Factor	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	120	17	181	98	7	24	67	18	0	0	0
Total Analysis Volume [veh/h]	30	479	67	724	391	29	95	270	72	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	17	17	0	24	24	0	0	29	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	3	24	24	18	39	39	14	14	14	
g / C, Green / Cycle	0.04	0.35	0.35	0.26	0.56	0.56	0.19	0.19	0.19	
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.23	0.13	0.13	0.06	0.16	0.05	
s, saturation flow rate [veh/h]	1603	1683	1612	3113	1683	1642	1603	1683	1431	
c, Capacity [veh/h]	73	583	558	815	947	925	312	328	278	
d1, Uniform Delay [s]	32.51	17.91	17.93	24.85	7.65	7.65	24.13	27.04	23.90	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.72	2.78	2.94	3.55	0.55	0.56	0.54	5.22	0.49	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.41	0.48	0.48	0.89	0.22	0.22	0.30	0.82	0.26	
d, Delay for Lane Group [s/veh]	36.23	20.69	20.87	28.40	8.20	8.22	24.68	32.26	24.39	
Lane Group LOS	D	C	C	C	A	A	C	C	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.55	3.64	3.54	5.71	1.45	1.42	1.34	4.58	1.01	
50th-Percentile Queue Length [ft/ln]	13.69	91.10	88.53	142.64	36.28	35.53	33.44	114.61	25.16	
95th-Percentile Queue Length [veh/ln]	0.99	6.56	6.37	9.62	2.61	2.56	2.41	8.10	1.81	
95th-Percentile Queue Length [ft/ln]	24.65	163.99	159.35	240.58	65.31	63.95	60.19	202.40	45.29	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.23	20.77	20.87	28.40	8.21	8.22	24.68	32.26	24.39	0.00	0.00	0.00
Movement LOS	D	C	C	C	A	A	C	C	C			
d_A, Approach Delay [s/veh]	21.58			20.99			29.31			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	22.84											
Intersection LOS	C											
Intersection V/C	0.559											

Emissions

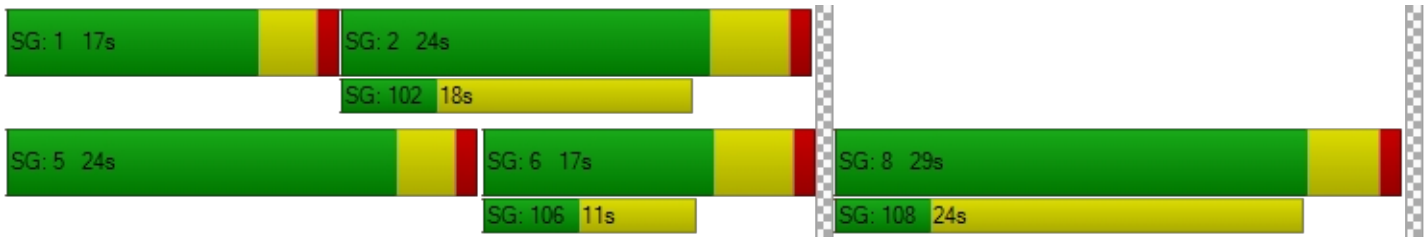
Vehicle Miles Traveled [mph]	1.19	11.02	10.63	53.16	15.60	15.24	13.90	39.50	10.53	
Stops [stops/h]	28.17	187.42	182.11	586.87	74.64	73.08	68.79	235.78	51.76	
Fuel consumption [US gal/h]	0.48	3.00	2.91	10.63	1.51	1.48	1.43	4.70	1.08	
CO [g/h]	33.44	209.68	203.66	742.69	105.60	103.28	99.91	328.61	75.28	
NOx [g/h]	6.51	40.80	39.62	144.50	20.55	20.09	19.44	63.94	14.65	
VOC [g/h]	7.75	48.60	47.20	172.13	24.47	23.94	23.15	76.16	17.45	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.525	2.767	2.241	2.221
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	340	540	694	0
d_b, Bicycle Delay [s]	24.11	18.65	14.92	35.00
l_b,int, Bicycle LOS Score for Intersection	2.249	2.718	2.495	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.397

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	155	446	0	522	205	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	24	0	100	46	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	470	0	622	251	0
Peak Hour Factor	0.9570	0.9570	0.9500	0.9570	0.9570	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	123	0	162	66	0
Total Analysis Volume [veh/h]	194	491	0	650	262	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	27	0	0	23	23	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	50	50	50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	13	13	29	29
g / C, Green / Cycle	0.25	0.25	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.12	0.19	0.20	0.08
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	406	642	1834	1834
d1, Uniform Delay [s]	15.85	17.28	5.73	4.98
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.87	1.94	0.54	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.76	0.35	0.14
d, Delay for Lane Group [s/veh]	16.72	19.22	6.27	5.14
Lane Group LOS	B	B	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.70	2.39	1.38	0.48
50th-Percentile Queue Length [ft/ln]	42.58	59.68	34.39	11.88
95th-Percentile Queue Length [veh/ln]	3.07	4.30	2.48	0.86
95th-Percentile Queue Length [ft/ln]	76.65	107.43	61.91	21.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.72	19.22	0.00	6.27	5.14	0.00
Movement LOS	B	B		A	A	
d_A, Approach Delay [s/veh]	18.51		6.27		5.14	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	11.33					
Intersection LOS	B					
Intersection V/C	0.397					

Emissions

Vehicle Miles Traveled [mph]	16.26	41.16	32.09	12.57
Stops [stops/h]	122.64	343.78	198.11	68.42
Fuel consumption [US gal/h]	2.20	6.07	3.25	1.17
CO [g/h]	153.95	424.63	226.83	81.76
NOx [g/h]	29.95	82.62	44.13	15.91
VOC [g/h]	35.68	98.41	52.57	18.95

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.296	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	920	732	732
d_b, Bicycle Delay [s]	7.29	10.05	10.05
l_b,int, Bicycle LOS Score for Intersection	1.774	2.310	1.990
Bicycle LOS	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	34.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.729

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	87	291	45	0	0	0	359	317	0	0	118	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	42	0	0	0	58	73	0	5	46	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	319	87	0	0	0	417	390	0	5	164	171
Peak Hour Factor	0.8650	0.8650	0.8650	0.9500	0.9500	0.9500	0.8650	0.8650	0.9500	0.9500	0.8650	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	92	25	0	0	0	121	113	0	1	47	49
Total Analysis Volume [veh/h]	101	369	101	0	0	0	482	451	0	5	190	198
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	32	0	0	0	0	32	48	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	80	80		80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	25	25		26	45	15	15
g / C, Green / Cycle	0.31	0.31		0.32	0.57	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.29		0.30	0.14	0.11	0.14
s, saturation flow rate [veh/h]	1603	1621		1603	3204	1683	1431
c, Capacity [veh/h]	501	507		517	1811	324	275
d1, Uniform Delay [s]	20.18	26.63		26.25	8.81	29.40	30.27
k, delay calibration	0.11	0.32		0.34	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	18.68		19.95	0.33	7.57	14.95
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.93		0.93	0.25	0.59	0.72
d, Delay for Lane Group [s/veh]	20.38	45.31		46.20	9.13	36.97	45.23
Lane Group LOS	C	D		D	A	D	D
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.34	10.69		11.26	1.86	3.90	4.60
50th-Percentile Queue Length [ft/ln]	33.51	267.26		281.57	46.47	97.53	114.98
95th-Percentile Queue Length [veh/ln]	2.41	16.05		16.77	3.35	7.02	8.12
95th-Percentile Queue Length [ft/ln]	60.32	401.31		419.17	83.65	175.56	202.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.38	45.31	45.31	0.00	0.00	0.00	46.20	9.13	0.00	0.00	36.97	45.23
Movement LOS	C	D	D				D	A			D	D
d_A, Approach Delay [s/veh]	40.90			0.00			28.28			41.18		
Approach LOS	D			A			C			D		
d_I, Intersection Delay [s/veh]	34.74											
Intersection LOS	C											
Intersection V/C	0.729											

Emissions

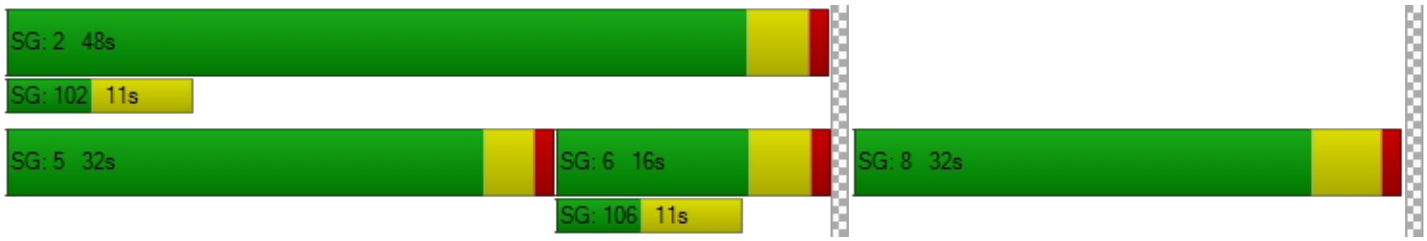
Vehicle Miles Traveled [mph]	8.80	40.95		23.13	21.64	6.95	7.25
Stops [stops/h]	60.32	481.06		506.83	167.30	175.56	206.96
Fuel consumption [US gal/h]	1.21	9.51		8.28	2.65	2.69	3.26
CO [g/h]	84.43	664.87		579.04	185.49	187.73	228.15
NOx [g/h]	16.43	129.36		112.66	36.09	36.53	44.39
VOC [g/h]	19.57	154.09		134.20	42.99	43.51	52.88

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.035	2.222	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	673	0	1083	283
d_b, Bicycle Delay [s]	17.62	40.00	8.42	29.50
l_b,int, Bicycle LOS Score for Intersection	2.716	4.132	2.544	2.094
Bicycle LOS	B	D	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.544

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	264	113	379	0	0	0	230	814	0	0	489	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	31	31	0	0	5	12	69	0	0	64	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	288	144	410	0	0	5	242	883	0	0	553	133
Peak Hour Factor	0.9290	0.9290	0.9290	0.9500	0.9500	0.9500	0.9290	0.9290	0.9500	0.9500	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	39	110	0	0	1	65	238	0	0	149	36
Total Analysis Volume [veh/h]	310	155	441	0	0	5	260	950	0	0	595	143
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	12	30	0	0	18	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	26	26	26		7	25	13	13
g / C, Green / Cycle	0.43	0.43	0.43		0.12	0.41	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.28		0.08	0.27	0.17	0.09
s, saturation flow rate [veh/h]	1781	1839	1589		3459	3560	3560	1589
c, Capacity [veh/h]	759	783	677		407	1468	782	349
d1, Uniform Delay [s]	11.36	11.32	13.68		25.25	14.13	21.94	20.08
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.04	0.97	4.82		1.67	0.48	1.56	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.30	0.65		0.64	0.65	0.76	0.41
d, Delay for Lane Group [s/veh]	12.40	12.29	18.49		26.91	14.62	23.51	20.85
Lane Group LOS	B	B	B		C	B	C	C
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.93	1.93	4.84		1.79	4.73	3.70	1.63
50th-Percentile Queue Length [ft/ln]	48.34	48.37	120.96		44.74	118.26	92.60	40.74
95th-Percentile Queue Length [veh/ln]	3.48	3.48	8.45		3.22	8.30	6.67	2.93
95th-Percentile Queue Length [ft/ln]	87.00	87.06	211.14		80.53	207.43	166.68	73.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.37	12.29	18.49	0.00	0.00	0.00	26.91	14.62	0.00	0.00	23.51	20.85
Movement LOS	B	B	B				C	B			C	C
d_A, Approach Delay [s/veh]	15.34			0.00			17.26			22.99		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	18.13											
Intersection LOS	B											
Intersection V/C	0.544											

Emissions

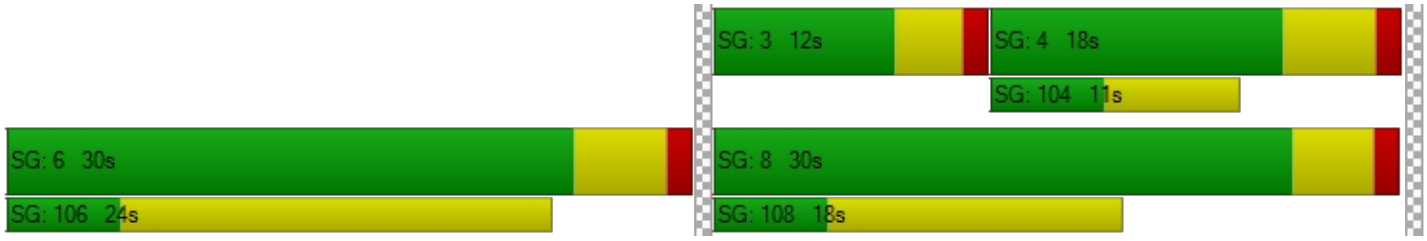
Vehicle Miles Traveled [mph]	9.06	9.14	17.26		18.77	68.58	30.09	7.23
Stops [stops/h]	116.01	116.08	290.30		214.75	567.65	444.48	97.78
Fuel consumption [US gal/h]	1.80	1.81	4.50		3.09	8.09	7.34	1.62
CO [g/h]	125.97	126.21	314.63		216.12	565.33	512.80	113.09
NOx [g/h]	24.51	24.56	61.22		42.05	109.99	99.77	22.00
VOC [g/h]	29.19	29.25	72.92		50.09	131.02	118.85	26.21

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.369	1.968	2.720	0.000
Crosswalk LOS	B	A	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	430
d_b, Bicycle Delay [s]	10.27	30.00	9.98	18.49
l_b,int, Bicycle LOS Score for Intersection	3.269	4.132	2.772	2.383
Bicycle LOS	C	D	C	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix I-3

Background Conditions + Project

Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\3 Background + P AM.pdf
Scenario 5 Background + Project AM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	NB Left	0.645	24.3	C
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	SB Left	0.720	33.1	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	WB Right	0.516	9.5	A
4	Main St @ First St	Signalized	HCM 7th Edition	EB Left	0.665	14.6	B
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.018	16.1	C
6	Main St @ Third St	Signalized	HCM 7th Edition	WB Right	0.584	27.0	C
7	Market St @ First St	Signalized	HCM 7th Edition	EB Left	0.404	14.7	B
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.008	19.1	C
9	Market St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.487	17.1	B
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	EB Left	0.113	34.9	D
11	Market St @ Fifth St	Signalized	HCM 7th Edition	EB Right	0.409	12.4	B
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	EB Right	0.029	13.2	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.636	26.1	C
14	Market St @ University Ave	Signalized	HCM 7th Edition	EB Left	0.584	24.6	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Left	0.405	4.8	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	EB Thru	0.366	7.5	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	EB Thru	0.164	106.7	F
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Left	0.320	6.5	A

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	WB Thru	0.092	76.8	F
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	SB Left	0.540	32.6	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.294	12.2	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.351	21.0	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.370	15.4	B
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.002	12.2	B
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	SB Thru	0.515	15.0	C
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	NB Thru	0.686	15.6	C
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.651	24.0	C
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.284	12.4	B
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Left	0.194	12.7	B
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.226	10.5	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Thru	0.002	11.0	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.055	18.0	C
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	WB Left	0.711	47.5	D
34	Lime St @ University Ave	Signalized	HCM 7th Edition	EB Left	0.496	27.8	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Left	0.342	19.3	B
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	SB Right	0.590	14.9	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.466	20.5	C
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.402	16.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	24.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	135	326	0	0	733	143	0	0	0	46	78	322
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	67	33	0	0	48	0	0	0	0	125	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	202	359	0	0	781	143	0	0	0	171	78	322
Peak Hour Factor	0.8950	0.8950	0.9500	0.9500	0.8950	0.8950	0.9500	0.9500	0.9500	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	100	0	0	218	40	0	0	0	48	22	90
Total Analysis Volume [veh/h]	226	401	0	0	873	160	0	0	0	191	87	360
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	23	37	0	0	14	0	0	0	0	0	28	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	65	65	65	65		65	65
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	10	38	23	23		17	17
g / C, Green / Cycle	0.16	0.58	0.36	0.36		0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.13	0.11	0.28	0.29		0.15	0.23
s, saturation flow rate [veh/h]	1781	3560	1870	1773		1808	1589
c, Capacity [veh/h]	281	2061	672	637		478	420
d1, Uniform Delay [s]	26.39	6.49	18.43	18.82		20.79	22.75
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.16
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	5.33	0.21	8.24	10.73		1.13	7.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.19	0.77	0.81		0.58	0.86
d, Delay for Lane Group [s/veh]	31.73	6.71	26.66	29.55		21.92	30.14
Lane Group LOS	C	A	C	C		C	C
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	3.55	1.07	7.55	8.04		3.49	5.60
50th-Percentile Queue Length [ft/ln]	88.80	26.85	188.81	201.05		87.36	140.01
95th-Percentile Queue Length [veh/ln]	6.39	1.93	12.06	12.69		6.29	9.48
95th-Percentile Queue Length [ft/ln]	159.85	48.33	301.48	317.32		157.25	237.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.73	6.71	0.00	0.00	27.84	29.55	0.00	0.00	0.00	21.92	21.92	30.14
Movement LOS	C	A			C	C				C	C	C
d_A, Approach Delay [s/veh]	15.72			28.11			0.00			26.56		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	24.30											
Intersection LOS	C											
Intersection V/C	0.645											

Emissions

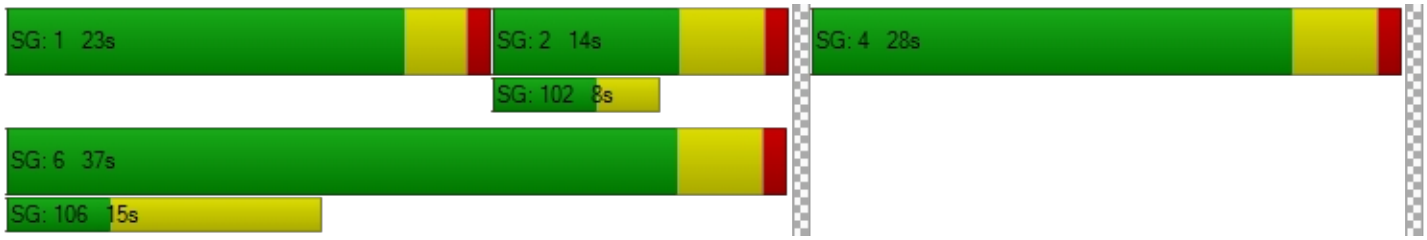
Vehicle Miles Traveled [mph]	13.44	23.86	19.12	19.12		10.20	13.21
Stops [stops/h]	196.73	118.96	418.29	445.40		193.53	310.18
Fuel consumption [US gal/h]	3.45	2.35	6.68	7.18		3.08	5.04
CO [g/h]	241.23	164.35	466.75	502.19		215.60	352.58
NOx [g/h]	46.94	31.98	90.81	97.71		41.95	68.60
VOC [g/h]	55.91	38.09	108.17	116.39		49.97	81.71

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.870	2.167
Crosswalk LOS	F	F	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	982	274	0	705
d_b, Bicycle Delay [s]	8.43	24.21	32.50	13.63
l_b,int, Bicycle LOS Score for Intersection	2.077	2.412	4.132	2.612
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	328	219	455	319	0	133	3	198	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	100	52	0	173	0	0	0	142	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	428	271	455	492	0	133	3	340	0	0	0
Peak Hour Factor	0.9500	0.8880	0.8880	0.8880	0.8880	0.9500	0.8880	0.8880	0.8880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	120	76	128	139	0	37	1	96	0	0	0
Total Analysis Volume [veh/h]	0	482	305	512	554	0	150	3	383	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	24	42	0	0	28	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	17	17	20	41	19	19	
g / C, Green / Cycle	0.24	0.24	0.29	0.58	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.14	0.19	0.29	0.16	0.09	0.24	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1783	1589	
c, Capacity [veh/h]	854	381	509	2075	484	432	
d1, Uniform Delay [s]	23.39	25.03	25.00	7.22	20.32	24.47	
k, delay calibration	0.50	0.50	0.43	0.50	0.11	0.22	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.69	16.03	38.68	0.32	0.37	11.94	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.56	0.80	1.01	0.27	0.32	0.89	
d, Delay for Lane Group [s/veh]	26.08	41.05	63.68	7.53	20.69	36.40	
Lane Group LOS	C	D	F	A	C	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.57	6.10	13.14	1.73	1.90	7.01	
50th-Percentile Queue Length [ft/ln]	89.23	152.44	328.61	43.21	47.54	175.36	
95th-Percentile Queue Length [veh/ln]	6.42	10.15	19.16	3.11	3.42	11.36	
95th-Percentile Queue Length [ft/ln]	160.61	253.68	479.08	77.78	85.58	283.95	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	26.08	41.05	63.68	7.53	0.00	20.69	20.69	36.40	0.00	0.00	0.00
Movement LOS		C	D	F	A		C	C	D			
d_A, Approach Delay [s/veh]	31.89			34.50			31.92			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	33.06											
Intersection LOS	C											
Intersection V/C	0.720											

Emissions

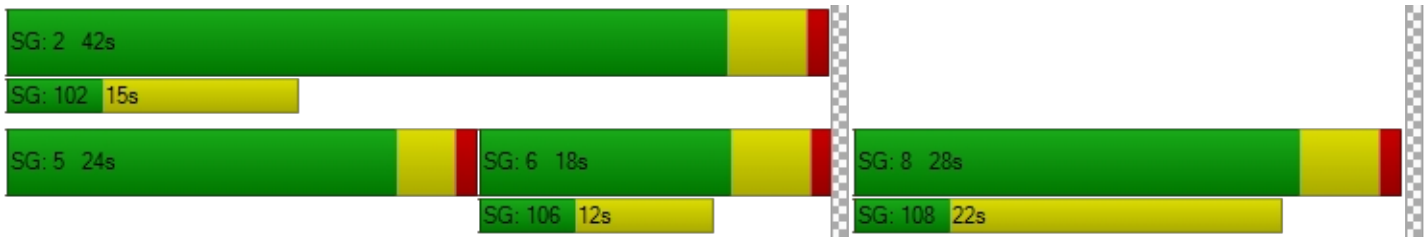
Vehicle Miles Traveled [mph]	65.72	41.59	30.46	32.96	4.67	11.68	
Stops [stops/h]	367.10	313.59	676.01	177.78	97.80	360.75	
Fuel consumption [US gal/h]	7.82	6.49	12.88	3.44	1.56	6.00	
CO [g/h]	546.94	453.78	900.25	240.64	108.87	419.09	
NOx [g/h]	106.42	88.29	175.16	46.82	21.18	81.54	
VOC [g/h]	126.76	105.17	208.64	55.77	25.23	97.13	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.681	0.000	2.132	2.103
Crosswalk LOS	B	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	369	1054	654	0
d_b, Bicycle Delay [s]	23.29	7.83	15.85	35.00
l_b,int, Bicycle LOS Score for Intersection	2.209	2.439	2.002	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	311	23	97	289	8	21	53	12	56	31	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	153	10	0	316	0	0	0	0	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	464	33	97	605	8	21	53	12	67	31	96
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	128	9	27	166	2	6	15	3	18	9	26
Total Analysis Volume [veh/h]	7	510	36	107	666	9	23	58	13	74	34	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	14	24	0	0	25	0	0	25	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	8	8	8	8
g / C, Green / Cycle	0.71	0.71	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.30	0.47	0.02	0.04	0.06	0.08
s, saturation flow rate [veh/h]	1846	1680	1248	1811	1329	1650
c, Capacity [veh/h]	1435	1326	184	236	244	215
d1, Uniform Delay [s]	3.65	4.26	27.49	23.61	26.12	24.79
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.78	1.93	0.30	0.71	0.69	3.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.59	0.12	0.30	0.30	0.65
d, Delay for Lane Group [s/veh]	4.44	6.19	27.79	24.31	26.82	28.08
Lane Group LOS	A	A	C	C	C	C
Critical Lane Group	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.68	3.05	0.32	0.92	1.03	2.01
50th-Percentile Queue Length [ft/ln]	41.97	76.21	8.10	23.07	25.63	50.29
95th-Percentile Queue Length [veh/ln]	3.02	5.49	0.58	1.66	1.85	3.62
95th-Percentile Queue Length [ft/ln]	75.54	137.19	14.59	41.52	46.13	90.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.44	4.44	4.44	6.19	6.19	6.19	27.79	24.31	24.31	26.82	28.08	28.08
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	4.44			6.19			25.17			27.64		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.48											
Intersection LOS	A											
Intersection V/C	0.516											

Emissions

Vehicle Miles Traveled [mph]	245.57	106.63	0.65	2.01	2.08	3.93
Stops [stops/h]	100.72	182.91	19.45	55.37	61.51	120.69
Fuel consumption [US gal/h]	10.62	6.43	0.23	0.65	0.73	1.44
CO [g/h]	742.14	449.14	16.36	45.72	51.25	100.63
NOx [g/h]	144.39	87.39	3.18	8.90	9.97	19.58
VOC [g/h]	172.00	104.09	3.79	10.60	11.88	23.32

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.544	2.492	2.747	3.146
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	997	997	680	680
d_b, Bicycle Delay [s]	7.55	7.55	13.07	13.07
l_b,int, Bicycle LOS Score for Intersection	2.472	2.850	1.715	1.913
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	225	9	3	235	45	79	40	30	25	26	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	169	119	0	0	127	200	44	0	55	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	174	344	9	3	362	245	123	40	85	25	26	12
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	92	2	1	97	65	33	11	23	7	7	3
Total Analysis Volume [veh/h]	186	368	10	3	387	262	131	43	91	27	28	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	33	0	11	33	0	0	26	0	0	26	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	0.00	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	40	51	40	9	9	9
g / C, Green / Cycle	0.73	0.57	0.73	0.57	0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.62	0.01	0.24	0.16	0.10	0.08	0.06
s, saturation flow rate [veh/h]	900	1589	1611	1589	1366	1670	1168
c, Capacity [veh/h]	790	903	1217	903	206	228	231
d1, Uniform Delay [s]	9.86	6.58	3.55	7.83	29.21	28.38	27.18
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.15	0.02	0.70	0.81	3.22	2.41	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.01	0.32	0.29	0.64	0.59	0.29
d, Delay for Lane Group [s/veh]	15.01	6.60	4.25	8.64	32.44	30.78	27.87
Lane Group LOS	B	A	A	A	C	C	C
Critical Lane Group	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.24	0.06	1.33	1.86	2.26	2.21	1.04
50th-Percentile Queue Length [ft/ln]	81.01	1.47	33.23	46.47	56.38	55.35	26.12
95th-Percentile Queue Length [veh/ln]	5.83	0.11	2.39	3.35	4.06	3.98	1.88
95th-Percentile Queue Length [ft/ln]	145.82	2.64	59.81	83.65	101.49	99.62	47.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.01	15.01	6.60	4.25	4.25	8.64	32.44	30.78	30.78	27.87	27.87	27.87
Movement LOS	B	B	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.86			6.01			31.60			27.87		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	14.57											
Intersection LOS	B											
Intersection V/C	0.665											

Emissions

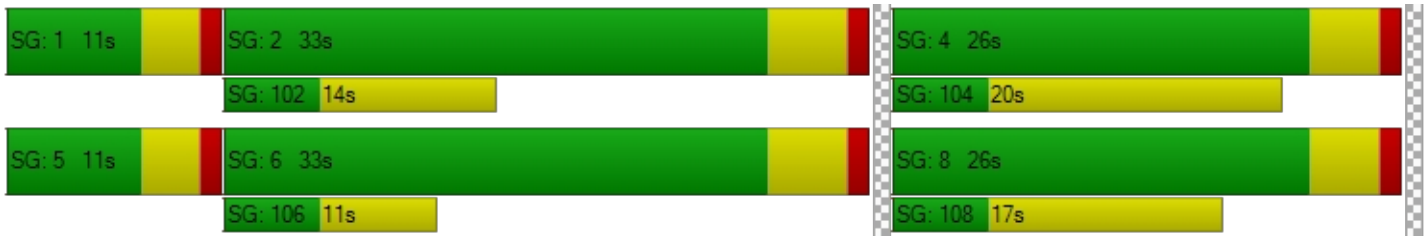
Vehicle Miles Traveled [mph]	41.81	0.75	173.19	116.34	10.84	11.09	1.92
Stops [stops/h]	166.65	3.02	68.35	95.60	115.99	113.86	53.73
Fuel consumption [US gal/h]	4.54	0.06	7.45	5.61	1.80	1.77	0.68
CO [g/h]	317.28	4.54	520.92	392.45	125.62	124.06	47.41
NOx [g/h]	61.73	0.88	101.35	76.36	24.44	24.14	9.22
VOC [g/h]	73.53	1.05	120.73	90.95	29.11	28.75	10.99

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.373	2.637	2.918	2.309
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1111	1111	611	611
d_b, Bicycle Delay [s]	6.91	6.91	16.87	16.87
l_b,int, Bicycle LOS Score for Intersection	2.705	2.850	2.211	1.886
Bicycle LOS	B	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	28	1	3	287	6	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	288	0	0	182	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	316	1	3	469	6	8
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	85	0	1	126	2	2
Total Analysis Volume [veh/h]	339	1	3	503	6	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.02	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.96	0.00	16.13	10.36
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.13	0.13	2.39	2.39
d_A, Approach Delay [s/veh]	0.00		0.05		12.67	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.25					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.584

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	2	1	4	169	10	118	141	247	51	83	160	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	11	3	154	12	16	74	23	3	3	25	204
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	12	7	323	22	134	215	270	54	86	185	284
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	2	85	6	35	57	71	14	23	49	75
Total Analysis Volume [veh/h]	5	13	7	342	23	142	228	286	57	91	196	301
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	11	0	20	20	0	11	32	0	12	33	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	4.55	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	29	11	28	28	22	37	27	37	26
g / C, Green / Cycle	0.39	0.15	0.37	0.37	0.30	0.50	0.36	0.50	0.35
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.11	0.18	0.10	0.23	0.21	0.08	0.33
s, saturation flow rate [veh/h]	1152	1585	1454	1136	1431	1002	1635	1077	1520
c, Capacity [veh/h]	297	232	664	569	426	380	594	515	531
d1, Uniform Delay [s]	23.92	27.66	16.44	19.45	20.53	15.91	19.23	11.28	23.57
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.34
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	0.73	0.90	1.70	2.10	6.83	0.89	0.16	19.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.09	0.25	0.35	0.33	0.60	0.58	0.18	0.94
d, Delay for Lane Group [s/veh]	24.02	28.39	17.34	21.15	22.62	22.74	20.11	11.44	43.19
Lane Group LOS	C	C	B	C	C	C	C	B	D
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.06	0.36	2.00	2.79	2.06	2.74	4.65	0.76	10.77
50th-Percentile Queue Length [ft/ln]	1.54	9.05	50.04	69.73	51.57	68.61	116.26	18.94	269.33
95th-Percentile Queue Length [veh/ln]	0.11	0.65	3.60	5.02	3.71	4.94	8.19	1.36	16.16
95th-Percentile Queue Length [ft/ln]	2.77	16.30	90.08	125.51	92.83	123.50	204.67	34.09	403.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.02	28.39	28.39	19.29	21.15	22.62	22.74	20.11	20.11	11.44	43.19	43.19
Movement LOS	C	C	C	B	C	C	C	C	C	B	D	D
d_A, Approach Delay [s/veh]	27.52			20.32			21.16			38.28		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	26.96											
Intersection LOS	C											
Intersection V/C	0.584											

Emissions

Vehicle Miles Traveled [mph]	0.12	0.47	12.51	15.08	10.73	19.14	28.80	6.97	38.05
Stops [stops/h]	2.95	17.38	96.08	133.88	99.01	131.74	223.22	36.36	517.10
Fuel consumption [US gal/h]	0.04	0.17	1.78	2.44	1.81	2.57	3.82	0.70	8.79
CO [g/h]	2.45	11.57	124.66	170.57	126.35	179.72	267.22	48.90	614.55
NOx [g/h]	0.48	2.25	24.25	33.19	24.58	34.97	51.99	9.51	119.57
VOC [g/h]	0.57	2.68	28.89	39.53	29.28	41.65	61.93	11.33	142.43

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.198	2.544	2.236	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	187	691	728	755
d_b, Bicycle Delay [s]	30.83	16.07	15.17	14.54
l_b,int, Bicycle LOS Score for Intersection	1.815	2.611	2.716	2.744
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	319	45	29	671	5	11	75	17	32	30	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	110	44	55	72	0	0	0	0	143	0	226
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	429	89	84	743	5	11	75	17	175	30	238
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	118	24	23	204	1	3	21	5	48	8	65
Total Analysis Volume [veh/h]	7	471	98	92	816	5	12	82	19	192	33	261
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	24	24	34	29	29	16	16	16	16
g / C, Green / Cycle	0.56	0.40	0.40	0.56	0.48	0.48	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.01	0.13	0.06	0.09	0.22	0.22	0.01	0.06	0.15	0.18
s, saturation flow rate [veh/h]	759	3560	1589	1051	1870	1866	1085	1810	1293	1617
c, Capacity [veh/h]	511	1433	640	697	899	897	197	494	368	441
d1, Uniform Delay [s]	6.41	12.35	11.42	6.35	10.36	10.36	26.17	16.81	23.04	19.40
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.61	0.51	0.39	1.67	1.68	0.13	0.20	1.15	1.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.33	0.15	0.13	0.46	0.46	0.06	0.20	0.52	0.67
d, Delay for Lane Group [s/veh]	6.42	12.96	11.93	6.75	12.03	12.04	26.29	17.01	24.19	21.14
Lane Group LOS	A	B	B	A	B	B	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.03	1.92	0.78	0.46	3.21	3.21	0.16	1.04	2.56	3.62
50th-Percentile Queue Length [ft/ln]	0.74	47.94	19.53	11.55	80.32	80.17	4.07	26.02	63.95	90.41
95th-Percentile Queue Length [veh/ln]	0.05	3.45	1.41	0.83	5.78	5.77	0.29	1.87	4.60	6.51
95th-Percentile Queue Length [ft/ln]	1.33	86.30	35.16	20.79	144.57	144.31	7.32	46.83	115.12	162.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.42	12.96	11.93	6.75	12.03	12.04	26.29	17.01	17.01	24.19	21.14	21.14
Movement LOS	A	B	B	A	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	12.70			11.50			18.00			22.35		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	14.71											
Intersection LOS	B											
Intersection V/C	0.404											

Emissions

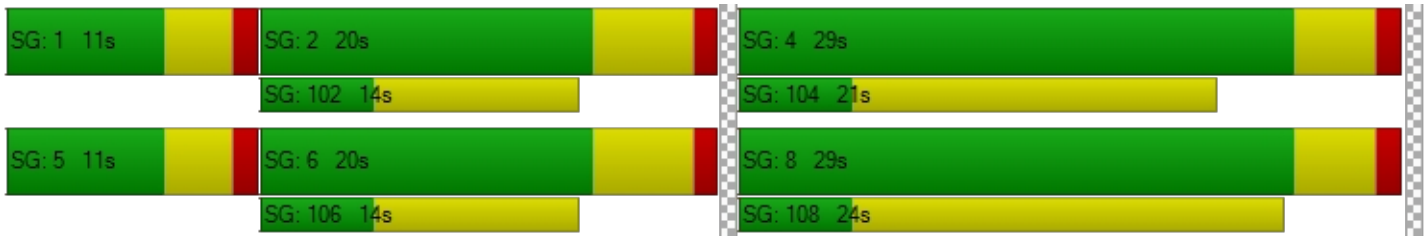
Vehicle Miles Traveled [mph]	0.52	35.16	7.32	3.04	13.57	13.54	0.28	2.33	15.89	24.33
Stops [stops/h]	1.77	230.13	46.88	27.72	192.77	192.41	9.76	62.44	153.49	216.98
Fuel consumption [US gal/h]	0.05	4.76	0.96	0.51	3.39	3.38	0.11	0.69	2.25	3.19
CO [g/h]	3.16	332.91	67.14	35.47	236.69	236.25	7.97	48.50	157.16	223.07
NOx [g/h]	0.62	64.77	13.06	6.90	46.05	45.96	1.55	9.44	30.58	43.40
VOC [g/h]	0.73	77.15	15.56	8.22	54.86	54.75	1.85	11.24	36.42	51.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	3.054	2.728	1.969	2.183
Crosswalk LOS	C	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	487	487	813	813
d_b, Bicycle Delay [s]	17.18	17.18	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.249	2.527	1.960	2.576
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	2	371	713	4	2	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	153	215	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	524	928	4	2	4
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	140	249	1	1	1
Total Analysis Volume [veh/h]	2	562	995	4	2	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	10.24	0.00	0.00	0.00	19.10	12.11
Movement LOS	B	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.22	0.00	0.00	0.00	1.18	1.18
d_A, Approach Delay [s/veh]	0.04		0.00		14.44	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	282	264	80	622	17	26	92	12	167	39	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	149	91	5	210	0	0	3	8	36	3	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	431	355	85	832	17	26	95	20	203	42	72
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	114	94	22	220	4	7	25	5	54	11	19
Total Analysis Volume [veh/h]	8	456	376	90	880	18	28	101	21	215	44	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	24	0	11	24	0	11	29	0	11	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	47	37	37	47	42	42	18	7	18	11	11
g / C, Green / Cycle	0.63	0.49	0.49	0.62	0.56	0.56	0.24	0.10	0.24	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.27	0.27	0.12	0.27	0.27	0.02	0.07	0.16	0.03	0.05
s, saturation flow rate [veh/h]	466	1683	1435	765	1683	1671	1273	1633	1370	1683	1431
c, Capacity [veh/h]	421	831	709	500	933	926	426	157	395	249	212
d1, Uniform Delay [s]	6.57	13.09	13.10	7.33	10.18	10.18	21.90	33.11	25.03	27.96	28.76
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	2.51	2.95	0.79	1.79	1.80	0.06	7.98	1.17	0.34	1.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.54	0.54	0.18	0.48	0.48	0.07	0.78	0.54	0.18	0.36
d, Delay for Lane Group [s/veh]	6.58	15.59	16.05	8.12	11.97	11.98	21.96	41.08	26.20	28.30	29.79
Lane Group LOS	A	B	B	A	B	B	C	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.04	5.11	4.46	0.54	4.11	4.09	0.38	2.45	3.33	0.70	1.25
50th-Percentile Queue Length [ft/ln]	0.99	127.87	111.56	13.50	102.83	102.19	9.38	61.30	83.29	17.38	31.36
95th-Percentile Queue Length [veh/ln]	0.07	8.82	7.93	0.97	7.40	7.36	0.68	4.41	6.00	1.25	2.26
95th-Percentile Queue Length [ft/ln]	1.78	220.59	198.17	24.31	185.09	183.94	16.89	110.34	149.93	31.29	56.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.58	15.60	16.05	8.12	11.97	11.98	21.96	41.08	41.08	26.20	28.30	29.79
Movement LOS	A	B	B	A	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	15.72			11.62			37.51			27.29		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	17.06											
Intersection LOS	B											
Intersection V/C	0.487											

Emissions

Vehicle Miles Traveled [mph]	0.32	17.69	15.12	6.81	34.09	33.85	0.72	3.13	18.05	3.69	6.38
Stops [stops/h]	1.90	245.50	214.19	25.93	197.43	196.20	18.01	117.70	159.92	33.38	60.21
Fuel consumption [US gal/h]	0.04	3.94	3.44	0.65	4.26	4.23	0.25	1.80	2.77	0.59	1.06
CO [g/h]	2.59	275.71	240.46	45.25	297.65	295.74	17.77	125.75	193.84	41.23	73.82
NOx [g/h]	0.50	53.64	46.79	8.80	57.91	57.54	3.46	24.47	37.71	8.02	14.36
VOC [g/h]	0.60	63.90	55.73	10.49	68.98	68.54	4.12	29.14	44.92	9.56	17.11

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.775	2.702	2.010	2.410
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	504	496	648	648
d_b, Bicycle Delay [s]	20.98	21.21	17.14	17.14
l_b,int, Bicycle LOS Score for Intersection	2.467	2.589	2.022	2.327
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	34.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.113

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	537	4	14	770	4	14	0	11	2	0	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	8	55	198	0	0	0	0	7	0	109
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	675	12	69	968	4	14	0	11	9	0	135
Peak Hour Factor	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	182	3	19	260	1	4	0	3	2	0	36
Total Analysis Volume [veh/h]	8	727	13	74	1042	4	15	0	12	10	0	145
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.09	0.01	0.00	0.11	0.00	0.02	0.05	0.00	0.23
d_M, Delay for Movement [s/veh]	10.51	0.00	0.00	9.57	0.00	0.00	34.93	31.57	15.09	25.10	30.32	13.25
Movement LOS	B	A	A	A	A	A	D	D	C	D	D	B
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.28	0.00	0.00	0.47	0.47	0.47	1.14	1.14	1.14
95th-Percentile Queue Length [ft/ln]	0.92	0.00	0.00	7.02	0.00	0.00	11.63	11.63	11.63	28.52	28.52	28.52
d_A, Approach Delay [s/veh]	0.11			0.63			26.11			14.02		
Approach LOS	A			A			D			B		
d_I, Intersection Delay [s/veh]	1.79											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.409

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	485	25	43	737	6	13	10	20	16	5	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	138	108	0	198	7	8	3	0	96	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	623	133	43	935	13	21	13	20	112	8	50
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	172	37	12	258	4	6	4	6	31	2	14
Total Analysis Volume [veh/h]	11	687	147	47	1031	14	23	14	22	123	9	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	105
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	48	0	11	48	0	11	35	0	11	35	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	80	70	70	80	74	74	16	5	16	8	8
g / C, Green / Cycle	0.76	0.67	0.67	0.76	0.70	0.70	0.15	0.04	0.15	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.26	0.07	0.31	0.31	0.02	0.02	0.09	0.01	0.04
s, saturation flow rate [veh/h]	541	1683	1581	684	1683	1675	1342	1519	1446	1683	1431
c, Capacity [veh/h]	440	1129	1061	547	1181	1176	295	67	290	132	112
d1, Uniform Delay [s]	4.19	7.65	7.65	3.97	6.77	6.77	38.57	49.12	41.20	44.84	46.39
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.98	1.04	0.31	1.21	1.21	0.11	6.45	0.98	0.22	3.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.38	0.38	0.09	0.44	0.44	0.08	0.53	0.42	0.07	0.49
d, Delay for Lane Group [s/veh]	4.21	8.62	8.69	4.28	7.98	7.98	38.68	55.56	42.18	45.06	49.70
Lane Group LOS	A	A	A	A	A	A	D	E	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.05	4.05	3.83	0.24	4.63	4.61	0.53	1.05	3.03	0.23	1.49
50th-Percentile Queue Length [ft/ln]	1.15	101.15	95.65	5.92	115.68	115.19	13.16	26.27	75.84	5.68	37.23
95th-Percentile Queue Length [veh/ln]	0.08	7.28	6.89	0.43	8.16	8.13	0.95	1.89	5.46	0.41	2.68
95th-Percentile Queue Length [ft/ln]	2.08	182.07	172.17	10.65	203.88	203.20	23.70	47.29	136.51	10.23	67.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.21	8.65	8.69	4.28	7.98	7.98	38.68	55.56	55.56	42.18	45.06	49.70
Movement LOS	A	A	A	A	A	A	D	E	E	D	D	D
d_A, Approach Delay [s/veh]	8.60			7.82			48.98			44.53		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	12.38											
Intersection LOS	B											
Intersection V/C	0.409											

Emissions

Vehicle Miles Traveled [mph]	0.82	32.04	30.14	3.58	39.90	39.72	0.60	0.95	10.39	0.76	4.64
Stops [stops/h]	1.58	138.72	131.18	8.11	158.65	157.98	18.05	36.03	104.00	7.79	51.06
Fuel consumption [US gal/h]	0.05	3.02	2.85	0.24	3.56	3.55	0.28	0.59	1.92	0.15	0.96
CO [g/h]	3.68	211.02	199.24	16.67	249.15	248.08	19.40	41.09	134.33	10.25	67.17
NOx [g/h]	0.72	41.06	38.77	3.24	48.48	48.27	3.77	7.99	26.14	1.99	13.07
VOC [g/h]	0.85	48.91	46.18	3.86	57.74	57.49	4.49	9.52	31.13	2.37	15.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	2.780	2.734	1.986	2.266
Crosswalk LOS	C	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	817	817	579	579
d_b, Bicycle Delay [s]	18.36	18.36	26.50	26.50
l_b,int, Bicycle LOS Score for Intersection	2.471	2.675	1.871	2.083
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	504	12	5	742	15	0	0	12	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	246	0	0	294	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	750	12	5	1036	15	0	0	12	0	0	14
Peak Hour Factor	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.9500	0.9500	0.8940	0.9500	0.9500	0.8940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	210	3	1	290	4	0	0	3	0	0	4
Total Analysis Volume [veh/h]	12	839	13	6	1159	17	0	0	13	0	0	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	11.23	0.00	0.00	9.64	0.00	0.00	0.00	0.00	13.20	0.00	0.00	11.42
Movement LOS	B	A	A	A	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
95th-Percentile Queue Length [ft/ln]	1.56	0.00	0.00	0.58	0.00	0.00	0.00	0.00	2.22	0.00	0.00	2.14
d_A, Approach Delay [s/veh]	0.16			0.05			13.20			11.42		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.26											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	345	33	29	665	59	143	191	138	114	17	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	198	32	0	260	33	49	11	17	33	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	543	65	29	925	92	192	202	155	147	28	41
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	151	18	8	257	26	53	56	43	41	8	11
Total Analysis Volume [veh/h]	69	603	72	32	1028	102	213	224	172	163	31	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13	30	0	11	28	0	13	27	0	12	26	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	6	37	37	4	35	35	25	13	13	26	13
g / C, Green / Cycle	0.07	0.46	0.46	0.05	0.44	0.44	0.32	0.17	0.17	0.32	0.16
(v / s)_i Volume / Saturation Flow Rate	0.04	0.20	0.20	0.02	0.34	0.34	0.16	0.13	0.12	0.19	0.05
s, saturation flow rate [veh/h]	1603	1683	1621	1603	1683	1630	1369	1683	1431	849	1522
c, Capacity [veh/h]	112	774	745	74	733	710	519	284	242	433	245
d1, Uniform Delay [s]	36.15	14.67	14.68	37.16	19.33	19.34	21.60	31.87	31.40	21.16	29.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.11	0.22	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.37	1.84	1.92	4.01	8.15	8.43	2.39	4.84	3.86	1.09	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.44	0.44	0.44	0.78	0.78	0.41	0.79	0.71	0.38	0.31
d, Delay for Lane Group [s/veh]	41.53	16.51	16.60	41.17	27.48	27.77	23.98	36.71	35.26	22.25	30.41
Lane Group LOS	D	B	B	D	C	C	C	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.43	4.22	4.09	0.67	9.85	9.61	3.31	4.36	3.27	2.38	1.35
50th-Percentile Queue Length [ft/ln]	35.86	105.61	102.35	16.83	246.15	240.19	82.79	108.89	81.64	59.50	33.69
95th-Percentile Queue Length [veh/ln]	2.58	7.60	7.37	1.21	14.99	14.69	5.96	7.78	5.88	4.28	2.43
95th-Percentile Queue Length [ft/ln]	64.55	189.88	184.23	30.29	374.80	367.27	149.03	194.45	146.95	107.09	60.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.53	16.55	16.60	41.17	27.61	27.77	23.98	36.71	35.26	22.25	30.41	30.41
Movement LOS	D	B	B	D	C	C	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	18.87			28.00			31.85			24.87		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	26.11											
Intersection LOS	C											
Intersection V/C	0.636											

Emissions

Vehicle Miles Traveled [mph]	5.45	27.12	26.17	2.54	45.61	44.24	48.81	51.33	39.41	26.12	12.34
Stops [stops/h]	64.55	190.11	184.23	30.29	443.06	432.34	149.03	195.99	146.95	107.09	60.64
Fuel consumption [US gal/h]	1.28	3.62	3.50	0.59	8.28	8.08	4.02	5.10	3.84	2.32	1.26
CO [g/h]	89.20	252.88	244.85	41.44	578.66	564.93	281.06	356.75	268.54	162.42	88.36
NOx [g/h]	17.36	49.20	47.64	8.06	112.59	109.91	54.68	69.41	52.25	31.60	17.19
VOC [g/h]	20.67	58.61	56.75	9.60	134.11	130.93	65.14	82.68	62.24	37.64	20.48

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.814	2.810	2.480	2.090
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	623	573	548	535
d_b, Bicycle Delay [s]	18.98	20.38	21.10	21.46
l_b,int, Bicycle LOS Score for Intersection	2.388	2.733	2.779	2.170
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.584

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	341	54	60	774	49	31	249	71	46	235	76
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	207	0	0	292	18	28	5	11	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	548	54	60	1066	67	59	254	82	46	241	76
Peak Hour Factor	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	163	16	18	317	20	18	76	24	14	72	23
Total Analysis Volume [veh/h]	43	652	64	71	1268	80	70	302	98	55	287	90
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	13	29	0	11	29	0	11	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	4	39	39	6	40	40	6	13	13	5	12	12
g / C, Green / Cycle	0.05	0.49	0.49	0.07	0.50	0.50	0.07	0.16	0.16	0.06	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.04	0.04	0.40	0.06	0.04	0.12	0.13	0.03	0.12	0.12
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1545	1603	1683	1549
c, Capacity [veh/h]	87	1564	698	112	1615	721	111	264	243	100	254	234
d1, Uniform Delay [s]	36.75	13.15	10.97	36.19	16.29	10.43	36.23	32.39	32.49	36.43	32.58	32.69
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.27	0.82	0.26	5.74	3.92	0.31	5.76	4.98	5.94	4.71	4.71	5.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.42	0.09	0.63	0.79	0.11	0.63	0.78	0.80	0.55	0.76	0.78
d, Delay for Lane Group [s/veh]	41.02	13.97	11.23	41.93	20.21	10.74	41.99	37.37	38.44	41.14	37.29	38.32
Lane Group LOS	D	B	B	D	C	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.89	3.55	0.60	1.48	9.16	0.73	1.48	4.10	3.91	1.17	3.89	3.73
50th-Percentile Queue Length [ft/ln]	22.36	88.76	15.06	37.09	228.94	18.28	37.02	102.38	97.80	29.15	97.21	93.31
95th-Percentile Queue Length [veh/ln]	1.61	6.39	1.08	2.67	14.12	1.32	2.67	7.37	7.04	2.10	7.00	6.72
95th-Percentile Queue Length [ft/ln]	40.26	159.76	27.11	66.77	353.01	32.90	66.63	184.29	176.05	52.48	174.99	167.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.02	13.97	11.23	41.93	20.21	10.74	41.99	37.71	38.44	41.14	37.62	38.32
Movement LOS	D	B	B	D	C	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.27			20.76			38.50			38.22		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	24.56											
Intersection LOS	C											
Intersection V/C	0.584											

Emissions

Vehicle Miles Traveled [mph]	3.45	52.32	5.14	5.61	100.11	6.32	15.92	46.92	44.04	8.95	31.56	29.77
Stops [stops/h]	40.26	319.52	27.11	66.77	824.19	32.90	66.63	184.29	176.05	52.48	174.99	167.96
Fuel consumption [US gal/h]	0.79	6.25	0.55	1.32	15.23	0.66	1.62	4.52	4.30	1.06	3.56	3.41
CO [g/h]	55.45	436.98	38.16	92.38	1064.48	46.34	113.35	315.88	300.60	74.38	248.99	238.38
NOx [g/h]	10.79	85.02	7.42	17.97	207.11	9.02	22.05	61.46	58.49	14.47	48.45	46.38
VOC [g/h]	12.85	101.27	8.84	21.41	246.70	10.74	26.27	73.21	69.67	17.24	57.71	55.25

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.862	2.871	2.467	2.437
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	548	598	608	610
d_b, Bicycle Delay [s]	21.10	19.67	19.39	19.32
l_b,int, Bicycle LOS Score for Intersection	2.400	2.945	2.162	2.130
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	4.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	408	38	86	803	6	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	210	15	0	304	37	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	618	53	86	1107	43	19
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	187	16	26	335	13	6
Total Analysis Volume [veh/h]	747	64	104	1339	52	23
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	20	0	11	31	89	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	93	93	104	104	7	7
g / C, Green / Cycle	0.78	0.78	0.86	0.86	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.22	0.22	0.14	0.38	0.03	0.01
s, saturation flow rate [veh/h]	1870	1819	766	3560	1781	1589
c, Capacity [veh/h]	1448	1409	703	3077	98	87
d1, Uniform Delay [s]	3.90	3.93	1.55	1.77	55.21	54.39
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	0.52	0.44	0.45	4.45	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.29	0.15	0.44	0.53	0.26
d, Delay for Lane Group [s/veh]	4.38	4.44	2.00	2.22	59.66	55.98
Lane Group LOS	A	A	A	A	E	E
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.46	2.49	0.24	1.68	1.67	0.71
50th-Percentile Queue Length [ft/ln]	61.61	62.24	6.01	42.09	41.67	17.81
95th-Percentile Queue Length [veh/ln]	4.44	4.48	0.43	3.03	3.00	1.28
95th-Percentile Queue Length [ft/ln]	110.90	112.03	10.81	75.75	75.01	32.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.41	4.44	2.00	2.22	59.66	55.98
Movement LOS	A	A	A	A	E	E
d_A, Approach Delay [s/veh]	4.41		2.20		58.53	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	4.79					
Intersection LOS	A					
Intersection V/C	0.405					

Emissions

Vehicle Miles Traveled [mph]	30.00	30.00	8.35	107.45	8.57	3.79
Stops [stops/h]	73.93	74.69	7.21	101.01	50.01	21.37
Fuel consumption [US gal/h]	2.06	2.07	0.41	5.46	1.21	0.51
CO [g/h]	144.05	144.82	28.98	381.65	84.48	35.96
NOx [g/h]	28.03	28.18	5.64	74.25	16.44	7.00
VOC [g/h]	33.39	33.56	6.72	88.45	19.58	8.33

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	2.773	0.000	2.138
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	248	432	1407
d_b, Bicycle Delay [s]	46.03	36.90	5.28
l_b,int, Bicycle LOS Score for Intersection	2.443	2.964	1.774
Bicycle LOS	B	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.366

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	414	31	112	647	34	11	32	12	21	20	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	214	0	0	331	10	11	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	628	31	112	978	44	22	32	12	21	20	21
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	183	9	33	285	13	6	9	3	6	6	6
Total Analysis Volume [veh/h]	16	731	36	130	1139	51	26	37	14	24	23	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	17	0	11	17	0	0	57	0	0	57	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	69	59	59	69	63	63	6	6
g / C, Green / Cycle	0.82	0.69	0.69	0.82	0.74	0.74	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.03	0.21	0.21	0.16	0.32	0.32	0.04	0.04
s, saturation flow rate [veh/h]	550	1870	1839	836	1870	1842	1793	1783
c, Capacity [veh/h]	513	1289	1267	746	1387	1366	182	182
d1, Uniform Delay [s]	2.23	5.18	5.18	1.98	4.18	4.18	38.37	38.27
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.60	0.61	0.51	0.98	1.00	1.55	1.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.30	0.30	0.17	0.43	0.43	0.42	0.39
d, Delay for Lane Group [s/veh]	2.26	5.78	5.79	2.49	5.16	5.18	39.93	39.64
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.02	2.27	2.24	0.28	3.00	2.97	1.61	1.48
50th-Percentile Queue Length [ft/ln]	0.59	56.73	55.93	7.03	75.05	74.28	40.32	36.99
95th-Percentile Queue Length [veh/ln]	0.04	4.08	4.03	0.51	5.40	5.35	2.90	2.66
95th-Percentile Queue Length [ft/ln]	1.07	102.12	100.68	12.65	135.08	133.70	72.57	66.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.26	5.78	5.79	2.49	5.17	5.18	39.93	39.93	39.93	39.64	39.64	39.64
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	5.71			4.91			39.93			39.64		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	7.48											
Intersection LOS	A											
Intersection V/C	0.366											

Emissions

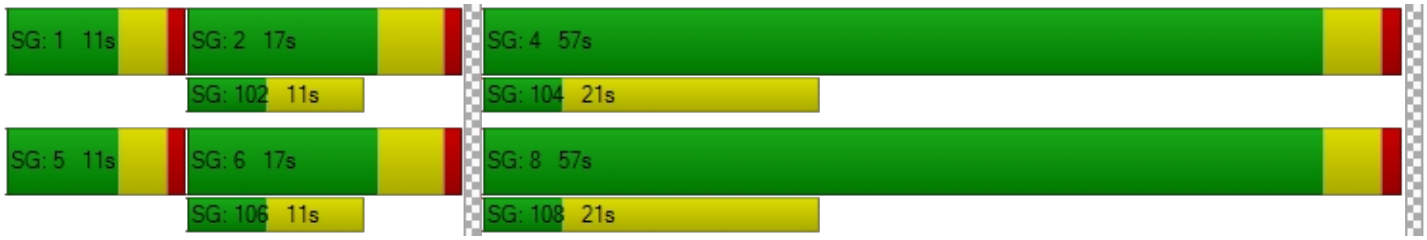
Vehicle Miles Traveled [mph]	1.21	29.16	28.70	9.62	44.31	43.73	2.01	11.85
Stops [stops/h]	1.00	96.11	94.76	11.90	127.14	125.83	68.31	62.67
Fuel consumption [US gal/h]	0.06	2.29	2.25	0.52	3.27	3.24	1.09	1.41
CO [g/h]	4.26	159.99	157.61	36.49	228.85	226.22	75.88	98.34
NOx [g/h]	0.83	31.13	30.67	7.10	44.53	44.01	14.76	19.13
VOC [g/h]	0.99	37.08	36.53	8.46	53.04	52.43	17.59	22.79

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.779	2.814	1.812	1.979
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	280	280	1231	1231
d_b, Bicycle Delay [s]	31.43	31.43	6.29	6.29
l_b,int, Bicycle LOS Score for Intersection	2.420	2.863	1.901	1.891
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	106.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.164

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	444	38	35	642	20	4	6	12	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	214	0	0	331	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	658	38	35	973	20	4	6	12	8	3	18
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	198	11	11	293	6	1	2	4	2	1	5
Total Analysis Volume [veh/h]	24	794	46	42	1174	24	5	7	14	10	4	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.11	0.16	0.03	0.17	0.09	0.04
d_M, Delay for Movement [s/veh]	11.49	0.00	0.00	9.81	0.00	0.00	100.11	106.70	30.44	78.69	100.40	23.58
Movement LOS	B	A	A	A	A	A	F	F	D	F	F	C
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.17	0.00	0.00	1.13	1.13	1.13	1.16	1.16	1.16
95th-Percentile Queue Length [ft/ln]	3.24	0.00	0.00	4.20	0.00	0.00	28.37	28.37	28.37	28.98	28.98	28.98
d_A, Approach Delay [s/veh]	0.32			0.33			64.37			47.43		
Approach LOS	A			A			F			E		
d_I, Intersection Delay [s/veh]	1.88											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.320

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	39	484	45	93	511	25	10	12	10	10	9	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	203	0	0	321	10	11	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	687	45	93	832	35	21	12	10	10	9	17
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	199	13	27	241	10	6	3	3	3	3	5
Total Analysis Volume [veh/h]	45	795	52	108	963	41	24	14	12	12	10	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	50	0	15	54	0	0	45	0	0	45	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	95	84	84	95	85	85	6	6	6
g / C, Green / Cycle	0.86	0.76	0.76	0.86	0.78	0.78	0.05	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.07	0.23	0.23	0.14	0.27	0.27	0.04	0.01	0.01
s, saturation flow rate [veh/h]	655	1870	1830	755	1870	1843	1137	1784	1589
c, Capacity [veh/h]	605	1424	1394	691	1450	1429	108	144	83
d1, Uniform Delay [s]	1.70	4.06	4.06	1.65	3.80	3.80	52.11	49.98	50.03
k, delay calibration	0.17	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	0.54	0.55	0.48	0.66	0.67	3.07	0.49	1.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.30	0.30	0.16	0.35	0.35	0.46	0.15	0.24
d, Delay for Lane Group [s/veh]	1.78	4.60	4.61	2.13	4.46	4.47	55.19	50.47	51.50
Lane Group LOS	A	A	A	A	A	A	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	2.52	2.47	0.23	2.85	2.81	1.47	0.61	0.57
50th-Percentile Queue Length [ft/ln]	1.69	62.96	61.74	5.65	71.24	70.35	36.85	15.13	14.18
95th-Percentile Queue Length [veh/ln]	0.12	4.53	4.45	0.41	5.13	5.07	2.65	1.09	1.02
95th-Percentile Queue Length [ft/ln]	3.04	113.33	111.13	10.17	128.24	126.63	66.32	27.24	25.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.78	4.60	4.61	2.13	4.47	4.47	55.19	55.19	55.19	50.47	50.47	51.50
Movement LOS	A	A	A	A	A	A	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	4.46			4.24			55.19			50.96		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	6.49											
Intersection LOS	A											
Intersection V/C	0.320											

Emissions

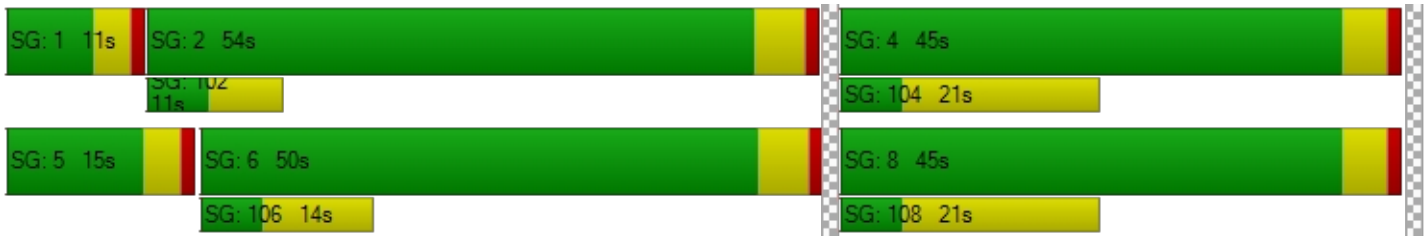
Vehicle Miles Traveled [mph]	3.38	32.13	31.45	8.12	38.00	37.47	1.47	0.66	0.60
Stops [stops/h]	2.21	82.42	80.82	7.40	93.26	92.09	48.24	19.81	18.56
Fuel consumption [US gal/h]	0.16	2.25	2.20	0.41	2.61	2.57	0.81	0.33	0.31
CO [g/h]	11.30	156.94	153.75	28.79	182.37	179.95	56.79	23.17	21.50
NOx [g/h]	2.20	30.53	29.91	5.60	35.48	35.01	11.05	4.51	4.18
VOC [g/h]	2.62	36.37	35.63	6.67	42.27	41.71	13.16	5.37	4.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.756	2.789	1.836	2.130
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	816	889	735	735
d_b, Bicycle Delay [s]	19.26	16.97	22.02	22.02
l_b,int, Bicycle LOS Score for Intersection	2.510	2.691	1.857	1.843
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	76.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.092

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	544	26	30	474	18	0	3	8	4	4	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	203	0	0	321	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	747	26	30	795	18	0	3	8	4	4	24
Peak Hour Factor	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	221	8	9	235	5	0	1	2	1	1	7
Total Analysis Volume [veh/h]	30	885	31	36	942	21	0	4	9	5	5	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.00	0.07	0.02	0.07	0.09	0.05
d_M, Delay for Movement [s/veh]	10.29	0.00	0.00	10.11	0.00	0.00	64.31	74.30	14.30	62.15	76.78	17.03
Movement LOS	B	A	A	B	A	A	F	F	B	F	F	C
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.15	0.00	0.00	0.30	0.30	0.30	0.79	0.79	0.79
95th-Percentile Queue Length [ft/ln]	3.30	0.00	0.00	3.83	0.00	0.00	7.39	7.39	7.39	19.63	19.63	19.63
d_A, Approach Delay [s/veh]	0.33			0.36			32.76			30.83		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	1.14											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	32.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	388	149	74	337	60	83	439	33	176	547	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	141	0	77	224	20	28	0	0	0	0	34
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	529	149	151	561	80	111	439	33	176	547	162
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	145	41	41	154	22	30	120	9	48	150	44
Total Analysis Volume [veh/h]	45	579	163	165	614	88	122	481	36	193	599	177
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	13	29	0	14	30	0	15	31	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	5	29	29	9	34	34	7	18	18	11	21	21
g / C, Green / Cycle	0.05	0.34	0.34	0.11	0.40	0.40	0.09	0.21	0.21	0.13	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.03	0.16	0.10	0.09	0.17	0.06	0.07	0.14	0.14	0.11	0.22	0.22
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1825	1781	1870	1725
c, Capacity [veh/h]	98	1216	543	189	1410	629	155	387	378	228	464	428
d1, Uniform Delay [s]	38.96	22.01	20.54	37.45	18.73	16.41	38.04	31.07	31.09	36.23	30.63	30.63
k, delay calibration	0.11	0.50	0.50	0.28	0.50	0.50	0.11	0.11	0.11	0.27	0.17	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.37	1.34	1.42	25.50	0.98	0.46	8.61	2.06	2.13	18.52	7.84	8.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.48	0.30	0.88	0.44	0.14	0.79	0.68	0.68	0.85	0.87	0.87
d, Delay for Lane Group [s/veh]	42.32	23.35	21.96	62.95	19.72	16.88	46.65	33.14	33.22	54.75	38.47	39.05
Lane Group LOS	D	C	C	E	B	B	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.97	4.44	2.43	4.61	4.32	1.12	2.79	4.97	4.87	4.96	8.55	7.96
50th-Percentile Queue Length [ft/ln]	24.20	111.10	60.74	115.23	108.00	27.94	69.68	124.21	121.76	123.92	213.70	198.90
95th-Percentile Queue Length [veh/ln]	1.74	7.90	4.37	8.13	7.73	2.01	5.02	8.62	8.49	8.61	13.34	12.58
95th-Percentile Queue Length [ft/ln]	43.56	197.53	109.33	203.25	193.21	50.30	125.43	215.59	212.24	215.20	333.57	314.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.32	23.35	21.96	62.95	19.72	16.88	46.65	33.17	33.22	54.75	38.66	39.05
Movement LOS	D	C	C	E	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	24.15			27.65			35.75			41.94		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.64											
Intersection LOS	C											
Intersection V/C	0.540											

Emissions

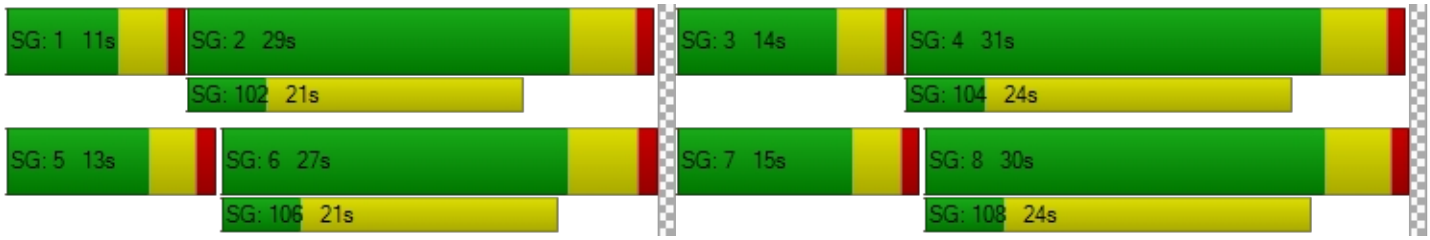
Vehicle Miles Traveled [mph]	1.70	21.88	6.16	12.63	46.99	6.73	4.79	10.26	10.04	7.16	14.98	13.82
Stops [stops/h]	41.00	376.43	102.90	195.21	365.92	47.34	118.05	210.42	206.28	209.93	362.03	336.96
Fuel consumption [US gal/h]	0.85	7.23	1.96	4.06	7.01	0.91	2.23	3.74	3.66	4.00	6.45	6.02
CO [g/h]	59.50	505.61	137.00	283.99	489.76	63.96	155.78	261.11	256.01	279.73	451.08	420.81
NOx [g/h]	11.58	98.37	26.65	55.25	95.29	12.44	30.31	50.80	49.81	54.43	87.76	81.87
VOC [g/h]	13.79	117.18	31.75	65.82	113.51	14.82	36.10	60.52	59.33	64.83	104.54	97.53

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.805	2.782	2.610	2.703
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	508	562	586	609
d_b, Bicycle Delay [s]	23.64	21.96	21.25	20.55
l_b,int, Bicycle LOS Score for Intersection	2.423	2.489	2.301	2.573
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.294

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	35	52	5	35	5	8	382	117	52	204	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	77	0	0	50	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	35	52	5	35	5	8	459	117	52	254	7
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	11	16	2	11	2	2	139	35	16	77	2
Total Analysis Volume [veh/h]	89	42	63	6	42	6	10	555	141	63	307	8
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	27	0	0	27	0	21	27	0	11	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	8	8	8	9	1	38	38	5	42	42
g / C, Green / Cycle	0.12	0.12	0.12	0.13	0.02	0.58	0.58	0.07	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.07	0.02	0.04	0.03	0.01	0.19	0.19	0.04	0.08	0.08
s, saturation flow rate [veh/h]	1357	1870	1589	1667	1781	1870	1741	1781	1870	1853
c, Capacity [veh/h]	159	230	196	208	32	1094	1019	130	1198	1187
d1, Uniform Delay [s]	27.75	25.56	26.02	25.30	31.53	6.92	6.93	28.94	4.59	4.59
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.04	0.38	0.94	0.66	5.52	0.80	0.87	2.76	0.23	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.18	0.32	0.26	0.31	0.33	0.33	0.48	0.13	0.13
d, Delay for Lane Group [s/veh]	30.79	25.94	26.96	25.95	37.04	7.73	7.80	31.70	4.82	4.82
Lane Group LOS	C	C	C	C	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.39	0.57	0.88	0.76	0.20	2.20	2.08	0.99	0.66	0.66
50th-Percentile Queue Length [ft/ln]	34.75	14.24	22.10	19.04	4.89	55.11	52.08	24.74	16.59	16.52
95th-Percentile Queue Length [veh/ln]	2.50	1.03	1.59	1.37	0.35	3.97	3.75	1.78	1.19	1.19
95th-Percentile Queue Length [ft/ln]	62.55	25.63	39.77	34.28	8.81	99.21	93.74	44.54	29.85	29.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.79	25.94	26.96	25.95	25.95	25.95	37.04	7.75	7.80	31.70	4.82	4.82
Movement LOS	C	C	C	C	C	C	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	28.49			25.95			8.18			9.30		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	12.18											
Intersection LOS	B											
Intersection V/C	0.294											

Emissions

Vehicle Miles Traveled [mph]	7.25	3.42	5.13	1.48	0.32	11.35	10.63	14.44	36.19	35.99
Stops [stops/h]	76.99	31.54	48.95	42.19	10.84	122.10	115.38	54.81	36.74	36.59
Fuel consumption [US gal/h]	1.41	0.59	0.91	0.51	0.17	1.92	1.81	1.37	1.81	1.80
CO [g/h]	98.77	41.19	63.56	35.92	11.81	133.96	126.31	95.69	126.57	125.90
NOx [g/h]	19.22	8.01	12.37	6.99	2.30	26.06	24.58	18.62	24.63	24.50
VOC [g/h]	22.89	9.55	14.73	8.32	2.74	31.05	29.27	22.18	29.33	29.18

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.241	1.746	2.663	2.587
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	674	689	674	366
d_b, Bicycle Delay [s]	14.29	13.96	14.29	21.69
l_b,int, Bicycle LOS Score for Intersection	2.094	1.863	2.356	2.086
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.351

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	148	58	21	197	4	1	222	180	42	126	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	2	0	0	0	0	43	0	2	26	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	148	60	21	197	4	1	265	180	44	152	19
Peak Hour Factor	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	44	18	6	59	1	0	79	54	13	46	6
Total Analysis Volume [veh/h]	81	177	72	25	236	5	1	317	216	53	182	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	11	27	0	18	26	0	11	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	21	15	15	21	12	0	34	34	5	40	40
g / C, Green / Cycle	0.29	0.20	0.20	0.29	0.16	0.00	0.46	0.46	0.06	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.05	0.02	0.13	0.00	0.15	0.15	0.03	0.06	0.06
s, saturation flow rate [veh/h]	1369	1870	1589	1278	1863	1781	1870	1624	1781	1870	1798
c, Capacity [veh/h]	398	365	310	417	293	6	855	743	112	983	946
d1, Uniform Delay [s]	20.58	26.84	25.45	19.61	30.59	37.27	13.00	13.07	33.96	8.92	8.93
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	1.00	0.38	0.06	5.75	12.56	1.03	1.24	3.11	0.22	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.49	0.23	0.06	0.82	0.17	0.33	0.34	0.48	0.11	0.11
d, Delay for Lane Group [s/veh]	20.83	27.84	25.83	19.67	36.34	49.82	14.03	14.30	37.07	9.14	9.16
Lane Group LOS	C	C	C	B	D	D	B	B	D	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.03	2.77	1.06	0.30	4.47	0.04	2.88	2.62	1.01	0.82	0.81
50th-Percentile Queue Length [ft/ln]	25.63	69.30	26.57	7.62	111.70	0.96	72.12	65.55	25.15	20.55	20.27
95th-Percentile Queue Length [veh/ln]	1.85	4.99	1.91	0.55	7.93	0.07	5.19	4.72	1.81	1.48	1.46
95th-Percentile Queue Length [ft/ln]	46.13	124.73	47.82	13.72	198.37	1.73	129.82	117.98	45.26	37.00	36.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.83	27.84	25.83	19.67	36.34	36.34	49.82	14.06	14.30	37.07	9.15	9.16
Movement LOS	C	C	C	B	D	D	D	B	B	D	A	A
d_A, Approach Delay [s/veh]	25.68			34.78			14.23			14.89		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	21.01											
Intersection LOS	C											
Intersection V/C	0.351											

Emissions

Vehicle Miles Traveled [mph]	2.88	6.30	2.56	2.04	19.63	0.03	8.01	7.14	12.05	23.52	23.10
Stops [stops/h]	49.20	133.05	51.01	14.64	214.47	1.84	138.47	125.85	48.28	39.46	38.91
Fuel consumption [US gal/h]	0.82	2.24	0.86	0.29	4.14	0.03	2.45	2.22	1.16	1.38	1.36
CO [g/h]	57.55	156.82	60.10	20.12	289.65	2.04	171.37	155.44	81.28	96.37	94.73
NOx [g/h]	11.20	30.51	11.69	3.91	56.36	0.40	33.34	30.24	15.81	18.75	18.43
VOC [g/h]	13.34	36.34	13.93	4.66	67.13	0.47	39.72	36.02	18.84	22.33	21.95

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.361	2.110	2.522	2.431
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	584	584	549	381
d_b, Bicycle Delay [s]	18.80	18.80	19.73	24.56
l_b,int, Bicycle LOS Score for Intersection	2.319	2.213	2.215	1.987
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.370

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	0	7	0	0	12	0	345	40	21	290	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	189	0	5	0	0	0	0	27	153	6	42	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	237	0	12	0	0	12	0	372	193	27	332	44
Peak Hour Factor	0.9340	0.9500	0.9340	0.9500	0.9500	0.9340	0.9500	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	0	3	0	0	3	0	100	52	7	89	12
Total Analysis Volume [veh/h]	254	0	13	0	0	13	0	398	207	29	355	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	23	0	0	0	0	22	0	19	0	11	30	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	13	13	2	40	40	47	47
g / C, Green / Cycle	0.17	0.17	0.02	0.53	0.53	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.14	0.01	0.01	0.16	0.18	0.03	0.22
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1668	923	1832
c, Capacity [veh/h]	301	269	38	983	877	622	1140
d1, Uniform Delay [s]	30.21	26.11	36.03	10.06	10.30	5.98	6.87
k, delay calibration	0.12	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.82	0.07	5.30	0.81	1.08	0.03	0.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.05	0.34	0.31	0.34	0.05	0.35
d, Delay for Lane Group [s/veh]	37.03	26.19	41.33	10.87	11.37	6.01	7.72
Lane Group LOS	D	C	D	B	B	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.91	0.20	0.29	2.74	2.84	0.15	2.83
50th-Percentile Queue Length [ft/ln]	122.81	4.94	7.19	68.42	70.93	3.80	70.82
95th-Percentile Queue Length [veh/ln]	8.55	0.36	0.52	4.93	5.11	0.27	5.10
95th-Percentile Queue Length [ft/ln]	213.68	8.89	12.94	123.15	127.68	6.83	127.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.03	0.00	26.19	0.00	0.00	41.33	0.00	10.99	11.37	6.01	7.72	7.72
Movement LOS	D		C			D		B	B	A	A	A
d_A, Approach Delay [s/veh]	36.50			41.33			11.12			7.61		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15.42											
Intersection LOS	B											
Intersection V/C	0.370											

Emissions

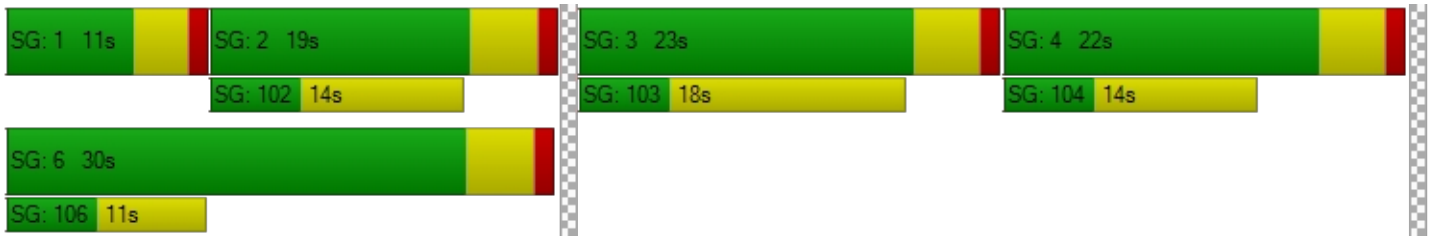
Vehicle Miles Traveled [mph]	19.05	0.97	0.32	23.16	23.16	4.37	60.63
Stops [stops/h]	235.79	9.49	13.80	131.36	136.19	7.29	135.97
Fuel consumption [US gal/h]	3.67	0.15	0.18	2.35	2.41	0.26	3.88
CO [g/h]	256.87	10.45	12.34	164.14	168.18	17.88	271.16
NOx [g/h]	49.98	2.03	2.40	31.94	32.72	3.48	52.76
VOC [g/h]	59.53	2.42	2.86	38.04	38.98	4.14	62.84

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.092	1.732	2.331	2.329
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	491	464	381	675
d_b, Bicycle Delay [s]	21.36	22.12	24.56	16.47
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.273	2.485
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	51	4	4	65	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	194	0	0	159	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	245	4	4	224	1	2
Peak Hour Factor	0.8890	0.8890	0.8890	0.8890	0.8890	0.8890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	69	1	1	63	0	1
Total Analysis Volume [veh/h]	276	4	4	252	1	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.82	0.00	12.19	9.76
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.23	0.00	0.35	0.35
d_A, Approach Delay [s/veh]	0.00		0.12		10.57	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	6	2	10	37	17	40	29	13	2	85	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	143	239	0	0	124	69	2	46	127	0	51	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	157	245	2	10	161	86	42	75	140	2	136	10
Peak Hour Factor	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	69	1	3	46	24	12	21	40	1	39	3
Total Analysis Volume [veh/h]	178	277	2	11	182	97	48	85	159	2	154	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	504	543	486	542	585	535
Degree of Utilization, x	0.35	0.51	0.02	0.51	0.50	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.58	2.91	0.07	2.92	2.78	1.32
95th-Percentile Queue Length [ft]	39.38	72.65	1.73	73.12	69.43	33.06
Approach Delay [s/veh]	15.15		15.96		15.12	12.74
Approach LOS	C		C		C	B
Intersection Delay [s/veh]	15.00					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.686

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	4	15	9	38	5	7	18	8	7	11	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	382	0	0	250	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	386	15	9	288	5	7	18	8	7	11	10
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	108	4	3	81	1	2	5	2	2	3	3
Total Analysis Volume [veh/h]	15	434	17	10	324	6	8	20	9	8	12	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	600	657	632	693	801	557	560
Degree of Utilization, x	0.03	0.69	0.02	0.47	0.01	0.07	0.06

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.08	5.43	0.05	2.50	0.02	0.21	0.18
95th-Percentile Queue Length [ft]	1.92	135.63	1.21	62.50	0.57	5.33	4.38
Approach Delay [s/veh]	18.96		12.17			9.93	9.80
Approach LOS	C		B			A	A
Intersection Delay [s/veh]	15.62						
Intersection LOS	C						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	11	10	11	24	29	14	241	28	177	338	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	120	106	24	27	17	0	0	20	347
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	18	10	131	130	53	41	258	28	177	358	370
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	5	3	36	35	14	11	70	8	48	98	101
Total Analysis Volume [veh/h]	15	20	11	143	142	58	45	282	31	193	391	404
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	36	0	0	36	0	11	23	0	11	23	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	14	14	14	14	47	36	47	39
g / C, Green / Cycle	0.20	0.20	0.20	0.20	0.67	0.52	0.67	0.55
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.12	0.12	0.06	0.19	0.18	0.51
s, saturation flow rate [veh/h]	1064	1584	1240	1601	743	1654	1081	1544
c, Capacity [veh/h]	158	315	290	318	362	852	769	856
d1, Uniform Delay [s]	31.93	22.92	28.54	25.68	11.99	10.15	4.85	14.32
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	0.14	1.30	2.05	0.70	1.22	0.78	17.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.10	0.49	0.63	0.12	0.37	0.25	0.93
d, Delay for Lane Group [s/veh]	32.18	23.06	29.84	27.73	12.69	11.37	5.64	31.96
Lane Group LOS	C	C	C	C	B	B	A	C
Critical Lane Group	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	0.42	2.34	3.13	0.24	2.90	0.99	14.03
50th-Percentile Queue Length [ft/ln]	6.29	10.51	58.61	78.36	6.12	72.56	24.81	350.79
95th-Percentile Queue Length [veh/ln]	0.45	0.76	4.22	5.64	0.44	5.22	1.79	20.17
95th-Percentile Queue Length [ft/ln]	11.32	18.92	105.50	141.05	11.02	130.61	44.65	504.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.18	23.06	23.06	29.84	27.73	27.73	12.69	11.37	11.37	5.64	31.96	31.96
Movement LOS	C	C	C	C	C	C	B	B	B	A	C	C
d_A, Approach Delay [s/veh]	26.03			28.61			11.54			26.81		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	24.00											
Intersection LOS	C											
Intersection V/C	0.651											

Emissions

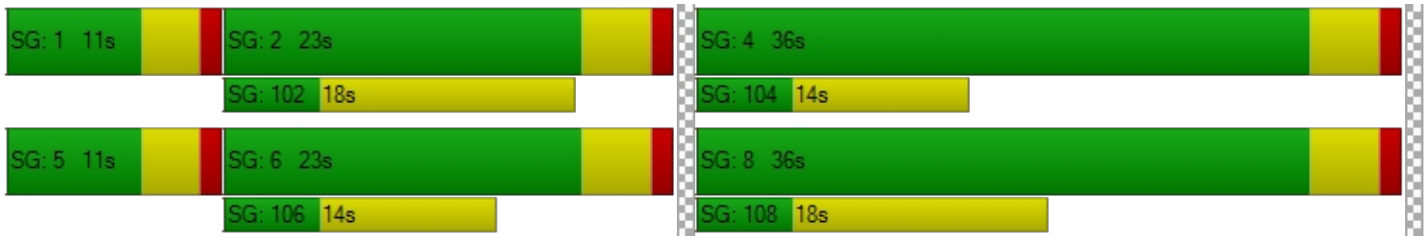
Vehicle Miles Traveled [mph]	1.21	2.51	11.26	15.75	7.21	50.16	28.88	118.95
Stops [stops/h]	12.93	21.62	120.58	161.20	12.59	149.27	51.03	721.62
Fuel consumption [US gal/h]	0.20	0.34	1.84	2.45	0.49	3.55	1.72	13.29
CO [g/h]	14.15	23.84	128.41	171.60	34.17	248.33	119.93	928.78
NOx [g/h]	2.75	4.64	24.98	33.39	6.65	48.32	23.33	180.71
VOC [g/h]	3.28	5.53	29.76	39.77	7.92	57.55	27.80	215.25

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.353	2.186	2.173	2.613
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	897	897	526	526
d_b, Bicycle Delay [s]	10.64	10.64	19.02	19.02
l_b,int, Bicycle LOS Score for Intersection	1.850	2.340	2.365	3.404
Bicycle LOS	A	B	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.284

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	10	150	38	12	315	37	120	320	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	106	0	0	5	0	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	7	0	10	256	38	12	320	37	120	326	24
Peak Hour Factor	0.9500	0.9500	0.9500	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	0	3	77	11	4	96	11	36	98	7
Total Analysis Volume [veh/h]	0	7	0	12	308	46	14	386	45	145	393	29
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	28	0	11	19	0	13	21	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		9	9	42	31	31	42	36	36
g / C, Green / Cycle		0.15	0.15	0.69	0.52	0.52	0.69	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate		0.11	0.11	0.02	0.13	0.13	0.14	0.13	0.13
s, saturation flow rate [veh/h]		1678	1611	931	1683	1622	1011	1683	1643
c, Capacity [veh/h]		258	248	753	873	842	799	1010	986
d1, Uniform Delay [s]		24.13	24.18	3.03	7.97	7.99	3.39	5.49	5.49
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.33	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.71	4.07	0.05	0.69	0.72	0.33	0.48	0.49
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.72	0.73	0.02	0.25	0.25	0.18	0.21	0.21
d, Delay for Lane Group [s/veh]		27.84	28.25	3.08	8.66	8.71	3.72	5.97	5.98
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.65	2.61	0.04	1.50	1.48	0.46	1.10	1.09
50th-Percentile Queue Length [ft/ln]		66.31	65.30	1.10	37.62	36.88	11.58	27.60	27.15
95th-Percentile Queue Length [veh/ln]		4.77	4.70	0.08	2.71	2.66	0.83	1.99	1.95
95th-Percentile Queue Length [ft/ln]		119.36	117.55	1.98	67.72	66.38	20.85	49.68	48.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	27.84	28.02	28.25	3.08	8.68	8.71	3.72	5.97	5.98
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			28.04			8.51			5.40		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	12.42											
Intersection LOS	B											
Intersection V/C	0.284											

Emissions

Vehicle Miles Traveled [mph]		14.98	14.61	2.28	35.51	34.60	21.76	31.99	31.35
Stops [stops/h]		159.15	156.73	2.64	90.30	88.50	27.80	66.24	65.16
Fuel consumption [US gal/h]		2.33	2.30	0.12	2.33	2.27	1.20	1.95	1.91
CO [g/h]		163.15	160.57	8.48	162.73	158.84	83.54	136.40	133.81
NOx [g/h]		31.74	31.24	1.65	31.66	30.91	16.25	26.54	26.03
VOC [g/h]		37.81	37.21	1.97	37.72	36.81	19.36	31.61	31.01

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.197	2.044	2.424	2.437
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	780	480	547
d_b, Bicycle Delay [s]	30.00	11.16	17.33	15.84
l_b,int, Bicycle LOS Score for Intersection	4.132	2.076	2.141	2.242
Bicycle LOS	D	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.194

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	97	55	0	126	31	37	69	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	89	0	0	0	0	0	0	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	120	97	55	0	126	31	37	69	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.8850	0.8850	0.8850	0.9500	0.8850	0.8850	0.8850	0.8850	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	34	27	16	0	36	9	10	19	2
Total Analysis Volume [veh/h]	0	0	0	136	110	62	0	142	35	42	78	7
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	24	0	0	26	0	0	26	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		7	7	7	34	34	34
g / C, Green / Cycle		0.14	0.14	0.14	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate		0.08	0.07	0.04	0.11	0.04	0.05
s, saturation flow rate [veh/h]		1603	1683	1431	1626	1086	1683
c, Capacity [veh/h]		228	239	203	1093	771	1131
d1, Uniform Delay [s]		20.11	19.69	19.24	3.02	4.64	2.82
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.50	1.38	0.84	0.32	0.13	0.12
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.60	0.46	0.31	0.16	0.05	0.07
d, Delay for Lane Group [s/veh]		22.62	21.07	20.08	3.34	4.78	2.94
Lane Group LOS		C	C	C	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.54	1.18	0.65	0.42	0.16	0.17
50th-Percentile Queue Length [ft/ln]		38.46	29.61	16.23	10.58	3.95	4.29
95th-Percentile Queue Length [veh/ln]		2.77	2.13	1.17	0.76	0.28	0.31
95th-Percentile Queue Length [ft/ln]		69.22	53.31	29.21	19.04	7.11	7.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	22.62	21.07	20.08	0.00	3.34	3.34	4.78	2.94	0.00
Movement LOS				C	C	C		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			21.55			3.34			3.58		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	12.66											
Intersection LOS	B											
Intersection V/C	0.194											

Emissions

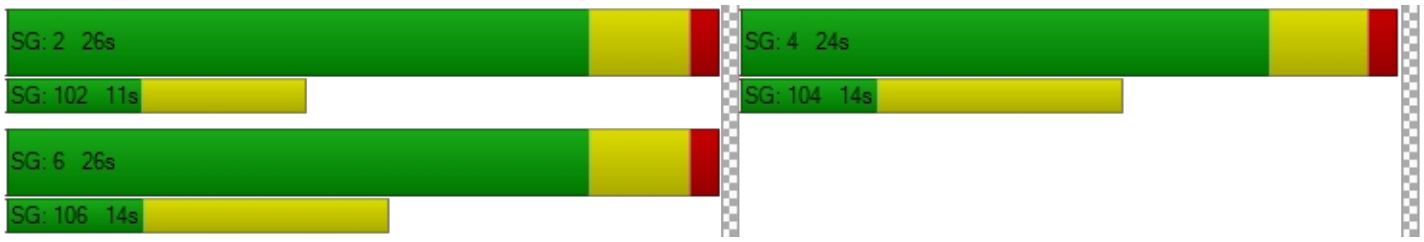
Vehicle Miles Traveled [mph]		10.25	8.29	4.67	29.55	6.14	11.41
Stops [stops/h]		110.76	85.29	46.74	30.46	11.37	12.35
Fuel consumption [US gal/h]		1.51	1.17	0.64	1.51	0.36	0.58
CO [g/h]		105.68	81.91	44.94	105.20	24.93	40.86
NOx [g/h]		20.56	15.94	8.74	20.47	4.85	7.95
VOC [g/h]		24.49	18.98	10.41	24.38	5.78	9.47

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.836	1.994	1.840	2.040
Crosswalk LOS	A	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	776	852	852
d_b, Bicycle Delay [s]	25.00	9.36	8.24	8.24
l_b,int, Bicycle LOS Score for Intersection	4.132	2.028	2.066	1.972
Bicycle LOS	D	B	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.226

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	93	0	43	0	0	5	0	285	81	50	250	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	7	0	0	0	0	32	0	8	48	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	0	50	0	0	5	0	317	81	58	298	0
Peak Hour Factor	0.9530	0.9500	0.9530	0.9500	0.9500	0.9530	0.9500	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	0	13	0	0	1	0	83	21	15	78	0
Total Analysis Volume [veh/h]	98	0	52	0	0	5	0	333	85	61	313	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	22	0	0	0	0	19	0	23	0	11	34	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	7	7	1	45	45	54	54
g / C, Green / Cycle	0.09	0.09	0.01	0.60	0.60	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.06	0.03	0.00	0.11	0.12	0.06	0.17
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1745	1074	1870
c, Capacity [veh/h]	160	143	16	1126	1051	861	1352
d1, Uniform Delay [s]	32.87	32.12	36.87	6.68	6.74	3.13	3.46
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.76	1.55	10.98	0.36	0.42	0.03	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.36	0.32	0.19	0.20	0.07	0.23
d, Delay for Lane Group [s/veh]	36.64	33.67	47.86	7.04	7.16	3.17	3.86
Lane Group LOS	D	C	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.81	0.91	0.14	1.38	1.40	0.19	1.23
50th-Percentile Queue Length [ft/ln]	45.29	22.85	3.46	34.53	35.07	4.75	30.78
95th-Percentile Queue Length [veh/ln]	3.26	1.65	0.25	2.49	2.53	0.34	2.22
95th-Percentile Queue Length [ft/ln]	81.53	41.13	6.23	62.15	63.13	8.54	55.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.64	0.00	33.67	0.00	0.00	47.86	0.00	7.09	7.16	3.17	3.86	3.86
Movement LOS	D		C			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	35.61			47.86			7.10			3.75		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	10.51											
Intersection LOS	B											
Intersection V/C	0.226											

Emissions

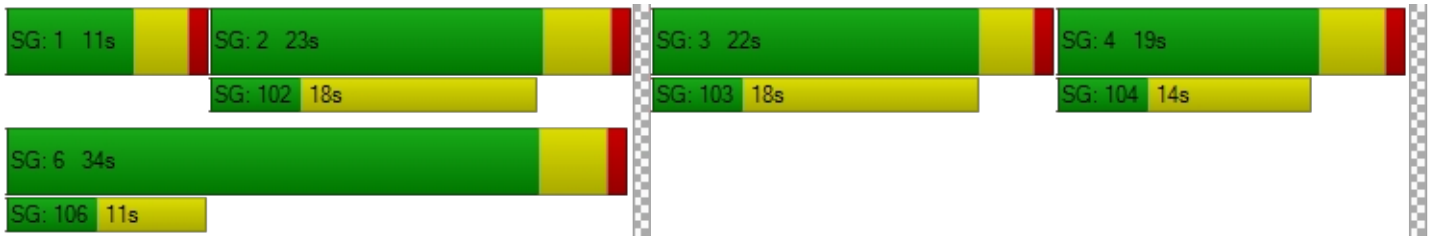
Vehicle Miles Traveled [mph]	7.40	3.93	0.13	31.52	31.52	2.07	10.61
Stops [stops/h]	86.96	43.87	6.64	66.30	67.34	9.11	59.10
Fuel consumption [US gal/h]	1.67	0.84	0.08	1.96	1.97	0.17	1.01
CO [g/h]	116.52	58.44	5.61	137.25	138.01	12.21	70.53
NOx [g/h]	22.67	11.37	1.09	26.70	26.85	2.38	13.72
VOC [g/h]	27.00	13.54	1.30	31.81	31.99	2.83	16.35

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.262	1.709	2.204	2.308
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	384	488	781
d_b, Bicycle Delay [s]	21.66	24.48	21.43	13.92
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.119	2.391
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	131	4	1	131	1	0	0	8	3	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	8	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	138	4	1	139	1	0	0	8	3	1	2
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	36	1	0	36	0	0	0	2	1	0	1
Total Analysis Volume [veh/h]	8	142	4	1	143	1	0	0	8	3	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.52	0.00	0.00	7.51	0.00	0.00	10.21	11.02	8.72	10.25	11.02	8.74
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.33	0.17	0.00	0.04	0.02	0.00	0.62	0.62	0.62	0.61	0.61	0.61
d_A, Approach Delay [s/veh]	0.39			0.05			8.72			9.87		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.63											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	18.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	139	16	6	131	6	3	5	37	14	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	51	7	0	0	8	0	0	0	46	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	146	16	6	139	6	3	5	83	14	1	2
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	43	5	2	41	2	1	1	24	4	0	1
Total Analysis Volume [veh/h]	126	171	19	7	163	7	4	6	97	16	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.11	0.05	0.00	0.00
d_M, Delay for Movement [s/veh]	7.71	0.00	0.00	7.61	0.00	0.00	15.74	15.74	9.85	18.00	15.63	9.89
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	A
95th-Percentile Queue Length [veh/ln]	0.23	0.23	0.23	0.01	0.01	0.01	0.48	0.48	0.48	0.19	0.19	0.19
95th-Percentile Queue Length [ft/ln]	5.76	5.76	5.76	0.30	0.30	0.30	11.97	11.97	11.97	4.74	4.74	4.74
d_A, Approach Delay [s/veh]	3.08			0.30			10.40			17.02		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	3.98											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	47.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	108	26	28	192	25	8	207	46	311	507	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	193	28	0	21	25	8	7	106	23	10	167	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	194	136	26	49	217	33	15	313	69	321	674	158
Peak Hour Factor	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	41	8	15	66	10	5	95	21	97	204	48
Total Analysis Volume [veh/h]	234	164	31	59	262	40	18	378	83	388	814	191
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	27	0	11	26	0	11	26	0	21	36	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	23	14	14	23	11	11	2	31	31	17	46	46
g / C, Green / Cycle	0.27	0.16	0.16	0.27	0.13	0.13	0.03	0.37	0.37	0.20	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.19	0.10	0.02	0.05	0.09	0.09	0.01	0.14	0.14	0.24	0.48	0.13
s, saturation flow rate [veh/h]	1244	1683	1431	1237	1683	1607	1603	1683	1580	1603	1683	1431
c, Capacity [veh/h]	372	273	232	359	219	209	46	618	580	321	905	769
d1, Uniform Delay [s]	27.29	33.03	30.47	23.80	35.36	35.43	40.56	19.78	19.84	34.00	17.60	10.49
k, delay calibration	0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.82	2.11	0.26	0.21	3.99	4.42	5.40	1.79	1.95	120.12	13.69	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.60	0.13	0.16	0.70	0.71	0.39	0.38	0.39	1.21	0.90	0.25
d, Delay for Lane Group [s/veh]	35.12	35.14	30.73	24.02	39.35	39.85	45.96	21.57	21.78	154.12	31.28	11.26
Lane Group LOS	D	D	C	C	D	D	D	C	C	F	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.67	3.19	0.54	0.88	3.18	3.11	0.44	3.68	3.54	17.11	16.12	1.94
50th-Percentile Queue Length [ft/ln]	116.68	79.65	13.61	22.09	79.42	77.86	10.94	91.97	88.49	427.74	402.97	48.44
95th-Percentile Queue Length [veh/ln]	8.21	5.74	0.98	1.59	5.72	5.61	0.79	6.62	6.37	26.23	22.70	3.49
95th-Percentile Queue Length [ft/ln]	205.25	143.38	24.49	39.77	142.95	140.14	19.70	165.54	159.28	655.68	567.58	87.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.12	35.14	30.73	24.02	39.56	39.85	45.96	21.65	21.78	154.12	31.28	11.26
Movement LOS	D	D	C	C	D	D	D	C	C	F	C	B
d_A, Approach Delay [s/veh]	34.81			37.05			22.59			62.75		
Approach LOS	C			D			C			E		
d_I, Intersection Delay [s/veh]	47.54											
Intersection LOS	D											
Intersection V/C	0.711											

Emissions

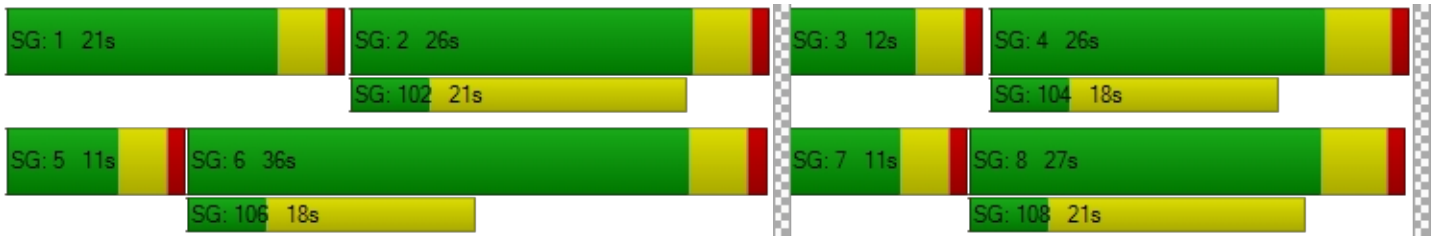
Vehicle Miles Traveled [mph]	19.02	13.33	2.52	4.62	11.99	11.66	2.69	35.30	33.68	19.16	40.19	9.43
Stops [stops/h]	197.66	134.94	23.05	37.43	134.54	131.90	18.54	155.81	149.91	724.63	682.68	82.06
Fuel consumption [US gal/h]	3.88	2.70	0.46	0.75	2.70	2.64	0.36	3.22	3.09	16.96	10.61	1.28
CO [g/h]	271.48	188.42	32.38	52.14	188.39	184.78	25.20	225.14	215.80	1185.43	741.51	89.42
NOx [g/h]	52.82	36.66	6.30	10.14	36.65	35.95	4.90	43.80	41.99	230.64	144.27	17.40
VOC [g/h]	62.92	43.67	7.51	12.08	43.66	42.82	5.84	52.18	50.01	274.74	171.85	20.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.563	2.339	2.499	2.677
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	515	492	504	736
d_b, Bicycle Delay [s]	23.42	24.17	23.79	16.96
l_b,int, Bicycle LOS Score for Intersection	2.482	2.072	2.169	4.072
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	27.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	67	97	56	472	26	2	233	113	282	434	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	15	27	31	0	0	5	0	47	6	216
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	71	112	83	503	26	2	238	113	329	440	296
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	22	35	26	155	8	1	73	35	102	136	91
Total Analysis Volume [veh/h]	17	88	138	102	621	32	2	294	140	406	543	365
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	33	0	11	33	0	20	29	0	17	26	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	27	16	16	27	20	20	0	36	36	13	49	49
g / C, Green / Cycle	0.30	0.18	0.18	0.30	0.23	0.23	0.00	0.40	0.40	0.14	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.10	0.08	0.20	0.20	0.00	0.09	0.10	0.13	0.29	0.29
s, saturation flow rate [veh/h]	851	3204	1431	1216	1683	1654	1603	3204	1431	3113	1683	1462
c, Capacity [veh/h]	240	587	262	458	383	377	8	1294	578	450	914	794
d1, Uniform Delay [s]	23.91	30.86	33.22	23.60	33.36	33.37	44.59	17.61	17.73	37.88	13.17	13.25
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	0.12	1.63	0.24	5.67	5.79	14.44	0.41	0.99	6.95	2.18	2.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.15	0.53	0.22	0.86	0.86	0.24	0.23	0.24	0.90	0.53	0.54
d, Delay for Lane Group [s/veh]	24.03	30.98	34.85	23.84	39.03	39.16	59.03	18.02	18.72	44.83	15.34	15.84
Lane Group LOS	C	C	C	C	D	D	E	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.26	0.79	2.76	1.60	7.23	7.13	0.08	2.05	2.06	4.81	6.46	5.82
50th-Percentile Queue Length [ft/ln]	6.39	19.82	69.08	40.01	180.78	178.17	1.94	51.36	51.48	120.16	161.53	145.55
95th-Percentile Queue Length [veh/ln]	0.46	1.43	4.97	2.88	11.64	11.51	0.14	3.70	3.71	8.40	10.63	9.78
95th-Percentile Queue Length [ft/ln]	11.51	35.67	124.34	72.01	291.03	287.63	3.49	92.45	92.66	210.05	265.75	244.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.03	30.98	34.85	23.84	39.09	39.16	59.03	18.02	18.72	44.83	15.40	15.84
Movement LOS	C	C	C	C	D	D	E	B	B	D	B	B
d_A, Approach Delay [s/veh]	32.69			37.03			18.43			24.62		
Approach LOS	C			D			B			C		
d_I, Intersection Delay [s/veh]	27.76											
Intersection LOS	C											
Intersection V/C	0.496											

Emissions

Vehicle Miles Traveled [mph]	1.32	6.83	10.71	8.29	26.76	26.32	0.30	44.13	21.01	29.31	34.81	30.73
Stops [stops/h]	10.23	63.42	110.52	64.01	289.25	285.08	3.11	164.36	82.36	384.52	258.45	232.88
Fuel consumption [US gal/h]	0.21	1.29	2.22	1.29	5.81	5.73	0.05	3.69	1.79	6.50	4.06	3.65
CO [g/h]	14.70	90.30	155.04	90.34	406.10	400.36	3.46	258.15	125.43	454.09	284.00	255.01
NOx [g/h]	2.86	17.57	30.16	17.58	79.01	77.89	0.67	50.23	24.40	88.35	55.26	49.62
VOC [g/h]	3.41	20.93	35.93	20.94	94.12	92.79	0.80	59.83	29.07	105.24	65.82	59.10

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.722	2.577	2.600	2.840
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	620	620	542	476
d_b, Bicycle Delay [s]	21.42	21.42	23.91	26.14
l_b,int, Bicycle LOS Score for Intersection	1.974	2.397	2.134	2.858
Bicycle LOS	A	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	211	5	316	301	109	14	87	27	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	4	0	55	4	0	0	83	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	215	5	371	305	109	14	170	34	0	0	0
Peak Hour Factor	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	64	1	111	91	33	4	51	10	0	0	0
Total Analysis Volume [veh/h]	61	257	6	444	365	130	17	203	41	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	17	0	19	24	0	0	29	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	5	30	30	11	37	37	10	10	10	
g / C, Green / Cycle	0.07	0.46	0.46	0.18	0.56	0.56	0.15	0.15	0.15	
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.08	0.14	0.15	0.15	0.01	0.12	0.03	
s, saturation flow rate [veh/h]	1603	1683	1670	3113	1683	1534	1603	1683	1431	
c, Capacity [veh/h]	117	768	762	550	943	860	248	260	221	
d1, Uniform Delay [s]	29.05	10.42	10.42	25.69	7.42	7.42	23.48	26.42	23.91	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.61	0.48	0.49	2.86	0.72	0.79	0.12	5.05	0.40	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.52	0.17	0.17	0.81	0.27	0.27	0.07	0.78	0.19	
d, Delay for Lane Group [s/veh]	32.66	10.91	10.92	28.55	8.14	8.21	23.59	31.47	24.31	
Lane Group LOS	C	B	B	C	A	A	C	C	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.98	1.06	1.06	3.26	1.66	1.53	0.22	3.23	0.55	
50th-Percentile Queue Length [ft/ln]	24.54	26.49	26.40	81.57	41.48	38.22	5.52	80.66	13.69	
95th-Percentile Queue Length [veh/ln]	1.77	1.91	1.90	5.87	2.99	2.75	0.40	5.81	0.99	
95th-Percentile Queue Length [ft/ln]	44.17	47.68	47.52	146.82	74.66	68.80	9.94	145.20	24.65	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.66	10.91	10.92	28.55	8.16	8.21	23.59	31.47	24.31	0.00	0.00	0.00
Movement LOS	C	B	B	C	A	A	C	C	C			
d_A, Approach Delay [s/veh]	15.01			17.81			29.83			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	19.27											
Intersection LOS	B											
Intersection V/C	0.342											

Emissions

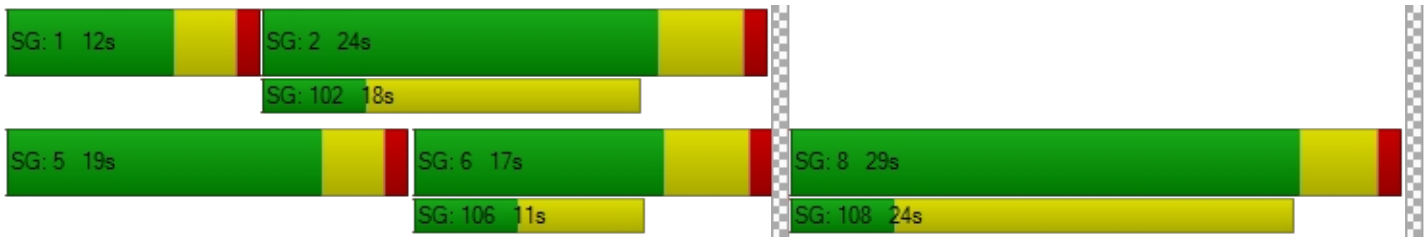
Vehicle Miles Traveled [mph]	2.42	5.23	5.20	32.60	19.02	17.33	2.49	29.70	6.00	
Stops [stops/h]	54.37	58.69	58.49	361.41	91.88	84.68	12.24	178.70	30.34	
Fuel consumption [US gal/h]	0.91	0.93	0.93	6.54	1.84	1.69	0.25	3.51	0.62	
CO [g/h]	63.36	65.22	64.99	457.17	128.96	118.28	17.59	245.34	43.16	
NOx [g/h]	12.33	12.69	12.64	88.95	25.09	23.01	3.42	47.73	8.40	
VOC [g/h]	14.69	15.12	15.06	105.95	29.89	27.41	4.08	56.86	10.00	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.451	2.668	2.226	2.018
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	366	582	748	0
d_b, Bicycle Delay [s]	21.69	16.35	12.74	32.50
l_b,int, Bicycle LOS Score for Intersection	2.041	2.549	2.205	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	124	827	0	260	126	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	142	0	127	59	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	969	0	387	185	0
Peak Hour Factor	0.8530	0.8530	0.9500	0.8530	0.8530	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	284	0	113	54	0
Total Analysis Volume [veh/h]	165	1136	0	454	217	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	32	0	0	23	23	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	27	27	20	20
g / C, Green / Cycle	0.49	0.49	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.10	0.45	0.14	0.07
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	781	1233	1137	1137
d1, Uniform Delay [s]	8.06	13.12	13.34	12.28
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	3.36	1.05	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.92	0.40	0.19
d, Delay for Lane Group [s/veh]	8.20	16.48	14.39	12.66
Lane Group LOS	A	B	B	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.90	5.46	2.00	0.87
50th-Percentile Queue Length [ft/ln]	22.54	136.61	50.12	21.71
95th-Percentile Queue Length [veh/ln]	1.62	9.30	3.61	1.56
95th-Percentile Queue Length [ft/ln]	40.58	232.45	90.21	39.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.20	16.48	0.00	14.39	12.66	0.00
Movement LOS	A	B		B	B	
d_A, Approach Delay [s/veh]	15.43		14.39		12.66	
Approach LOS	B		B		B	
d_I, Intersection Delay [s/veh]	14.89					
Intersection LOS	B					
Intersection V/C	0.590					

Emissions

Vehicle Miles Traveled [mph]	13.83	95.23	22.41	10.41
Stops [stops/h]	59.03	715.33	262.44	113.66
Fuel consumption [US gal/h]	1.25	12.82	3.70	1.62
CO [g/h]	87.13	896.13	258.79	112.93
NOx [g/h]	16.95	174.35	50.35	21.97
VOC [g/h]	20.19	207.69	59.98	26.17

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.477	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1018	665	665
d_b, Bicycle Delay [s]	6.63	12.24	12.24
l_b,int, Bicycle LOS Score for Intersection	1.774	2.149	1.953
Bicycle LOS	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.466

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	74	171	43	0	0	0	213	165	0	0	50	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	20	20	0	0	0	92	51	0	11	59	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	191	63	0	0	0	305	216	0	11	109	109
Peak Hour Factor	0.9110	0.9110	0.9110	0.9500	0.9500	0.9500	0.9110	0.9110	0.9500	0.9500	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	52	17	0	0	0	84	59	0	3	30	30
Total Analysis Volume [veh/h]	81	210	69	0	0	0	335	237	0	12	120	120
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	16	0	0	0	0	18	34	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	50	50		50	50	50	50
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	10	10		12	30	14	14
g / C, Green / Cycle	0.21	0.21		0.24	0.60	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17		0.21	0.07	0.07	0.08
s, saturation flow rate [veh/h]	1603	1613		1603	3204	1683	1431
c, Capacity [veh/h]	332	334		391	1914	460	391
d1, Uniform Delay [s]	16.56	19.02		18.07	4.38	14.22	14.41
k, delay calibration	0.11	0.20		0.23	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	9.77		10.78	0.13	1.38	2.03
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.84		0.86	0.12	0.26	0.31
d, Delay for Lane Group [s/veh]	16.94	28.79		28.85	4.51	15.59	16.44
Lane Group LOS	B	C		C	A	B	B
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.71	3.57		4.40	0.38	1.10	1.16
50th-Percentile Queue Length [ft/ln]	17.75	89.36		110.10	9.53	27.60	29.03
95th-Percentile Queue Length [veh/ln]	1.28	6.43		7.85	0.69	1.99	2.09
95th-Percentile Queue Length [ft/ln]	31.94	160.85		196.14	17.16	49.69	52.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.94	28.79	28.79	0.00	0.00	0.00	28.85	4.51	0.00	0.00	15.59	16.44
Movement LOS	B	C	C				C	A			B	B
d_A, Approach Delay [s/veh]	26.12			0.00			18.76			16.02		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	20.46											
Intersection LOS	C											
Intersection V/C	0.466											

Emissions

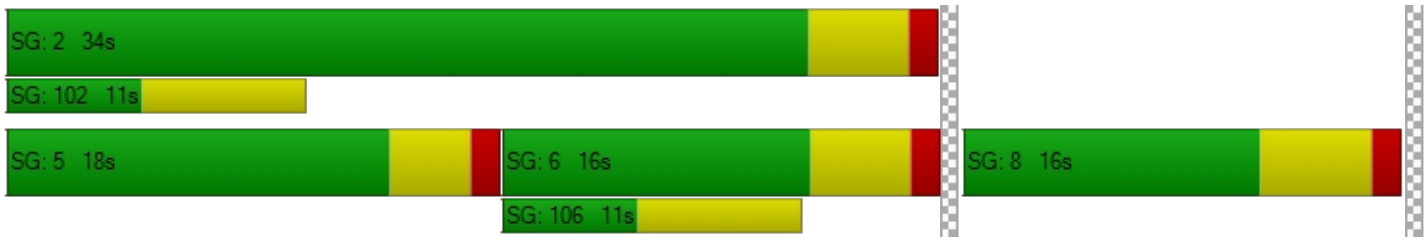
Vehicle Miles Traveled [mph]	7.06	24.31		16.07	11.37	4.39	4.39
Stops [stops/h]	51.11	257.35		317.09	54.92	79.50	83.60
Fuel consumption [US gal/h]	0.93	4.50		4.38	0.99	1.00	1.04
CO [g/h]	65.19	314.30		306.18	69.15	69.96	72.99
NOx [g/h]	12.68	61.15		59.57	13.45	13.61	14.20
VOC [g/h]	15.11	72.84		70.96	16.03	16.21	16.92

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.890	2.010	0.000	0.000
Crosswalk LOS	A	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	436	0	1172	452
d_b, Bicycle Delay [s]	15.29	25.00	4.28	14.98
l_b,int, Bicycle LOS Score for Intersection	2.368	4.132	2.246	1.972
Bicycle LOS	B	D	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	331	94	231	0	0	0	80	308	0	0	468	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	170	17	17	0	0	11	3	44	0	0	88	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	501	111	248	0	0	11	83	352	0	0	556	116
Peak Hour Factor	0.8760	0.8760	0.8760	0.9500	0.9500	0.9500	0.8760	0.8760	0.9500	0.9500	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	143	32	71	0	0	3	24	100	0	0	159	33
Total Analysis Volume [veh/h]	572	127	283	0	0	12	95	402	0	0	635	132
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	13	30	0	0	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	26	26	26		6	24	14	14
g / C, Green / Cycle	0.44	0.44	0.44		0.09	0.40	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.20	0.19	0.18		0.03	0.11	0.18	0.08
s, saturation flow rate [veh/h]	1781	1812	1589		3459	3560	3560	1589
c, Capacity [veh/h]	779	793	695		327	1427	824	368
d1, Uniform Delay [s]	11.81	11.76	11.55		25.29	12.14	21.57	19.33
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.87	1.78	1.77		0.49	0.11	1.56	0.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.44	0.41		0.29	0.28	0.77	0.36
d, Delay for Lane Group [s/veh]	13.68	13.54	13.32		25.78	12.24	23.13	19.92
Lane Group LOS	B	B	B		C	B	C	B
Critical Lane Group	Yes	No	No		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.12	3.10	2.49		0.63	1.68	3.93	1.46
50th-Percentile Queue Length [ft/ln]	78.08	77.49	62.36		15.75	42.10	98.14	36.40
95th-Percentile Queue Length [veh/ln]	5.62	5.58	4.49		1.13	3.03	7.07	2.62
95th-Percentile Queue Length [ft/ln]	140.55	139.48	112.24		28.35	75.77	176.64	65.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.63	13.54	13.32	0.00	0.00	0.00	25.78	12.24	0.00	0.00	23.13	19.92
Movement LOS	B	B	B				C	B			C	B
d_A, Approach Delay [s/veh]	13.53			0.00			14.83			22.58		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	16.91											
Intersection LOS	B											
Intersection V/C	0.402											

Emissions

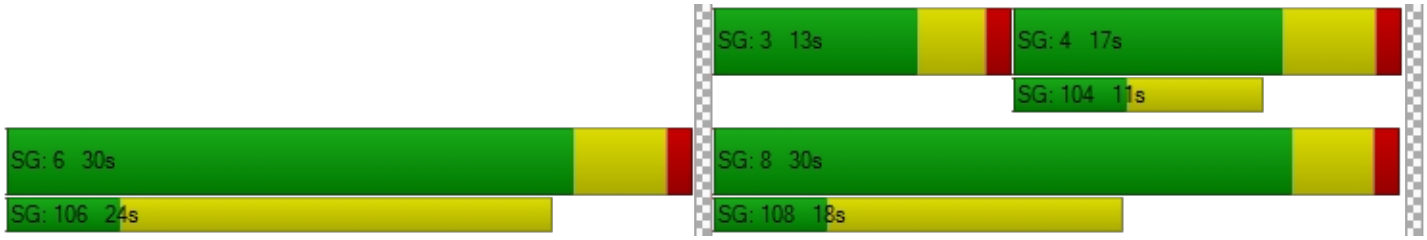
Vehicle Miles Traveled [mph]	13.68	13.68	11.08		6.86	29.02	32.11	6.68
Stops [stops/h]	187.40	185.97	149.66		75.61	202.06	471.05	87.37
Fuel consumption [US gal/h]	2.90	2.88	2.31		1.10	3.08	7.76	1.45
CO [g/h]	202.98	201.55	161.81		76.67	215.43	542.14	101.11
NOx [g/h]	39.49	39.21	31.48		14.92	41.91	105.48	19.67
VOC [g/h]	47.04	46.71	37.50		17.77	49.93	125.65	23.43

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.391	1.868	2.664	0.000
Crosswalk LOS	B	A	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	397
d_b, Bicycle Delay [s]	10.27	30.00	9.98	19.28
l_b,int, Bicycle LOS Score for Intersection	3.394	4.132	2.184	2.407
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\3 Background + P PM.pdf
Scenario 6 Background + Project PM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	NB Left	0.702	28.7	C
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	EB Right	0.601	20.4	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	WB Left	0.598	12.8	B
4	Main St @ First St	Signalized	HCM 7th Edition	EB Left	0.918	29.9	C
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.062	28.5	D
6	Main St @ Third St	Signalized	HCM 7th Edition	WB Right	0.716	36.1	D
7	Market St @ First St	Signalized	HCM 7th Edition	WB Left	0.459	13.8	B
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.052	26.9	D
9	Market St @ Third St	Signalized	HCM 7th Edition	SB Left	0.726	30.6	C
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.058	35.9	E
11	Market St @ Fifth St	Signalized	HCM 7th Edition	EB Right	0.449	12.8	B
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	WB Right	0.115	14.2	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.764	34.5	C
14	Market St @ University Ave	Signalized	HCM 7th Edition	NB Left	0.632	29.7	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Right	0.395	7.1	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	EB Thru	0.383	8.9	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	WB Left	0.078	78.1	F
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Right	0.394	10.0	B

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	EB Thru	0.241	108.6	F
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	EB Left	0.602	31.8	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.372	14.9	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.414	22.6	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.513	15.5	B
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.014	13.6	B
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	SB Thru	0.836	25.7	D
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	SB Thru	0.737	17.6	C
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	SB Left	0.581	21.8	C
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.359	12.1	B
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Left	0.285	12.2	B
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.427	13.6	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.005	11.6	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.089	17.7	C
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	WB Left	0.510	25.9	C
34	Lime St @ University Ave	Signalized	HCM 7th Edition	NB Right	0.681	31.3	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Left	0.635	25.5	C
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	SB Right	0.452	11.5	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	WB Right	0.790	43.5	D
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.549	18.1	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	28.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.702

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	280	415	0	0	700	164	0	0	0	34	107	286
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	113	60	0	0	34	0	0	0	0	61	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	393	475	0	0	734	164	0	0	0	95	107	286
Peak Hour Factor	0.9350	0.9350	0.9500	0.9500	0.9350	0.9350	0.9500	0.9500	0.9500	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	105	127	0	0	196	44	0	0	0	25	29	76
Total Analysis Volume [veh/h]	420	508	0	0	785	175	0	0	0	102	114	306
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35	49	0	0	14	0	0	0	0	0	31	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	80	80	80	80		80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	21	52	27	27		18	18
g / C, Green / Cycle	0.26	0.65	0.34	0.34		0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.24	0.14	0.26	0.27		0.12	0.19
s, saturation flow rate [veh/h]	1781	3560	1870	1757		1827	1589
c, Capacity [veh/h]	469	2310	627	589		409	356
d1, Uniform Delay [s]	28.40	5.76	23.78	24.32		27.33	29.85
k, delay calibration	0.16	0.50	0.50	0.50		0.11	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	9.03	0.22	8.67	11.78		1.06	7.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.22	0.77	0.81		0.53	0.86
d, Delay for Lane Group [s/veh]	37.43	5.98	32.44	36.10		28.39	37.23
Lane Group LOS	D	A	C	D		C	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	8.47	1.46	9.03	9.62		3.59	6.09
50th-Percentile Queue Length [ft/ln]	211.72	36.45	225.64	240.39		89.67	152.29
95th-Percentile Queue Length [veh/ln]	13.24	2.62	13.95	14.70		6.46	10.14
95th-Percentile Queue Length [ft/ln]	331.04	65.62	348.82	367.52		161.40	253.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.43	5.98	0.00	0.00	33.87	36.10	0.00	0.00	0.00	28.39	28.39	37.23
Movement LOS	D	A			C	D				C	C	D
d_A, Approach Delay [s/veh]	20.21			34.27			0.00			33.57		
Approach LOS	C			C			A			C		
d_I, Intersection Delay [s/veh]	28.71											
Intersection LOS	C											
Intersection V/C	0.702											

Emissions

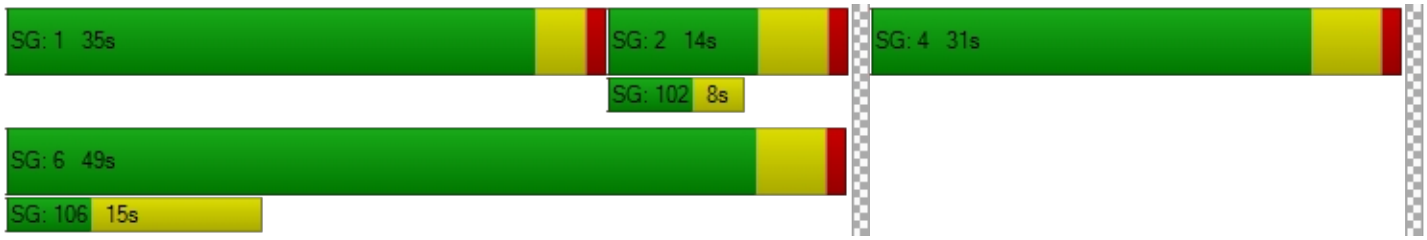
Vehicle Miles Traveled [mph]	24.99	30.22	17.77	17.77		7.92	11.23
Stops [stops/h]	381.10	131.23	406.16	432.69		161.40	274.13
Fuel consumption [US gal/h]	7.02	2.76	6.90	7.46		2.76	4.81
CO [g/h]	490.53	192.71	482.39	521.31		193.20	336.06
NOx [g/h]	95.44	37.49	93.85	101.43		37.59	65.38
VOC [g/h]	113.69	44.66	111.80	120.82		44.78	77.88

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.110	2.134
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	223	0	648
d_b, Bicycle Delay [s]	8.15	31.60	40.00	18.29
l_b,int, Bicycle LOS Score for Intersection	2.325	2.352	4.132	2.421
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.601

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	608	180	391	337	0	87	29	174	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	173	97	0	95	0	0	0	72	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	781	277	391	432	0	87	29	246	0	0	0
Peak Hour Factor	0.9500	0.9880	0.9880	0.9880	0.9880	0.9500	0.9880	0.9880	0.9880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	198	70	99	109	0	22	7	62	0	0	0
Total Analysis Volume [veh/h]	0	790	280	396	437	0	88	29	249	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	25	43	0	0	17	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	19	19	15	39	11	11	
g / C, Green / Cycle	0.32	0.32	0.26	0.64	0.19	0.19	
(v / s)_i Volume / Saturation Flow Rate	0.22	0.18	0.22	0.12	0.06	0.16	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1802	1589	
c, Capacity [veh/h]	1140	509	458	2292	336	296	
d1, Uniform Delay [s]	17.83	16.84	21.29	4.34	21.25	23.56	
k, delay calibration	0.50	0.50	0.17	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.48	4.24	7.64	0.18	0.62	6.39	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.69	0.55	0.86	0.19	0.35	0.84	
d, Delay for Lane Group [s/veh]	21.31	21.08	28.93	4.52	21.87	29.95	
Lane Group LOS	C	C	C	A	C	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.71	3.39	5.70	0.76	1.37	3.61	
50th-Percentile Queue Length [ft/ln]	117.85	84.67	142.54	19.05	34.15	90.32	
95th-Percentile Queue Length [veh/ln]	8.27	6.10	9.62	1.37	2.46	6.50	
95th-Percentile Queue Length [ft/ln]	206.87	152.40	240.44	34.28	61.47	162.58	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.31	21.08	28.93	4.52	0.00	21.87	21.87	29.95	0.00	0.00	0.00
Movement LOS		C	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	21.25			16.13			27.37			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	20.35											
Intersection LOS	C											
Intersection V/C	0.601											

Emissions

Vehicle Miles Traveled [mph]	107.72	38.18	23.56	26.00	3.57	7.59	
Stops [stops/h]	565.67	203.20	342.10	91.42	81.96	216.77	
Fuel consumption [US gal/h]	11.79	4.18	5.80	2.08	1.27	3.44	
CO [g/h]	823.85	292.51	405.58	145.45	88.99	240.28	
NOx [g/h]	160.29	56.91	78.91	28.30	17.31	46.75	
VOC [g/h]	190.93	67.79	94.00	33.71	20.62	55.69	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.680	0.000	2.060	2.039
Crosswalk LOS	B	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	430	1263	397	0
d_b, Bicycle Delay [s]	18.49	4.07	19.28	30.00
l_b,int, Bicycle LOS Score for Intersection	2.442	2.247	1.862	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	476	28	136	285	9	65	202	25	54	31	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	270	11	0	167	0	0	0	0	7	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	746	39	136	452	9	65	202	25	61	31	117
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	202	11	37	122	2	18	55	7	16	8	32
Total Analysis Volume [veh/h]	6	806	42	147	489	10	70	218	27	66	34	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	28	0	13	29	0	0	14	0	0	14	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	9	9	9	9
g / C, Green / Cycle	0.65	0.65	0.17	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.46	0.45	0.06	0.13	0.06	0.10
s, saturation flow rate [veh/h]	1854	1420	1226	1834	1135	1642
c, Capacity [veh/h]	1366	1088	191	313	141	281
d1, Uniform Delay [s]	5.87	5.83	26.35	21.82	27.46	20.94
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.17	2.39	1.18	4.25	2.40	1.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.59	0.37	0.78	0.47	0.57
d, Delay for Lane Group [s/veh]	8.04	8.22	27.53	26.07	29.86	22.77
Lane Group LOS	A	A	C	C	C	C
Critical Lane Group	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.30	3.49	0.94	3.20	0.93	1.92
50th-Percentile Queue Length [ft/ln]	107.47	87.19	23.59	80.01	23.25	47.91
95th-Percentile Queue Length [veh/ln]	7.70	6.28	1.70	5.76	1.67	3.45
95th-Percentile Queue Length [ft/ln]	192.47	156.94	42.47	144.02	41.85	86.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.04	8.04	8.04	8.22	8.22	8.22	27.53	26.07	26.07	29.86	22.77	22.77
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.04			8.22			26.39			24.84		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.79											
Intersection LOS	B											
Intersection V/C	0.598											

Emissions

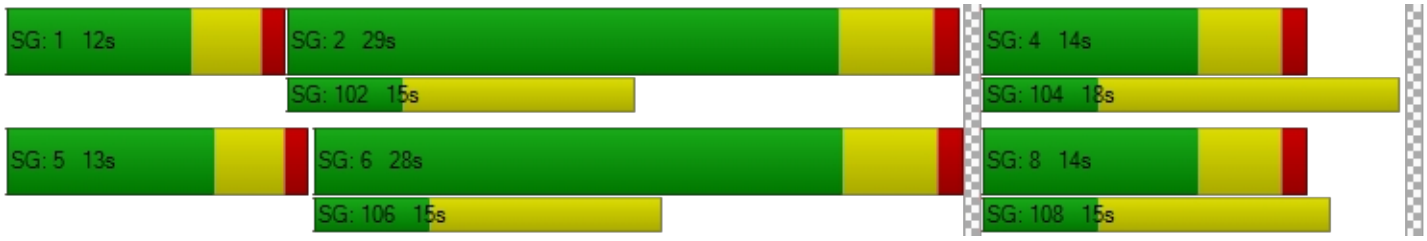
Vehicle Miles Traveled [mph]	379.23	88.09	1.98	6.94	1.85	4.49
Stops [stops/h]	281.36	228.28	61.78	209.48	60.87	125.43
Fuel consumption [US gal/h]	17.97	6.16	0.72	2.42	0.72	1.42
CO [g/h]	1256.05	430.25	50.21	168.84	50.17	99.56
NOx [g/h]	244.38	83.71	9.77	32.85	9.76	19.37
VOC [g/h]	291.10	99.72	11.64	39.13	11.63	23.07

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	2.601	2.641	3.230	3.006
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1305	1305	342	342
d_b, Bicycle Delay [s]	3.32	3.32	18.90	18.90
l_b,int, Bicycle LOS Score for Intersection	2.969	2.626	2.079	1.933
Bicycle LOS	C	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.918

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	330	10	6	264	65	84	68	145	31	52	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	83	136	0	0	91	83	145	0	172	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	466	10	6	355	148	229	68	317	31	52	11
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	124	3	2	95	39	61	18	84	8	14	3
Total Analysis Volume [veh/h]	93	496	11	6	378	158	244	72	338	33	55	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	18	27	0	11	20	0	0	62	0	0	62	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	C
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.55	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	0.00	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	62	51	62	44	28	28	28
g / C, Green / Cycle	0.62	0.51	0.62	0.44	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.58	0.01	0.26	0.10	0.18	0.25	0.16
s, saturation flow rate [veh/h]	1020	1589	1499	1589	1334	1632	630
c, Capacity [veh/h]	706	810	942	699	283	463	227
d1, Uniform Delay [s]	21.45	12.12	9.62	17.44	36.82	34.27	28.97
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.19	0.03	1.31	0.75	7.61	5.85	1.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.01	0.41	0.23	0.86	0.89	0.44
d, Delay for Lane Group [s/veh]	32.64	12.15	10.93	18.20	44.43	40.12	30.32
Lane Group LOS	C	B	B	B	D	D	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.10	0.12	3.96	2.33	6.33	10.18	1.91
50th-Percentile Queue Length [ft/ln]	327.61	3.09	98.89	58.37	158.14	254.59	47.67
95th-Percentile Queue Length [veh/ln]	19.04	0.22	7.12	4.20	10.45	15.42	3.43
95th-Percentile Queue Length [ft/ln]	476.02	5.56	178.00	105.07	261.26	385.43	85.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.64	32.64	12.15	10.93	10.93	18.20	44.43	40.12	40.12	30.32	30.32	30.32
Movement LOS	C	C	B	B	B	B	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	32.26			13.05			41.73			30.32		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	29.93											
Intersection LOS	C											
Intersection V/C	0.918											

Emissions

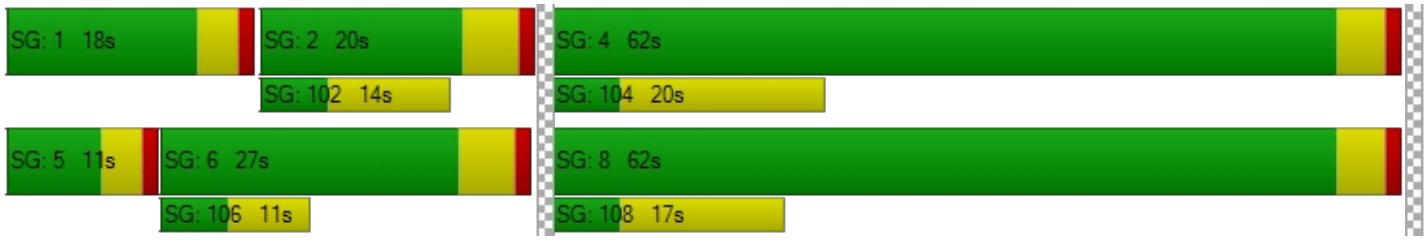
Vehicle Miles Traveled [mph]	44.45	0.83	170.52	70.16	20.19	33.92	2.83
Stops [stops/h]	471.75	4.45	142.40	84.05	227.73	366.61	68.65
Fuel consumption [US gal/h]	9.15	0.09	8.42	3.89	3.99	6.28	1.01
CO [g/h]	639.87	6.45	588.88	272.02	278.72	438.93	70.42
NOx [g/h]	124.49	1.26	114.57	52.93	54.23	85.40	13.70
VOC [g/h]	148.30	1.49	136.48	63.04	64.60	101.73	16.32

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.505	2.853	3.045	2.345
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	658	658	1148	1148
d_b, Bicycle Delay [s]	22.51	22.51	9.07	9.07
l_b,int, Bicycle LOS Score for Intersection	2.764	2.668	2.853	1.939
Bicycle LOS	C	B	C	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	28.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	340	7	5	432	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	219	0	0	263	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	559	7	5	695	9	5
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	150	2	1	186	2	1
Total Analysis Volume [veh/h]	600	8	5	746	10	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.01	0.06	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.72	0.00	28.53	13.55
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.23	0.23
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.21	0.21	5.74	5.74
d_A, Approach Delay [s/veh]	0.00		0.06		23.53	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.29					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.716

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	7	6	17	299	4	140	146	687	10	13	283	203
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	12	3	246	8	10	81	23	2	2	18	126
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	18	20	545	12	150	227	710	12	15	301	329
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	5	5	142	3	39	59	185	3	4	78	86
Total Analysis Volume [veh/h]	10	19	21	567	12	156	236	739	12	16	313	342
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	18	0	13	20	0	11	26	0	33	48	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	5.10	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	30	17	29	29	19	51	45	51	40
g / C, Green / Cycle	0.34	0.19	0.33	0.33	0.22	0.57	0.50	0.57	0.44
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.19	0.32	0.11	0.27	0.45	0.02	0.43
s, saturation flow rate [veh/h]	1147	1540	1370	997	1431	860	1678	722	1541
c, Capacity [veh/h]	148	297	534	454	307	315	832	261	684
d1, Uniform Delay [s]	38.59	30.10	24.63	28.53	31.14	19.30	20.71	16.35	24.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.34	0.11	0.37
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	0.94	3.16	8.77	5.88	15.15	10.91	0.10	20.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.13	0.49	0.70	0.51	0.75	0.90	0.06	0.96
d, Delay for Lane Group [s/veh]	39.47	31.04	27.78	37.31	37.02	34.46	31.63	16.45	45.09
Lane Group LOS	D	C	C	D	D	C	C	B	D
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.18	0.82	4.75	5.05	3.39	3.53	15.73	0.14	16.52
50th-Percentile Queue Length [ft/ln]	4.52	20.39	118.77	126.25	84.77	88.20	393.33	3.39	413.05
95th-Percentile Queue Length [veh/ln]	0.33	1.47	8.33	8.74	6.10	6.35	22.24	0.24	23.19
95th-Percentile Queue Length [ft/ln]	8.14	36.71	208.13	218.38	152.59	158.75	555.95	6.11	579.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.47	31.04	31.04	32.92	37.31	37.02	34.46	31.63	31.63	16.45	45.09	45.09
Movement LOS	D	C	C	C	D	D	C	C	C	B	D	D
d_A, Approach Delay [s/veh]	32.73			33.87			32.30			44.41		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	36.11											
Intersection LOS	D											
Intersection V/C	0.716											

Emissions

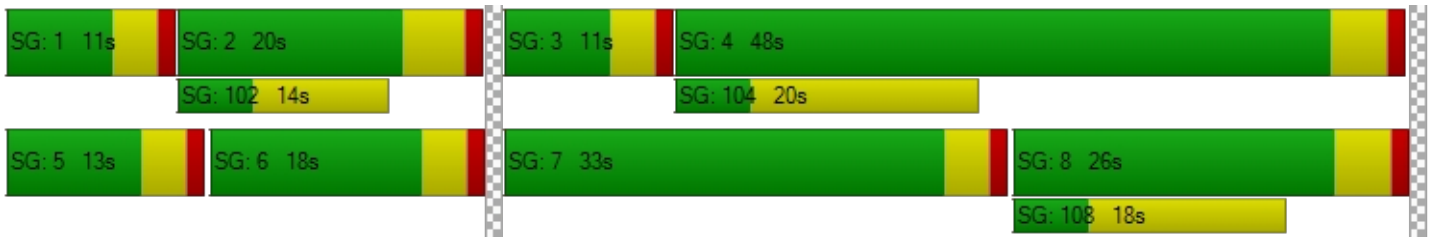
Vehicle Miles Traveled [mph]	0.24	0.95	19.69	24.07	11.79	19.82	63.06	1.23	50.15
Stops [stops/h]	7.23	32.63	190.03	202.00	135.64	141.11	629.33	5.43	660.87
Fuel consumption [US gal/h]	0.10	0.35	3.65	4.85	2.64	3.25	10.91	0.13	11.73
CO [g/h]	7.22	24.44	255.33	339.31	184.87	227.18	762.34	9.36	819.65
NOx [g/h]	1.40	4.75	49.68	66.02	35.97	44.20	148.32	1.82	159.47
VOC [g/h]	1.67	5.66	59.17	78.64	42.85	52.65	176.68	2.17	189.96

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.155	2.668	2.432	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	311	576	473	962
d_b, Bicycle Delay [s]	32.09	22.83	26.22	12.12
l_b,int, Bicycle LOS Score for Intersection	1.857	2.987	3.403	2.881
Bicycle LOS	A	C	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.459

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	619	71	115	983	24	21	103	15	47	47	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	81	145	172	110	0	0	0	0	59	0	107
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	700	216	287	1093	24	21	103	15	106	47	140
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	192	59	79	300	7	6	28	4	29	13	38
Total Analysis Volume [veh/h]	21	768	237	315	1200	26	23	113	16	116	52	154
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	25	0	19	33	0	0	16	0	0	16	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	27	27	39	32	32	11	11	11	11
g / C, Green / Cycle	0.64	0.46	0.46	0.64	0.54	0.54	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.04	0.22	0.15	0.37	0.33	0.33	0.02	0.07	0.09	0.12
s, saturation flow rate [veh/h]	597	3560	1589	851	1870	1856	1176	1830	1261	1652
c, Capacity [veh/h]	457	1627	726	638	1012	1004	169	348	240	314
d1, Uniform Delay [s]	5.57	11.28	10.40	6.37	9.42	9.43	28.10	21.18	27.04	22.49
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.99	1.20	2.72	2.71	2.75	0.36	0.66	1.50	2.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.47	0.33	0.49	0.61	0.61	0.14	0.37	0.48	0.66
d, Delay for Lane Group [s/veh]	5.61	12.26	11.59	9.09	12.13	12.18	28.47	21.83	28.54	24.82
Lane Group LOS	A	B	B	A	B	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.06	3.01	1.83	1.48	4.70	4.69	0.33	1.57	1.69	2.75
50th-Percentile Queue Length [ft/ln]	1.51	75.28	45.69	37.00	117.51	117.27	8.23	39.21	42.17	68.87
95th-Percentile Queue Length [veh/ln]	0.11	5.42	3.29	2.66	8.26	8.24	0.59	2.82	3.04	4.96
95th-Percentile Queue Length [ft/ln]	2.73	135.51	82.24	66.59	206.40	206.07	14.82	70.57	75.91	123.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.61	12.26	11.59	9.09	12.15	12.18	28.47	21.83	21.83	28.54	24.82	24.82
Movement LOS	A	B	B	A	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.97			11.53			22.84			26.16		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.79											
Intersection LOS	B											
Intersection V/C	0.459											

Emissions

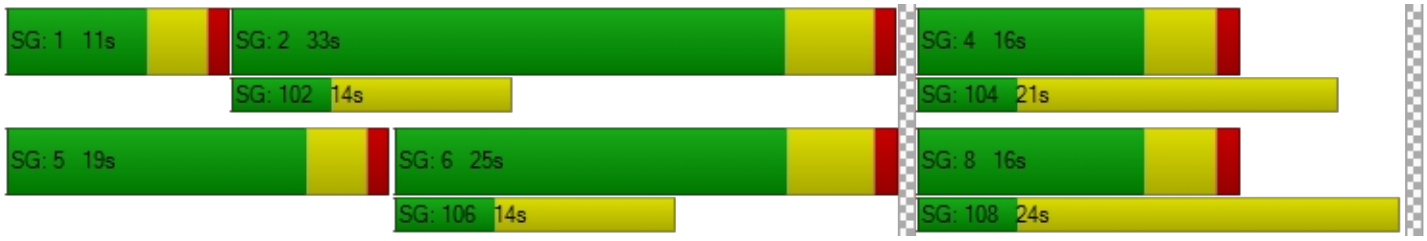
Vehicle Miles Traveled [mph]	1.57	57.33	17.69	10.40	20.29	20.19	0.53	2.97	9.60	17.04
Stops [stops/h]	3.64	361.35	109.66	88.79	282.03	281.45	19.76	94.09	101.22	165.29
Fuel consumption [US gal/h]	0.12	7.52	2.27	1.83	5.01	5.00	0.23	1.07	1.49	2.44
CO [g/h]	8.10	525.69	158.69	127.74	350.52	349.77	16.28	74.64	104.41	170.62
NOx [g/h]	1.58	102.28	30.87	24.85	68.20	68.05	3.17	14.52	20.31	33.20
VOC [g/h]	1.88	121.83	36.78	29.61	81.24	81.06	3.77	17.30	24.20	39.54

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	3.109	2.960	2.006	2.408
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	653	920	380	380
d_b, Bicycle Delay [s]	13.60	8.75	19.68	19.68
l_b,int, Bicycle LOS Score for Intersection	2.620	3.045	2.025	2.305
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	26.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	11	700	1035	6	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	226	169	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	926	1204	6	9	5
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	243	317	2	2	1
Total Analysis Volume [veh/h]	12	974	1266	6	9	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.05	0.01
d_M, Delay for Movement [s/veh]	11.79	0.00	0.00	0.00	26.91	14.68
Movement LOS	B	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.07	0.00	0.00	0.00	0.20	0.20
95th-Percentile Queue Length [ft/ln]	1.70	0.00	0.00	0.00	5.08	5.08
d_A, Approach Delay [s/veh]	0.14		0.00		22.54	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.20					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	30.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.726

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	557	311	398	606	28	30	133	13	177	104	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	221	101	3	166	0	0	2	5	23	3	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	778	412	401	772	28	30	135	18	200	107	130
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	198	105	102	197	7	8	34	5	51	27	33
Total Analysis Volume [veh/h]	19	794	420	409	788	29	31	138	18	204	109	133
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	19	41	0	17	39	0	11	16	0	11	16	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	55	38	38	54	48	48	21	10	21	13	13
g / C, Green / Cycle	0.64	0.44	0.44	0.64	0.56	0.56	0.24	0.11	0.24	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.04	0.38	0.38	0.55	0.24	0.24	0.03	0.09	0.15	0.06	0.09
s, saturation flow rate [veh/h]	476	1683	1490	743	1683	1662	1182	1649	1323	1683	1431
c, Capacity [veh/h]	416	743	658	452	942	931	349	188	342	258	219
d1, Uniform Delay [s]	7.12	21.43	21.54	22.08	10.89	10.89	24.97	36.86	28.62	32.59	33.60
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.15	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	12.70	14.70	24.26	1.47	1.49	0.11	9.06	2.29	1.10	2.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.86	0.87	0.91	0.44	0.44	0.09	0.83	0.60	0.42	0.61
d, Delay for Lane Group [s/veh]	7.16	34.13	36.24	46.35	12.36	12.38	25.08	45.91	30.91	33.69	36.30
Lane Group LOS	A	C	D	D	B	B	C	D	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.11	13.06	12.06	5.91	4.21	4.17	0.48	3.58	3.72	2.07	2.67
50th-Percentile Queue Length [ft/ln]	2.70	326.62	301.43	147.68	105.28	104.20	12.10	89.51	93.00	51.81	66.82
95th-Percentile Queue Length [veh/ln]	0.19	18.99	17.75	9.89	7.58	7.50	0.87	6.44	6.70	3.73	4.81
95th-Percentile Queue Length [ft/ln]	4.87	474.82	443.79	247.32	189.41	187.57	21.79	161.12	167.40	93.26	120.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.16	34.53	36.24	46.35	12.37	12.38	25.08	45.91	45.91	30.91	33.69	36.30
Movement LOS	A	C	D	D	B	B	C	D	D	C	C	D
d_A, Approach Delay [s/veh]	34.69			23.71			42.46			33.19		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	30.59											
Intersection LOS	C											
Intersection V/C	0.726											

Emissions

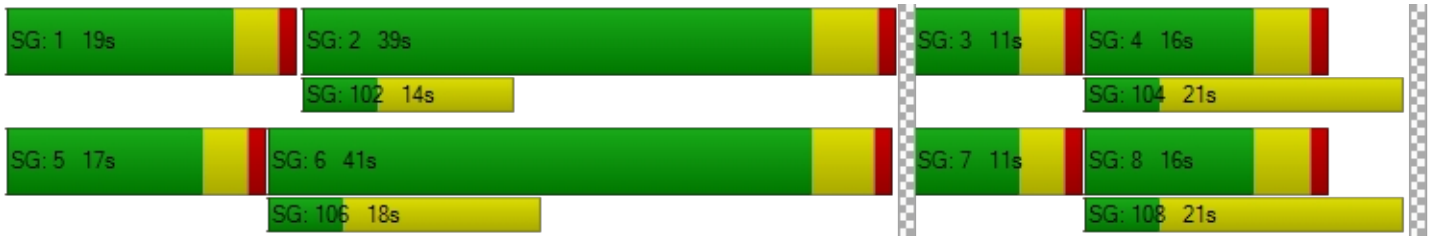
Vehicle Miles Traveled [mph]	0.75	25.30	22.59	30.95	31.09	30.73	0.79	4.00	17.13	9.15	11.17
Stops [stops/h]	4.58	553.34	510.66	250.18	178.35	176.54	20.50	151.65	157.55	87.78	113.19
Fuel consumption [US gal/h]	0.09	9.58	8.92	7.42	3.90	3.86	0.30	2.46	2.86	1.61	2.07
CO [g/h]	6.34	669.66	623.77	518.88	272.56	269.71	21.26	171.95	199.82	112.46	144.51
NOx [g/h]	1.23	130.29	121.36	100.96	53.03	52.48	4.14	33.45	38.88	21.88	28.12
VOC [g/h]	1.47	155.20	144.56	120.26	63.17	62.51	4.93	39.85	46.31	26.06	33.49

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.849	2.874	2.066	2.743
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	845	791	266	266
d_b, Bicycle Delay [s]	14.18	15.54	31.95	31.95
l_b,int, Bicycle LOS Score for Intersection	2.791	2.785	2.083	2.510
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	35.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	879	1	5	780	6	9	0	13	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	210	5	35	158	0	0	0	0	8	0	120
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	1089	6	40	938	6	9	0	13	8	0	134
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	284	2	10	245	2	2	0	3	2	0	35
Total Analysis Volume [veh/h]	23	1136	6	42	978	6	9	0	14	8	0	140
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.07	0.01	0.00	0.07	0.00	0.03	0.06	0.00	0.30
d_M, Delay for Movement [s/veh]	10.34	0.00	0.00	11.37	0.00	0.00	35.10	35.41	13.55	35.91	37.10	17.59
Movement LOS	B	A	A	B	A	A	E	E	B	E	E	C
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.22	0.00	0.00	0.32	0.32	0.32	1.61	1.61	1.61
95th-Percentile Queue Length [ft/ln]	2.55	0.00	0.00	5.55	0.00	0.00	8.04	8.04	8.04	40.17	40.17	40.17
d_A, Approach Delay [s/veh]	0.20			0.47			21.98			18.58		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.68											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	801	30	82	734	19	14	9	17	19	21	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	210	69	0	158	8	5	2	0	106	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1011	99	82	892	27	19	11	17	125	24	49
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	257	25	21	227	7	5	3	4	32	6	12
Total Analysis Volume [veh/h]	18	1027	101	83	907	27	19	11	17	127	24	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	37	0	11	37	0	12	51	0	11	50	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	85	75	75	85	78	78	15	4	15	8	8
g / C, Green / Cycle	0.77	0.68	0.68	0.77	0.71	0.71	0.14	0.04	0.14	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.03	0.34	0.34	0.15	0.28	0.28	0.01	0.02	0.09	0.01	0.03
s, saturation flow rate [veh/h]	602	1683	1631	564	1683	1666	1331	1520	1456	1683	1431
c, Capacity [veh/h]	493	1142	1107	451	1195	1183	267	58	279	124	105
d1, Uniform Delay [s]	3.72	8.60	8.61	5.10	6.40	6.40	41.35	51.84	44.39	47.89	48.92
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	1.57	1.63	0.90	0.97	0.98	0.11	6.13	1.16	0.75	3.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.50	0.50	0.18	0.39	0.39	0.07	0.48	0.46	0.19	0.48
d, Delay for Lane Group [s/veh]	3.75	10.18	10.23	6.00	7.37	7.38	41.47	57.97	45.55	48.65	52.22
Lane Group LOS	A	B	B	A	A	A	D	E	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	6.30	6.13	0.44	4.04	4.01	0.46	0.86	3.36	0.65	1.43
50th-Percentile Queue Length [ft/ln]	1.82	157.47	153.19	11.09	101.07	100.13	11.60	21.54	83.98	16.27	35.66
95th-Percentile Queue Length [veh/ln]	0.13	10.41	10.19	0.80	7.28	7.21	0.84	1.55	6.05	1.17	2.57
95th-Percentile Queue Length [ft/ln]	3.28	260.37	254.68	19.95	181.92	180.23	20.88	38.78	151.16	29.29	64.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.75	10.20	10.23	6.00	7.38	7.38	41.47	57.97	57.97	45.55	48.65	52.22
Movement LOS	A	B	B	A	A	A	D	E	E	D	D	D
d_A, Approach Delay [s/veh]	10.10			7.26			51.30			47.58		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	12.83											
Intersection LOS	B											
Intersection V/C	0.449											

Emissions

Vehicle Miles Traveled [mph]	1.34	42.69	41.41	6.32	35.76	35.40	0.50	0.74	10.72	2.03	4.22
Stops [stops/h]	2.39	206.14	200.54	14.51	132.31	131.08	15.19	28.20	109.94	21.30	46.69
Fuel consumption [US gal/h]	0.08	4.36	4.24	0.45	3.06	3.03	0.24	0.47	2.08	0.41	0.90
CO [g/h]	5.79	305.01	296.60	31.56	214.06	212.02	16.85	32.96	145.47	28.69	62.93
NOx [g/h]	1.13	59.34	57.71	6.14	41.65	41.25	3.28	6.41	28.30	5.58	12.24
VOC [g/h]	1.34	70.69	68.74	7.31	49.61	49.14	3.90	7.64	33.71	6.65	14.58

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.821	2.794	2.001	2.305
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	580	844	825
d_b, Bicycle Delay [s]	27.73	27.73	18.39	18.97
l_b,int, Bicycle LOS Score for Intersection	2.719	2.613	1.852	2.106
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.115

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	823	36	19	683	42	0	0	49	0	0	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	279	0	0	264	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	1102	36	19	947	42	0	0	49	0	0	48
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9500	0.9500	0.9460	0.9500	0.9500	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	291	10	5	250	11	0	0	13	0	0	13
Total Analysis Volume [veh/h]	35	1165	38	20	1001	44	0	0	52	0	0	51
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.10	0.00	0.00	0.12
d_M, Delay for Movement [s/veh]	10.75	0.00	0.00	11.48	0.00	0.00	0.00	0.00	13.05	0.00	0.00	14.18
Movement LOS	B	A	A	B	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.39
95th-Percentile Queue Length [ft/ln]	4.18	0.00	0.00	2.69	0.00	0.00	0.00	0.00	8.67	0.00	0.00	9.68
d_A, Approach Delay [s/veh]	0.30			0.22			13.05			14.18		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.83											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	34.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	101	622	89	72	587	73	219	298	184	66	223	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	252	37	0	216	48	27	11	7	41	13	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	118	874	126	72	803	121	246	309	191	107	236	53
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	231	33	19	212	32	65	82	50	28	62	14
Total Analysis Volume [veh/h]	125	924	133	76	849	128	260	327	202	113	249	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	18	34	0	11	27	0	13	29	0	11	27	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	8	35	35	6	32	32	30	20	20	31	18
g / C, Green / Cycle	0.10	0.41	0.41	0.07	0.38	0.38	0.36	0.23	0.23	0.36	0.21
(v / s)_i Volume / Saturation Flow Rate	0.08	0.32	0.32	0.05	0.30	0.30	0.22	0.19	0.14	0.18	0.19
s, saturation flow rate [veh/h]	1603	1683	1610	1603	1683	1607	1196	1683	1431	620	1630
c, Capacity [veh/h]	156	682	653	111	635	606	381	395	336	379	345
d1, Uniform Delay [s]	37.56	22.12	22.14	38.66	23.45	23.46	22.66	30.90	28.99	20.15	32.51
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.19	0.11	0.20	0.21
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.12	9.11	9.56	7.30	9.55	9.97	9.51	7.52	1.74	0.81	13.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.79	0.79	0.69	0.79	0.79	0.68	0.83	0.60	0.30	0.88
d, Delay for Lane Group [s/veh]	46.67	31.23	31.71	45.97	33.00	33.43	32.18	38.42	30.73	20.96	46.17
Lane Group LOS	D	C	C	D	C	C	C	D	C	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.87	10.40	10.05	1.73	9.91	9.53	4.74	6.90	3.68	1.59	7.30
50th-Percentile Queue Length [ft/ln]	71.63	259.98	251.37	43.26	247.68	238.37	118.61	172.46	92.05	39.69	182.46
95th-Percentile Queue Length [veh/ln]	5.16	15.69	15.26	3.11	15.07	14.60	8.32	11.21	6.63	2.86	11.73
95th-Percentile Queue Length [ft/ln]	128.94	392.19	381.38	77.87	376.74	364.97	207.91	280.15	165.69	71.44	293.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.67	31.43	31.71	45.97	33.18	33.43	32.18	38.42	30.73	20.96	46.17	46.17
Movement LOS	D	C	C	D	C	C	C	D	C	C	D	D
d_A, Approach Delay [s/veh]	33.07			34.13			34.39			39.35		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	34.46											
Intersection LOS	C											
Intersection V/C	0.764											

Emissions

Vehicle Miles Traveled [mph]	9.87	42.61	40.84	6.04	39.73	37.95	59.58	74.93	46.29	18.11	48.88
Stops [stops/h]	121.35	440.43	425.86	73.29	419.61	403.82	200.94	292.17	155.94	67.24	309.11
Fuel consumption [US gal/h]	2.48	8.37	8.10	1.49	8.03	7.73	5.48	7.61	4.20	1.55	6.25
CO [g/h]	173.07	584.80	566.00	104.32	561.02	540.34	383.37	531.94	293.60	108.64	436.80
NOx [g/h]	33.67	113.78	110.12	20.30	109.15	105.13	74.59	103.50	57.12	21.14	84.99
VOC [g/h]	40.11	135.53	131.17	24.18	130.02	125.23	88.85	123.28	68.04	25.18	101.23

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.870	2.905	2.592	2.197
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	515	562	527
d_b, Bicycle Delay [s]	18.51	23.42	21.96	23.05
l_b,int, Bicycle LOS Score for Intersection	2.749	2.643	3.076	2.464
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	609	132	173	632	56	48	400	79	67	278	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	290	0	0	236	28	16	9	5	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	899	132	173	868	84	64	409	84	67	286	116
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	244	36	47	235	23	17	111	23	18	78	31
Total Analysis Volume [veh/h]	86	975	143	188	941	91	69	444	91	73	310	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	22	31	0	22	31	0	11	21	0	11	21	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	6	34	34	12	39	39	6	16	16	6	16	16
g / C, Green / Cycle	0.07	0.40	0.40	0.14	0.46	0.46	0.07	0.19	0.19	0.07	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.05	0.30	0.10	0.12	0.29	0.06	0.04	0.16	0.16	0.05	0.13	0.14
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1585	1603	1683	1521
c, Capacity [veh/h]	118	1270	567	223	1480	661	107	315	297	109	319	289
d1, Uniform Delay [s]	38.53	22.27	17.21	35.67	17.43	13.15	38.71	33.55	33.60	38.69	32.24	32.35
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.12	0.13	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.24	4.50	1.07	8.34	2.10	0.43	6.45	8.29	9.42	6.96	2.91	3.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.77	0.25	0.84	0.64	0.14	0.65	0.87	0.88	0.67	0.71	0.73
d, Delay for Lane Group [s/veh]	46.77	26.76	18.28	44.01	19.53	13.58	45.16	41.83	43.02	45.65	35.14	35.80
Lane Group LOS	D	C	B	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.98	8.60	1.94	4.18	6.81	1.01	1.57	6.07	5.86	1.69	4.57	4.28
50th-Percentile Queue Length [ft/ln]	49.44	214.90	48.44	104.60	170.16	25.25	39.31	151.76	146.57	42.26	114.26	106.91
95th-Percentile Queue Length [veh/ln]	3.56	13.40	3.49	7.53	11.08	1.82	2.83	10.11	9.83	3.04	8.08	7.67
95th-Percentile Queue Length [ft/ln]	88.99	335.11	87.19	188.29	277.12	45.44	70.76	252.78	245.84	76.07	201.91	191.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.77	26.76	18.28	44.01	19.53	13.58	45.16	42.29	43.02	45.65	35.32	35.80
Movement LOS	D	C	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	27.18			22.86			42.73			36.92		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	29.75											
Intersection LOS	C											
Intersection V/C	0.632											

Emissions

Vehicle Miles Traveled [mph]	6.90	78.24	11.47	14.84	74.29	7.18	15.69	62.39	59.27	11.87	36.86	34.06
Stops [stops/h]	83.76	728.14	82.06	177.21	576.53	42.77	66.60	257.10	248.30	71.60	193.56	181.12
Fuel consumption [US gal/h]	1.71	13.77	1.59	3.58	10.91	0.85	1.65	6.32	6.09	1.49	4.02	3.75
CO [g/h]	119.63	962.41	110.90	250.39	762.46	59.21	115.19	442.09	425.93	103.92	281.03	262.29
NOx [g/h]	23.28	187.25	21.58	48.72	148.35	11.52	22.41	86.01	82.87	20.22	54.68	51.03
VOC [g/h]	27.73	223.05	25.70	58.03	176.71	13.72	26.70	102.46	98.71	24.08	65.13	60.79

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.889	2.905	2.511	2.507
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	609	609	384	386
d_b, Bicycle Delay [s]	20.55	20.55	27.76	27.68
l_b,int, Bicycle LOS Score for Intersection	2.767	2.781	2.272	2.194
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	7.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.395

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	751	42	38	717	43	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	302	41	0	241	23	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1053	83	38	958	66	77
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	284	22	10	258	18	21
Total Analysis Volume [veh/h]	1136	90	41	1033	71	83
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	40	0	11	51	34	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	60	60	68	68	7	7
g / C, Green / Cycle	0.71	0.71	0.80	0.80	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.33	0.34	0.07	0.29	0.04	0.05
s, saturation flow rate [veh/h]	1870	1823	578	3560	1781	1589
c, Capacity [veh/h]	1319	1285	516	2861	146	131
d1, Uniform Delay [s]	5.49	5.56	2.96	2.31	37.28	37.77
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.18	1.27	0.30	0.36	2.47	5.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.48	0.08	0.36	0.48	0.63
d, Delay for Lane Group [s/veh]	6.67	6.83	3.26	2.66	39.75	42.79
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.92	3.98	0.11	1.23	1.51	1.85
50th-Percentile Queue Length [ft/ln]	97.92	99.57	2.65	30.84	37.70	46.23
95th-Percentile Queue Length [veh/ln]	7.05	7.17	0.19	2.22	2.71	3.33
95th-Percentile Queue Length [ft/ln]	176.26	179.22	4.78	55.51	67.87	83.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.75	6.83	3.26	2.66	39.75	42.79
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	6.75		2.69		41.39	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	7.15					
Intersection LOS	A					
Intersection V/C	0.395					

Emissions

Vehicle Miles Traveled [mph]	45.35	45.35	3.29	82.89	11.70	13.68
Stops [stops/h]	165.90	168.68	4.50	104.49	63.87	78.32
Fuel consumption [US gal/h]	3.81	3.85	0.19	4.51	1.35	1.64
CO [g/h]	266.23	269.09	13.03	314.93	94.06	114.52
NOx [g/h]	51.80	52.36	2.54	61.27	18.30	22.28
VOC [g/h]	61.70	62.37	3.02	72.99	21.80	26.54

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	0.00	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.792	0.000	2.059
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	821	1080	692
d_b, Bicycle Delay [s]	14.76	8.99	18.18
l_b,int, Bicycle LOS Score for Intersection	2.785	2.660	1.774
Bicycle LOS	C	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.383

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	723	26	60	660	26	34	50	16	24	27	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	336	0	0	253	11	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1059	26	60	913	37	41	50	16	24	27	49
Peak Hour Factor	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	278	7	16	240	10	11	13	4	6	7	13
Total Analysis Volume [veh/h]	15	1112	27	63	959	39	43	53	17	25	28	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	17	0	11	17	0	0	47	0	0	47	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	59	50	50	59	53	53	6	6
g / C, Green / Cycle	0.78	0.66	0.66	0.78	0.71	0.71	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.02	0.31	0.31	0.10	0.27	0.27	0.07	0.06
s, saturation flow rate [veh/h]	645	1870	1854	650	1870	1844	1697	1766
c, Capacity [veh/h]	579	1237	1226	572	1317	1299	213	212
d1, Uniform Delay [s]	2.36	6.20	6.20	2.97	4.48	4.48	33.48	33.28
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.25	1.26	0.39	0.84	0.85	2.05	1.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.46	0.46	0.11	0.38	0.38	0.53	0.49
d, Delay for Lane Group [s/veh]	2.38	7.44	7.45	3.35	5.32	5.33	35.53	35.03
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.02	3.66	3.64	0.15	2.39	2.36	2.08	1.89
50th-Percentile Queue Length [ft/ln]	0.60	91.60	90.96	3.82	59.75	59.05	51.90	47.24
95th-Percentile Queue Length [veh/ln]	0.04	6.60	6.55	0.28	4.30	4.25	3.74	3.40
95th-Percentile Queue Length [ft/ln]	1.08	164.88	163.73	6.88	107.55	106.28	93.43	85.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.38	7.45	7.45	3.35	5.33	5.33	35.53	35.53	35.53	35.03	35.03	35.03
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.38			5.21			35.53			35.03		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	8.92											
Intersection LOS	A											
Intersection V/C	0.383											

Emissions

Vehicle Miles Traveled [mph]	1.13	43.13	42.79	4.66	37.17	36.66	2.94	17.36
Stops [stops/h]	1.15	175.87	174.65	7.34	114.72	113.37	99.66	90.69
Fuel consumption [US gal/h]	0.06	3.83	3.80	0.28	2.82	2.79	1.49	1.96
CO [g/h]	4.13	267.90	265.95	19.28	197.39	194.90	104.07	136.81
NOx [g/h]	0.80	52.12	51.74	3.75	38.40	37.92	20.25	26.62
VOC [g/h]	0.96	62.09	61.64	4.47	45.75	45.17	24.12	31.71

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.818	2.869	1.818	1.889
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	317	317	1128	1128
d_b, Bicycle Delay [s]	26.54	26.54	7.13	7.13
l_b,int, Bicycle LOS Score for Intersection	2.726	2.649	1.960	1.946
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	78.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.078

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	733	4	3	699	7	7	0	40	4	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	336	0	0	253	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	1069	4	3	952	7	7	0	40	4	0	20
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	292	1	1	260	2	2	0	11	1	0	5
Total Analysis Volume [veh/h]	12	1170	4	3	1042	8	8	0	44	4	0	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.13	0.00	0.09	0.08	0.00	0.05
d_M, Delay for Movement [s/veh]	10.57	0.00	0.00	11.13	0.00	0.00	70.11	99.09	16.64	78.11	97.50	15.49
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	C
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.02	0.00	0.00	0.83	0.83	0.83	0.43	0.43	0.43
95th-Percentile Queue Length [ft/ln]	1.39	0.00	0.00	0.38	0.00	0.00	20.81	20.81	20.81	10.70	10.70	10.70
d_A, Approach Delay [s/veh]	0.11			0.03			24.86			25.12		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	0.91											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.394

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	625	12	32	705	14	34	38	65	19	14	71
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	329	0	0	241	11	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	954	12	32	946	25	41	38	65	19	14	71
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	262	3	9	259	7	11	10	18	5	4	19
Total Analysis Volume [veh/h]	16	1046	13	35	1037	27	45	42	71	21	15	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	35	35	43	37	37	8	8	8
g / C, Green / Cycle	0.71	0.59	0.59	0.71	0.61	0.61	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.28	0.28	0.05	0.29	0.29	0.10	0.02	0.05
s, saturation flow rate [veh/h]	642	1870	1862	686	1870	1853	1539	1642	1589
c, Capacity [veh/h]	528	1102	1098	556	1146	1136	275	306	204
d1, Uniform Delay [s]	3.80	7.06	7.06	3.94	6.29	6.29	25.38	23.23	23.96
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.51	1.51	0.22	1.36	1.38	1.90	0.17	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.48	0.48	0.06	0.47	0.47	0.57	0.12	0.38
d, Delay for Lane Group [s/veh]	3.83	8.56	8.57	4.15	7.65	7.66	27.28	23.40	25.13
Lane Group LOS	A	A	A	A	A	A	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.03	3.21	3.20	0.10	2.91	2.89	2.24	0.45	1.04
50th-Percentile Queue Length [ft/ln]	0.78	80.27	79.97	2.38	72.82	72.28	55.90	11.25	26.00
95th-Percentile Queue Length [veh/ln]	0.06	5.78	5.76	0.17	5.24	5.20	4.02	0.81	1.87
95th-Percentile Queue Length [ft/ln]	1.40	144.48	143.95	4.28	131.08	130.11	100.61	20.25	46.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.83	8.56	8.57	4.15	7.66	7.66	27.28	27.28	27.28	23.40	23.40	25.13
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.49			7.55			27.28			24.59		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.03											
Intersection LOS	B											
Intersection V/C	0.394											

Emissions

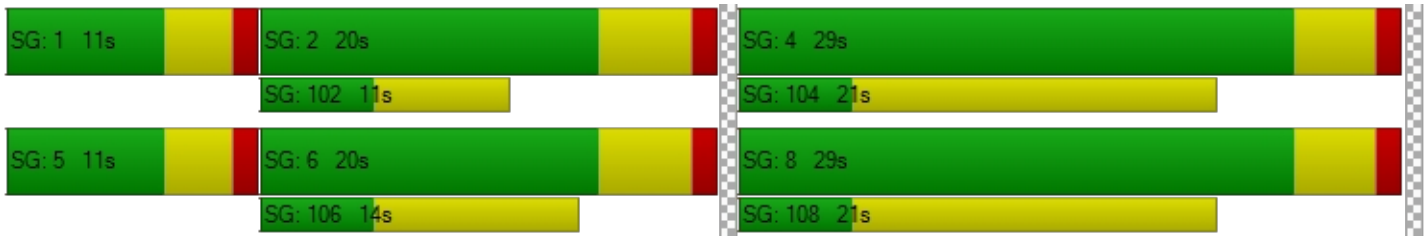
Vehicle Miles Traveled [mph]	1.20	39.83	39.66	2.63	40.16	39.81	4.64	1.07	2.33
Stops [stops/h]	1.87	192.64	191.94	5.71	174.77	173.48	134.15	27.00	62.40
Fuel consumption [US gal/h]	0.07	3.89	3.88	0.17	3.68	3.65	1.60	0.32	0.74
CO [g/h]	5.06	272.03	270.98	12.08	257.05	255.03	111.85	22.60	51.94
NOx [g/h]	0.98	52.93	52.72	2.35	50.01	49.62	21.76	4.40	10.11
VOC [g/h]	1.17	63.05	62.80	2.80	59.57	59.10	25.92	5.24	12.04

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.812	2.860	1.798	2.007
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	497	497	813	813
d_b, Bicycle Delay [s]	16.95	16.95	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.661	2.681	2.035	1.962
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	108.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.241

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	603	15	28	742	8	4	9	53	2	4	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	329	0	0	241	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	932	15	28	983	8	4	9	53	2	4	51
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	256	4	8	270	2	1	2	15	1	1	14
Total Analysis Volume [veh/h]	7	1025	17	31	1081	9	4	10	58	2	4	56
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.05	0.01	0.00	0.08	0.24	0.12	0.05	0.10	0.11
d_M, Delay for Movement [s/veh]	10.72	0.00	0.00	10.69	0.00	0.00	97.89	108.60	29.27	97.55	96.35	17.26
Movement LOS	B	A	A	B	A	A	F	F	D	F	F	C
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.15	0.00	0.00	2.04	2.04	2.04	0.99	0.99	0.99
95th-Percentile Queue Length [ft/ln]	0.83	0.00	0.00	3.67	0.00	0.00	51.03	51.03	51.03	24.77	24.77	24.77
d_A, Approach Delay [s/veh]	0.07			0.30			44.10			24.95		
Approach LOS	A			A			E			C		
d_I, Intersection Delay [s/veh]	2.23											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	31.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.602

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	465	151	150	593	37	66	408	49	176	446	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	290	0	58	153	31	21	0	0	0	0	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	755	151	208	746	68	87	408	49	176	446	103
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	206	41	57	203	19	24	111	13	48	122	28
Total Analysis Volume [veh/h]	58	823	165	227	814	74	95	445	53	192	486	112
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	24	40	0	23	18	0	21	16	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	5	32	32	13	40	40	6	14	14	12	20	20
g / C, Green / Cycle	0.06	0.36	0.36	0.15	0.45	0.45	0.07	0.16	0.16	0.13	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.03	0.23	0.10	0.13	0.23	0.05	0.05	0.14	0.14	0.11	0.16	0.17
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1801	1781	1870	1750
c, Capacity [veh/h]	107	1266	565	266	1598	713	130	299	288	230	405	379
d1, Uniform Delay [s]	41.12	24.30	20.85	37.30	17.73	14.34	40.87	36.71	36.74	38.26	33.09	33.10
k, delay calibration	0.11	0.50	0.50	0.12	0.50	0.50	0.11	0.11	0.11	0.12	0.15	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.27	2.60	1.31	8.60	1.16	0.29	7.75	6.46	6.90	8.32	4.00	4.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.65	0.29	0.85	0.51	0.10	0.73	0.84	0.85	0.84	0.76	0.76
d, Delay for Lane Group [s/veh]	45.39	26.90	22.16	45.89	18.89	14.63	48.63	43.17	43.64	46.58	37.09	37.43
Lane Group LOS	D	C	C	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.34	7.29	2.56	5.36	5.89	0.89	2.30	5.77	5.62	4.55	6.53	6.16
50th-Percentile Queue Length [ft/ln]	33.39	182.22	63.89	133.99	147.16	22.14	57.40	144.20	140.60	113.72	163.21	154.03
95th-Percentile Queue Length [veh/ln]	2.40	11.72	4.60	9.16	9.87	1.59	4.13	9.71	9.51	8.05	10.72	10.23
95th-Percentile Queue Length [ft/ln]	60.11	292.91	115.00	228.91	246.64	39.86	103.32	242.66	237.83	201.17	267.96	255.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.39	26.90	22.16	45.89	18.89	14.63	48.63	43.37	43.64	46.58	37.21	37.43
Movement LOS	D	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	27.18			24.11			44.24			39.52		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.82											
Intersection LOS	C											
Intersection V/C	0.602											

Emissions

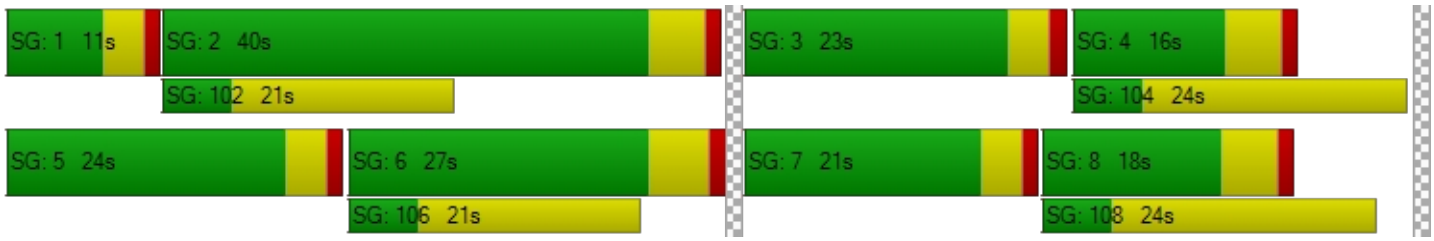
Vehicle Miles Traveled [mph]	2.19	31.10	6.23	17.37	62.30	5.66	3.73	9.93	9.62	7.12	11.45	10.74
Stops [stops/h]	53.43	583.10	102.22	214.39	470.92	35.43	91.84	230.71	224.95	181.95	261.13	246.44
Fuel consumption [US gal/h]	1.14	11.35	1.97	4.39	9.05	0.70	1.77	4.34	4.23	3.46	4.73	4.47
CO [g/h]	79.62	793.17	137.80	307.17	632.29	49.12	123.93	303.07	295.99	241.84	330.53	312.29
NOx [g/h]	15.49	154.32	26.81	59.76	123.02	9.56	24.11	58.97	57.59	47.05	64.31	60.76
VOC [g/h]	18.45	183.82	31.94	71.19	146.54	11.38	28.72	70.24	68.60	56.05	76.60	72.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.910	2.861	2.577	2.672
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	776	287	242
d_b, Bicycle Delay [s]	25.99	16.87	33.02	34.76
l_b,int, Bicycle LOS Score for Intersection	2.637	2.694	2.263	2.426
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.372

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	148	101	74	2	94	19	19	570	121	65	297	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	46	0	0	79	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	148	101	74	2	94	19	19	616	121	65	376	19
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	26	19	1	25	5	5	161	32	17	98	5
Total Analysis Volume [veh/h]	155	106	77	2	98	20	20	644	127	68	393	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	16	0	0	16	0	32	29	0	20	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	11	11	11	11	2	35	35	5	38	38
g / C, Green / Cycle	0.17	0.17	0.17	0.18	0.03	0.54	0.54	0.08	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.12	0.06	0.05	0.07	0.01	0.21	0.21	0.04	0.11	0.11
s, saturation flow rate [veh/h]	1274	1870	1589	1812	1781	1870	1764	1781	1870	1838
c, Capacity [veh/h]	211	314	267	318	61	1004	948	137	1084	1066
d1, Uniform Delay [s]	27.24	23.87	23.66	23.66	30.66	8.84	8.84	28.80	6.46	6.46
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.91	0.63	0.59	0.74	3.09	1.16	1.24	2.78	0.39	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.34	0.29	0.38	0.33	0.39	0.40	0.50	0.19	0.19
d, Delay for Lane Group [s/veh]	32.15	24.50	24.25	24.40	33.75	10.00	10.08	31.58	6.85	6.87
Lane Group LOS	C	C	C	C	C	B	B	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.50	1.39	1.01	1.64	0.34	2.96	2.82	1.06	1.16	1.15
50th-Percentile Queue Length [ft/ln]	62.43	34.85	25.20	40.92	8.56	74.02	70.48	26.61	29.06	28.76
95th-Percentile Queue Length [veh/ln]	4.50	2.51	1.81	2.95	0.62	5.33	5.07	1.92	2.09	2.07
95th-Percentile Queue Length [ft/ln]	112.38	62.74	45.37	73.66	15.41	133.24	126.87	47.90	52.31	51.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.15	24.50	24.25	24.40	24.40	24.40	33.75	10.03	10.08	31.58	6.86	6.87
Movement LOS	C	C	C	C	C	C	C	B	B	C	A	A
d_A, Approach Delay [s/veh]	27.95			24.40			10.64			10.35		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.90											
Intersection LOS	B											
Intersection V/C	0.372											

Emissions

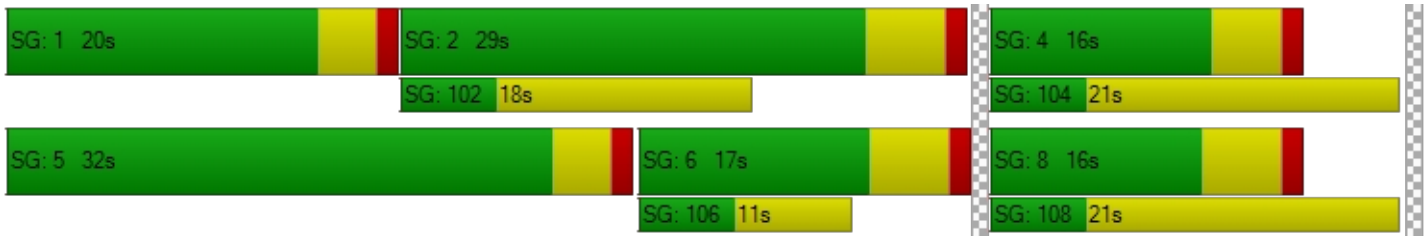
Vehicle Miles Traveled [mph]	12.63	8.64	6.27	3.30	0.63	12.51	11.83	15.58	47.62	47.02
Stops [stops/h]	138.31	77.22	55.84	90.65	18.96	163.99	156.15	58.95	64.38	63.71
Fuel consumption [US gal/h]	2.54	1.44	1.04	1.09	0.30	2.52	2.39	1.47	2.59	2.56
CO [g/h]	177.24	100.54	72.63	76.33	21.25	175.95	167.35	103.05	180.99	178.82
NOx [g/h]	34.48	19.56	14.13	14.85	4.14	34.23	32.56	20.05	35.21	34.79
VOC [g/h]	41.08	23.30	16.83	17.69	4.93	40.78	38.78	23.88	41.95	41.44

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.295	1.808	2.814	2.723
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	335	351	735	366
d_b, Bicycle Delay [s]	22.51	22.10	12.99	21.69
l_b,int, Bicycle LOS Score for Intersection	2.332	1.972	2.427	2.171
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.414

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	184	299	68	37	237	5	6	329	184	44	284	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	0	26	0	3	45	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	299	71	37	237	5	6	355	184	47	329	23
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	78	19	10	62	1	2	93	48	12	86	6
Total Analysis Volume [veh/h]	193	314	75	39	249	5	6	373	193	49	345	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	18	0	11	17	0	27	35	0	11	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	24	16	16	24	12	1	32	32	4	36	36
g / C, Green / Cycle	0.32	0.21	0.21	0.32	0.16	0.01	0.43	0.43	0.06	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.14	0.17	0.05	0.03	0.14	0.00	0.16	0.16	0.03	0.10	0.10
s, saturation flow rate [veh/h]	1400	1870	1589	1189	1864	1781	1870	1660	1781	1870	1828
c, Capacity [veh/h]	440	398	339	363	296	24	800	710	107	905	885
d1, Uniform Delay [s]	20.32	27.91	24.37	18.80	30.73	36.63	14.58	14.64	34.07	11.08	11.09
k, delay calibration	0.50	0.13	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.16	4.05	0.33	0.13	7.21	5.50	1.32	1.53	3.05	0.51	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.79	0.22	0.11	0.86	0.25	0.37	0.38	0.46	0.21	0.21
d, Delay for Lane Group [s/veh]	23.48	31.96	24.70	18.93	37.94	42.14	15.91	16.17	37.12	11.60	11.62
Lane Group LOS	C	C	C	B	D	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.79	5.46	1.08	0.45	4.83	0.14	3.32	3.05	0.93	1.75	1.73
50th-Percentile Queue Length [ft/ln]	69.63	136.50	26.90	11.37	120.80	3.50	83.08	76.35	23.30	43.69	43.13
95th-Percentile Queue Length [veh/ln]	5.01	9.29	1.94	0.82	8.44	0.25	5.98	5.50	1.68	3.15	3.11
95th-Percentile Queue Length [ft/ln]	125.33	232.30	48.42	20.47	210.92	6.30	149.54	137.43	41.94	78.65	77.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.48	31.96	24.70	18.93	37.94	37.94	42.14	15.96	16.17	37.12	11.61	11.62
Movement LOS	C	C	C	B	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	28.21			35.41			16.31			14.60		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	22.64											
Intersection LOS	C											
Intersection V/C	0.414											

Emissions

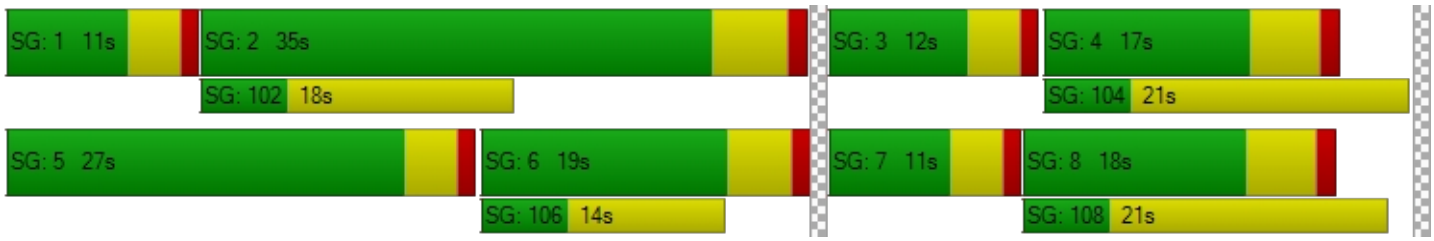
Vehicle Miles Traveled [mph]	6.87	11.18	2.67	3.18	20.69	0.17	8.44	7.64	11.14	42.28	41.63
Stops [stops/h]	133.68	262.08	51.65	21.84	231.93	6.72	159.51	146.59	44.74	83.89	82.82
Fuel consumption [US gal/h]	2.19	4.44	0.87	0.44	4.49	0.12	2.83	2.60	1.08	2.64	2.60
CO [g/h]	153.04	310.31	60.62	30.45	314.14	8.64	197.91	181.65	75.22	184.74	182.05
NOx [g/h]	29.78	60.38	11.79	5.92	61.12	1.68	38.51	35.34	14.63	35.94	35.42
VOC [g/h]	35.47	71.92	14.05	7.06	72.80	2.00	45.87	42.10	17.43	42.81	42.19

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.429	2.174	2.633	2.482
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	344	317	789	381
d_b, Bicycle Delay [s]	25.71	26.54	13.74	24.56
l_b,int, Bicycle LOS Score for Intersection	2.734	2.257	2.246	2.119
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	0	48	0	0	16	0	953	40	18	480	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	116	0	6	0	0	0	0	40	231	4	30	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	173	0	54	0	0	16	0	993	271	22	510	93
Peak Hour Factor	0.9270	0.9500	0.9270	0.9500	0.9500	0.9270	0.9500	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	0	15	0	0	4	0	268	73	6	138	25
Total Analysis Volume [veh/h]	187	0	58	0	0	17	0	1071	292	24	550	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	16	0	0	0	0	28	0	30	0	11	41	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	11	11	2	51	51	58	58
g / C, Green / Cycle	0.13	0.13	0.03	0.60	0.60	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.11	0.04	0.01	0.36	0.39	0.05	0.36
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1739	520	1821
c, Capacity [veh/h]	225	201	46	1118	1040	371	1240
d1, Uniform Delay [s]	36.26	33.68	40.49	10.80	11.29	7.82	6.72
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.76	0.79	4.78	2.48	3.23	0.07	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.29	0.37	0.61	0.66	0.06	0.52
d, Delay for Lane Group [s/veh]	44.02	34.46	45.27	13.28	14.52	7.89	8.31
Lane Group LOS	D	C	D	B	B	A	A
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.24	1.13	0.41	7.82	8.31	0.12	5.22
50th-Percentile Queue Length [ft/ln]	106.00	28.14	10.25	195.60	207.66	3.00	130.50
95th-Percentile Queue Length [veh/ln]	7.62	2.03	0.74	12.41	13.03	0.22	8.97
95th-Percentile Queue Length [ft/ln]	190.43	50.66	18.46	310.28	325.82	5.40	224.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.02	0.00	34.46	0.00	0.00	45.27	0.00	13.73	14.52	7.89	8.31	8.31
Movement LOS	D		C			D		B	B	A	A	A
d_A, Approach Delay [s/veh]	41.76			45.27			13.90			8.30		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15.46											
Intersection LOS	B											
Intersection V/C	0.513											

Emissions

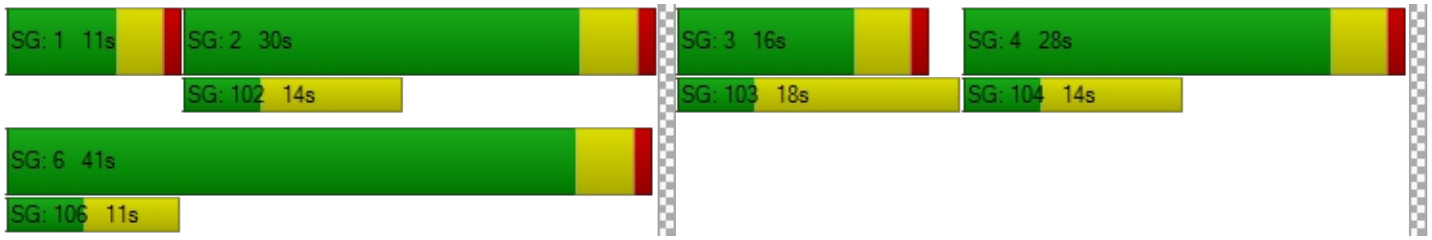
Vehicle Miles Traveled [mph]	14.02	4.35	0.41	52.18	52.18	3.62	98.04
Stops [stops/h]	179.58	47.68	17.37	331.36	351.79	5.08	221.08
Fuel consumption [US gal/h]	2.99	0.79	0.24	5.82	6.11	0.22	6.36
CO [g/h]	209.32	54.89	16.91	406.87	426.78	15.07	444.34
NOx [g/h]	40.73	10.68	3.29	79.16	83.04	2.93	86.45
VOC [g/h]	48.51	12.72	3.92	94.30	98.91	3.49	102.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.112	1.761	2.627	2.569
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	268	551	595	854
d_b, Bicycle Delay [s]	31.86	22.32	20.97	13.95
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.898	2.886
Bicycle LOS	A	A	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	6	7	52	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	121	0	0	235	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	218	6	7	287	5	8
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	2	2	90	2	3
Total Analysis Volume [veh/h]	273	8	9	359	6	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.83	0.00	13.57	9.90
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.53	0.00	2.09	2.09
d_A, Approach Delay [s/veh]	0.00		0.19		11.28	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.38					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	25.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.836

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	38	3	5	46	7	46	66	35	2	56	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	91	135	0	0	244	45	1	50	140	0	33	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	173	3	5	290	52	47	116	175	2	89	20
Peak Hour Factor	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	53	1	2	89	16	14	36	54	1	27	6
Total Analysis Volume [veh/h]	126	212	4	6	355	64	58	142	214	2	109	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	445	477	461	501	548	470
Degree of Utilization, x	0.28	0.45	0.01	0.84	0.76	0.29

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.15	2.32	0.04	8.41	6.65	1.19
95th-Percentile Queue Length [ft]	28.80	58.10	0.99	210.24	166.17	29.77
Approach Delay [s/veh]	15.49		36.36		27.13	13.78
Approach LOS	C		E		D	B
Intersection Delay [s/veh]	25.71					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	17.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.737

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	40	39	20	9	58	11	15	38	21	7	28	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	227	0	0	384	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	266	20	9	442	11	15	38	21	7	28	6
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	74	6	2	122	3	4	11	6	2	8	2
Total Analysis Volume [veh/h]	44	294	22	10	489	12	17	42	23	8	31	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	540	589	607	663	763	538	524
Degree of Utilization, x	0.08	0.54	0.02	0.74	0.02	0.15	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.27	3.18	0.05	6.49	0.05	0.54	0.29
95th-Percentile Queue Length [ft]	6.63	79.50	1.26	162.15	1.20	13.38	7.18
Approach Delay [s/veh]	14.98		21.19			10.90	10.53
Approach LOS	B		C			B	B
Intersection Delay [s/veh]	17.61						
Intersection LOS	C						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	21.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	26	22	18	55	29	42	393	49	52	315	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	0	201	156	27	17	31	0	0	28	205
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	31	22	219	211	56	59	424	49	52	343	230
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	8	6	56	54	14	15	109	13	13	88	59
Total Analysis Volume [veh/h]	13	32	23	226	218	58	61	437	51	54	354	237
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	23	0	0	23	0	11	32	0	15	36	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	18	18	18	18	42	34	42	34
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.61	0.48	0.61	0.48
(v / s)_i Volume / Saturation Flow Rate	0.01	0.04	0.19	0.17	0.07	0.30	0.06	0.38
s, saturation flow rate [veh/h]	993	1567	1214	1623	883	1653	940	1572
c, Capacity [veh/h]	185	412	354	426	449	797	535	752
d1, Uniform Delay [s]	29.82	19.72	27.03	22.92	9.44	13.31	7.51	15.24
k, delay calibration	0.11	0.11	0.20	0.16	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	0.15	3.55	2.45	0.63	3.50	0.08	8.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.13	0.64	0.65	0.14	0.61	0.10	0.79
d, Delay for Lane Group [s/veh]	29.97	19.86	30.58	25.37	10.07	16.81	7.59	23.32
Lane Group LOS	C	B	C	C	B	B	A	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.21	0.68	3.89	4.17	0.40	5.90	0.29	8.77
50th-Percentile Queue Length [ft/ln]	5.20	17.06	97.29	104.33	9.90	147.41	7.30	219.18
95th-Percentile Queue Length [veh/ln]	0.37	1.23	7.01	7.51	0.71	9.88	0.53	13.62
95th-Percentile Queue Length [ft/ln]	9.36	30.70	175.13	187.79	17.82	246.97	13.14	340.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.97	19.86	19.86	30.58	25.37	25.37	10.07	16.81	16.81	7.59	23.32	23.32
Movement LOS	C	B	B	C	C	C	B	B	B	A	C	C
d_A, Approach Delay [s/veh]	21.80			27.72			16.06			22.00		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	21.77											
Intersection LOS	C											
Intersection V/C	0.581											

Emissions

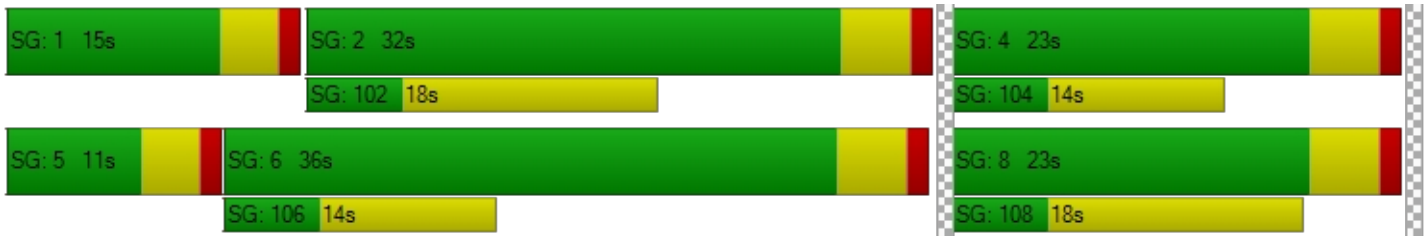
Vehicle Miles Traveled [mph]	1.05	4.45	17.79	21.73	9.78	78.20	8.08	88.43
Stops [stops/h]	10.70	35.08	200.15	214.62	20.36	303.24	15.01	450.88
Fuel consumption [US gal/h]	0.17	0.56	2.97	3.23	0.64	6.35	0.50	8.51
CO [g/h]	11.71	38.93	207.91	225.47	44.93	443.84	35.26	594.91
NOx [g/h]	2.28	7.57	40.45	43.87	8.74	86.35	6.86	115.75
VOC [g/h]	2.71	9.02	48.18	52.25	10.41	102.86	8.17	137.88

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.239	2.198	2.211	2.712
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	526	526	783	897
d_b, Bicycle Delay [s]	19.02	19.02	12.96	10.64
l_b,int, Bicycle LOS Score for Intersection	1.886	2.602	2.680	2.838
Bicycle LOS	A	B	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.359

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	34	99	38	21	633	53	46	432	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	0	0	156	0	0	9	0	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	0	34	255	38	21	642	53	46	440	27
Peak Hour Factor	0.9500	0.9500	0.9500	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	9	71	11	6	179	15	13	123	8
Total Analysis Volume [veh/h]	0	5	0	38	285	42	23	717	59	51	491	30
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	30	0	11	19	0	11	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		9	9	42	34	34	42	35	35
g / C, Green / Cycle		0.15	0.15	0.69	0.56	0.56	0.69	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate		0.11	0.11	0.03	0.23	0.23	0.07	0.16	0.16
s, saturation flow rate [veh/h]		1666	1617	876	1683	1638	767	1683	1649
c, Capacity [veh/h]		255	248	712	942	917	614	991	971
d1, Uniform Delay [s]		24.18	24.22	3.10	7.59	7.59	3.61	6.01	6.01
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.83	4.10	0.08	1.36	1.40	0.06	0.65	0.67
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.72	0.73	0.03	0.42	0.42	0.08	0.27	0.27
d, Delay for Lane Group [s/veh]		28.02	28.32	3.18	8.95	9.00	3.66	6.66	6.68
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.65	2.62	0.07	2.75	2.69	0.14	1.48	1.46
50th-Percentile Queue Length [ft/ln]		66.13	65.40	1.84	68.79	67.28	3.46	37.02	36.52
95th-Percentile Queue Length [veh/ln]		4.76	4.71	0.13	4.95	4.84	0.25	2.67	2.63
95th-Percentile Queue Length [ft/ln]		119.03	117.72	3.32	123.82	121.11	6.23	66.63	65.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.02	28.17	28.32	3.18	8.97	9.00	3.66	6.67	6.68
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			28.17			8.81			6.40		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	12.09											
Intersection LOS	B											
Intersection V/C	0.359											

Emissions

Vehicle Miles Traveled [mph]		14.89	14.62	3.74	63.94	62.30	7.66	39.43	38.77
Stops [stops/h]		158.71	156.96	4.42	165.10	161.48	8.31	88.84	87.64
Fuel consumption [US gal/h]		2.33	2.30	0.20	4.22	4.12	0.41	2.47	2.43
CO [g/h]		162.77	160.90	13.99	295.31	288.13	28.95	172.66	169.92
NOx [g/h]		31.67	31.30	2.72	57.46	56.06	5.63	33.59	33.06
VOC [g/h]		37.72	37.29	3.24	68.44	66.78	6.71	40.02	39.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.092	2.054	2.497	2.496
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	847	480	480
d_b, Bicycle Delay [s]	30.00	9.98	17.33	17.33
l_b,int, Bicycle LOS Score for Intersection	4.132	2.075	2.433	2.246
Bicycle LOS	D	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.285

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	45	61	37	0	201	16	7	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	98	0	0	0	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	143	61	37	0	201	16	7	53	5
Peak Hour Factor	0.9500	0.9500	0.9500	0.7720	0.7720	0.7720	0.9500	0.7720	0.7720	0.7720	0.7720	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	46	20	12	0	65	5	2	17	1
Total Analysis Volume [veh/h]	0	0	0	185	79	48	0	260	21	9	69	5
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	31	0	0	19	0	0	19	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		8	8	8	33	33	33
g / C, Green / Cycle		0.16	0.16	0.16	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate		0.12	0.05	0.03	0.17	0.01	0.04
s, saturation flow rate [veh/h]		1603	1683	1431	1661	988	1683
c, Capacity [veh/h]		262	275	234	1080	656	1095
d1, Uniform Delay [s]		19.77	18.35	18.10	3.68	5.85	3.19
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.47	0.57	0.43	0.58	0.04	0.11
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.71	0.29	0.21	0.26	0.01	0.06
d, Delay for Lane Group [s/veh]		23.24	18.92	18.53	4.26	5.89	3.30
Lane Group LOS		C	B	B	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.13	0.79	0.47	0.83	0.04	0.17
50th-Percentile Queue Length [ft/ln]		53.26	19.69	11.85	20.87	1.03	4.35
95th-Percentile Queue Length [veh/ln]		3.83	1.42	0.85	1.50	0.07	0.31
95th-Percentile Queue Length [ft/ln]		95.87	35.45	21.32	37.57	1.86	7.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	23.24	18.92	18.53	0.00	4.26	4.26	5.89	3.30	0.00
Movement LOS				C	B	B		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			21.42			4.26			3.60		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	12.16											
Intersection LOS	B											
Intersection V/C	0.285											

Emissions

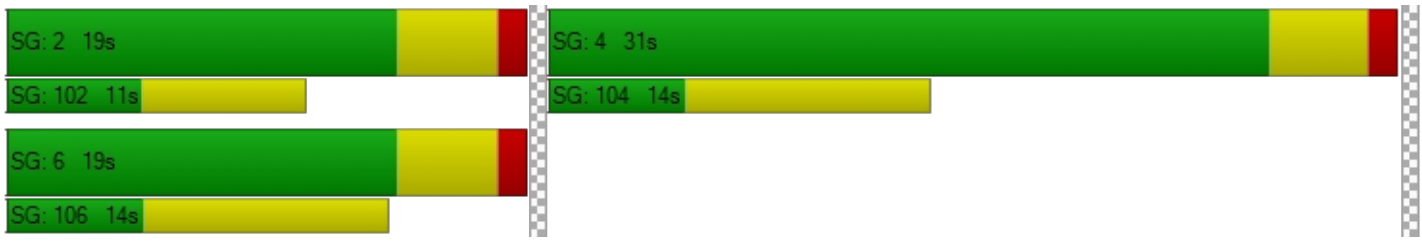
Vehicle Miles Traveled [mph]		13.95	5.96	3.62	46.92	1.32	10.09
Stops [stops/h]		153.39	56.72	34.12	60.11	2.97	12.52
Fuel consumption [US gal/h]		2.09	0.79	0.47	2.51	0.08	0.53
CO [g/h]		146.13	55.19	33.17	175.26	5.69	37.12
NOx [g/h]		28.43	10.74	6.45	34.10	1.11	7.22
VOC [g/h]		33.87	12.79	7.69	40.62	1.32	8.60

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.751	1.995	1.879	2.081
Crosswalk LOS	A	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1056	572	572
d_b, Bicycle Delay [s]	25.00	5.57	12.74	12.74
l_b,int, Bicycle LOS Score for Intersection	4.132	2.031	2.238	1.903
Bicycle LOS	D	B	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.427

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	144	0	68	0	0	7	0	960	81	108	389	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	12	0	0	0	0	45	0	11	34	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	144	0	80	0	0	7	0	1005	81	119	423	0
Peak Hour Factor	0.9580	0.9500	0.9580	0.9500	0.9500	0.9580	0.9500	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	0	21	0	0	2	0	262	21	31	110	0
Total Analysis Volume [veh/h]	150	0	84	0	0	7	0	1049	85	124	442	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13	0	0	0	0	30	0	26	0	11	37	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	9	9	1	46	46	57	57
g / C, Green / Cycle	0.11	0.11	0.01	0.58	0.58	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.08	0.05	0.00	0.30	0.31	0.18	0.24
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1822	689	1870
c, Capacity [veh/h]	190	170	24	1084	1056	523	1331
d1, Uniform Delay [s]	34.84	33.68	38.98	10.13	10.25	5.82	4.35
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.06	2.22	6.65	1.80	1.96	1.07	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.49	0.29	0.52	0.54	0.24	0.33
d, Delay for Lane Group [s/veh]	41.90	35.90	45.64	11.94	12.21	6.88	5.02
Lane Group LOS	D	D	D	B	B	A	A
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.11	1.59	0.18	5.77	5.86	0.62	2.27
50th-Percentile Queue Length [ft/ln]	77.87	39.72	4.49	144.29	146.57	15.51	56.73
95th-Percentile Queue Length [veh/ln]	5.61	2.86	0.32	9.71	9.83	1.12	4.08
95th-Percentile Queue Length [ft/ln]	140.17	71.50	8.07	242.78	245.84	27.91	102.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.90	0.00	35.90	0.00	0.00	45.64	0.00	12.06	12.21	6.88	5.02	5.02
Movement LOS	D		D			D		B	B	A	A	A
d_A, Approach Delay [s/veh]	39.75			45.64			12.07			5.43		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	13.59											
Intersection LOS	B											
Intersection V/C	0.427											

Emissions

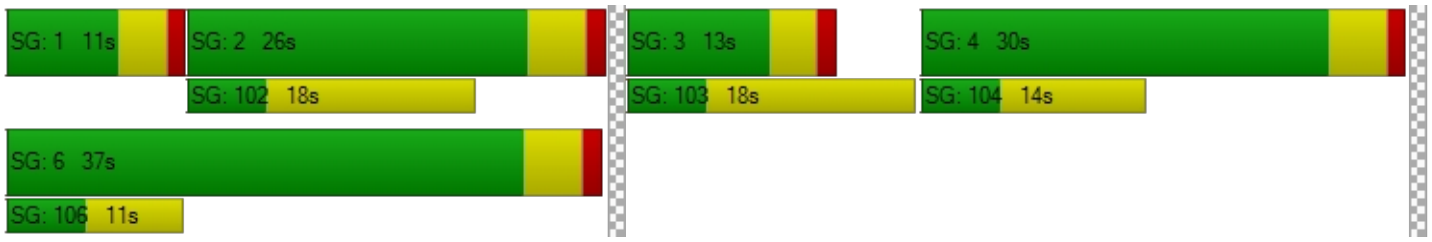
Vehicle Miles Traveled [mph]	11.33	6.35	0.19	85.52	85.52	4.20	14.98
Stops [stops/h]	140.17	71.50	8.07	259.71	263.82	27.91	102.12
Fuel consumption [US gal/h]	2.77	1.39	0.10	6.33	6.39	0.50	1.63
CO [g/h]	193.28	97.39	7.30	442.67	446.43	35.01	114.10
NOx [g/h]	37.61	18.95	1.42	86.13	86.86	6.81	22.20
VOC [g/h]	44.80	22.57	1.69	102.59	103.46	8.11	26.44

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.360	1.713	2.499	2.541
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	225	635	533	808
d_b, Bicycle Delay [s]	31.51	18.63	21.54	14.22
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.710	2.708
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	222	1	2	173	2	3	0	13	3	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	0	0	11	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	234	1	2	184	2	3	0	13	3	0	2
Peak Hour Factor	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	65	0	1	51	1	1	0	4	1	0	1
Total Analysis Volume [veh/h]	3	261	1	2	205	2	3	0	14	3	0	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.65	0.00	0.00	7.77	0.00	0.00	11.30	12.54	8.95	11.62	12.50	9.07
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.13	0.06	0.00	0.08	0.04	0.00	1.55	1.55	1.55	0.58	0.58	0.58
d_A, Approach Delay [s/veh]	0.09			0.07			9.37			10.60		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.51											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	17.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.089

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	189	11	2	184	4	10	2	58	26	6	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	33	12	0	0	11	0	0	0	50	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	201	11	2	195	4	10	2	108	26	6	15
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	54	3	1	52	1	3	1	29	7	2	4
Total Analysis Volume [veh/h]	70	216	12	2	209	4	11	2	116	28	6	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.14	0.09	0.01	0.02
d_M, Delay for Movement [s/veh]	7.74	0.00	0.00	7.69	0.00	0.00	15.33	15.05	10.35	17.72	15.25	10.66
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.12	0.12	0.12	0.00	0.00	0.00	0.62	0.62	0.62	0.42	0.42	0.42
95th-Percentile Queue Length [ft/ln]	3.07	3.07	3.07	0.08	0.08	0.08	15.60	15.60	15.60	10.49	10.49	10.49
d_A, Approach Delay [s/veh]	1.82			0.07			10.85			15.16		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	3.92											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	25.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	183	112	55	276	27	11	355	86	140	355	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	115	18	0	23	27	11	12	177	42	14	106	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	153	201	112	78	303	38	23	532	128	154	461	170
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	53	30	21	80	10	6	140	34	41	122	45
Total Analysis Volume [veh/h]	161	212	118	82	320	40	24	561	135	162	486	179
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	16	0	11	16	0	16	26	0	27	37	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	22	12	12	22	11	11	3	35	35	10	42	42
g / C, Green / Cycle	0.27	0.15	0.15	0.27	0.13	0.13	0.04	0.43	0.43	0.12	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.08	0.07	0.11	0.11	0.01	0.21	0.21	0.10	0.29	0.13
s, saturation flow rate [veh/h]	1203	1683	1431	1184	1683	1619	1603	1683	1572	1603	1683	1431
c, Capacity [veh/h]	358	249	211	334	225	217	61	728	680	200	872	741
d1, Uniform Delay [s]	24.16	33.24	31.66	23.05	33.66	33.70	37.58	16.37	16.39	34.09	13.06	10.61
k, delay calibration	0.42	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.36	8.05	2.30	0.38	6.81	7.45	4.11	2.38	2.57	7.63	2.57	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.85	0.56	0.25	0.81	0.82	0.39	0.49	0.50	0.81	0.56	0.24
d, Delay for Lane Group [s/veh]	27.52	41.29	33.96	23.43	40.47	41.16	41.69	18.75	18.96	41.73	15.62	11.39
Lane Group LOS	C	D	C	C	D	D	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.68	4.39	2.17	1.17	3.73	3.67	0.53	5.02	4.75	3.41	5.95	1.76
50th-Percentile Queue Length [ft/ln]	66.89	109.85	54.25	29.14	93.22	91.65	13.15	125.42	118.63	85.31	148.86	43.89
95th-Percentile Queue Length [veh/ln]	4.82	7.83	3.91	2.10	6.71	6.60	0.95	8.69	8.32	6.14	9.96	3.16
95th-Percentile Queue Length [ft/ln]	120.40	195.80	97.65	52.44	167.80	164.96	23.67	217.25	207.94	153.55	248.90	79.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.52	41.29	33.96	23.43	40.77	41.16	41.69	18.82	18.96	41.73	15.62	11.39
Movement LOS	C	D	C	C	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	35.01			37.59			19.61			19.82		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	25.93											
Intersection LOS	C											
Intersection V/C	0.510											

Emissions

Vehicle Miles Traveled [mph]	13.09	17.23	9.59	6.42	14.29	13.90	3.59	53.73	50.41	8.00	23.99	8.84
Stops [stops/h]	120.40	197.74	97.65	52.44	167.80	164.96	23.67	225.75	213.54	153.55	267.94	79.00
Fuel consumption [US gal/h]	2.31	3.93	1.92	1.03	3.31	3.26	0.46	4.65	4.39	2.55	4.01	1.22
CO [g/h]	161.20	274.37	133.89	72.01	231.32	227.68	31.87	325.20	306.56	178.46	280.52	84.93
NOx [g/h]	31.36	53.38	26.05	14.01	45.01	44.30	6.20	63.27	59.64	34.72	54.58	16.52
VOC [g/h]	37.36	63.59	31.03	16.69	53.61	52.77	7.39	75.37	71.05	41.36	65.01	19.68

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.548	2.370	2.449	2.625
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	273	273	535	808
d_b, Bicycle Delay [s]	29.84	29.84	21.46	14.22
l_b,int, Bicycle LOS Score for Intersection	2.584	2.139	2.368	3.139
Bicycle LOS	B	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	31.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.681

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	247	374	102	370	40	8	675	93	202	420	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	41	46	37	0	0	9	0	37	8	131
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	250	415	148	407	40	8	684	93	239	428	206
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	66	110	39	108	11	2	182	25	64	114	55
Total Analysis Volume [veh/h]	28	266	441	157	433	43	9	728	99	254	455	219
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21	33	0	11	23	0	11	29	0	12	30	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	39	28	28	39	31	31	1	25	25	8	31	31
g / C, Green / Cycle	0.45	0.33	0.33	0.45	0.37	0.37	0.02	0.29	0.29	0.09	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.31	0.18	0.14	0.14	0.01	0.23	0.07	0.08	0.21	0.21
s, saturation flow rate [veh/h]	937	3204	1431	882	1683	1630	1603	3204	1431	3113	1683	1500
c, Capacity [veh/h]	454	1044	466	482	615	596	26	933	416	293	621	554
d1, Uniform Delay [s]	13.47	21.07	27.93	14.27	19.98	19.99	41.36	27.64	22.95	37.98	21.47	21.47
k, delay calibration	0.11	0.11	0.38	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	0.13	25.13	0.39	0.41	0.42	7.64	6.44	1.34	7.67	3.83	4.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.25	0.95	0.33	0.39	0.39	0.34	0.78	0.24	0.87	0.57	0.57
d, Delay for Lane Group [s/veh]	13.53	21.20	53.07	14.66	20.38	20.41	49.00	34.08	24.29	45.65	25.30	25.76
Lane Group LOS	B	C	D	B	C	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.29	1.88	11.42	1.76	3.41	3.32	0.24	7.47	1.65	2.90	6.19	5.59
50th-Percentile Queue Length [ft/ln]	7.15	46.91	285.49	43.90	85.25	83.01	6.04	186.65	41.32	72.56	154.75	139.77
95th-Percentile Queue Length [veh/ln]	0.51	3.38	16.96	3.16	6.14	5.98	0.43	11.95	2.98	5.22	10.27	9.47
95th-Percentile Queue Length [ft/ln]	12.87	84.44	424.04	79.02	153.45	149.42	10.87	298.68	74.38	130.60	256.76	236.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.53	21.20	53.07	14.66	20.40	20.41	49.00	34.08	24.29	45.65	25.40	25.76
Movement LOS	B	C	D	B	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	40.03			18.98			33.08			31.02		
Approach LOS	D			B			C			C		
d_I, Intersection Delay [s/veh]	31.25											
Intersection LOS	C											
Intersection V/C	0.681											

Emissions

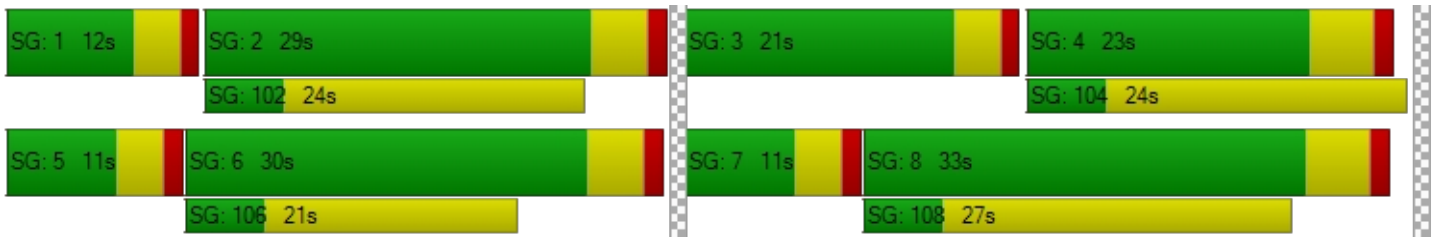
Vehicle Miles Traveled [mph]	2.17	20.64	34.21	12.76	19.62	19.08	1.35	109.27	14.86	18.34	25.72	22.94
Stops [stops/h]	12.12	158.94	483.65	74.38	144.42	140.63	10.23	632.41	70.00	245.84	262.17	236.78
Fuel consumption [US gal/h]	0.25	3.13	9.70	1.51	2.84	2.76	0.19	12.39	1.43	4.13	4.00	3.61
CO [g/h]	17.54	218.75	678.26	105.85	198.17	192.90	13.26	865.94	99.69	288.47	279.35	251.99
NOx [g/h]	3.41	42.56	131.97	20.59	38.56	37.53	2.58	168.48	19.40	56.13	54.35	49.03
VOC [g/h]	4.07	50.70	157.19	24.53	45.93	44.71	3.07	200.69	23.10	66.86	64.74	58.40

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.740	2.555	2.652	2.932
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	656	421	574	598
d_b, Bicycle Delay [s]	19.18	26.48	21.60	20.90
l_b,int, Bicycle LOS Score for Intersection	2.380	2.296	2.464	2.540
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	25.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	385	54	496	314	23	76	217	58	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	3	0	105	4	0	0	91	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	388	54	601	318	23	76	308	65	0	0	0
Peak Hour Factor	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	121	17	187	99	7	24	96	20	0	0	0
Total Analysis Volume [veh/h]	36	483	67	748	396	29	95	383	81	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	20	17	0	27	24	0	0	26	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	4	19	19	19	35	35	18	18	18	
g / C, Green / Cycle	0.05	0.27	0.27	0.28	0.50	0.50	0.26	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.24	0.13	0.13	0.06	0.23	0.06	
s, saturation flow rate [veh/h]	1603	1683	1612	3113	1683	1643	1603	1683	1431	
c, Capacity [veh/h]	83	456	437	857	832	813	411	432	367	
d1, Uniform Delay [s]	32.20	22.31	22.34	24.19	10.25	10.25	20.57	25.05	20.51	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.18	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.55	6.06	6.42	2.96	0.75	0.77	0.28	10.06	0.30	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.43	0.61	0.62	0.87	0.26	0.26	0.23	0.89	0.22	
d, Delay for Lane Group [s/veh]	35.74	28.38	28.77	27.15	11.00	11.02	20.85	35.10	20.81	
Lane Group LOS	D	C	C	C	B	B	C	D	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.65	4.48	4.37	5.76	1.83	1.79	1.20	6.94	1.02	
50th-Percentile Queue Length [ft/ln]	16.17	112.09	109.20	143.95	45.63	44.70	30.03	173.61	25.61	
95th-Percentile Queue Length [veh/ln]	1.16	7.96	7.80	9.69	3.29	3.22	2.16	11.27	1.84	
95th-Percentile Queue Length [ft/ln]	29.10	198.91	194.89	242.33	82.14	80.46	54.05	281.65	46.09	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.74	28.54	28.77	27.15	11.01	11.02	20.85	35.10	20.81	0.00	0.00	0.00
Movement LOS	D	C	C	C	B	B	C	D	C			
d_A, Approach Delay [s/veh]	29.01			21.30			30.61			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	25.50											
Intersection LOS	C											
Intersection V/C	0.635											

Emissions

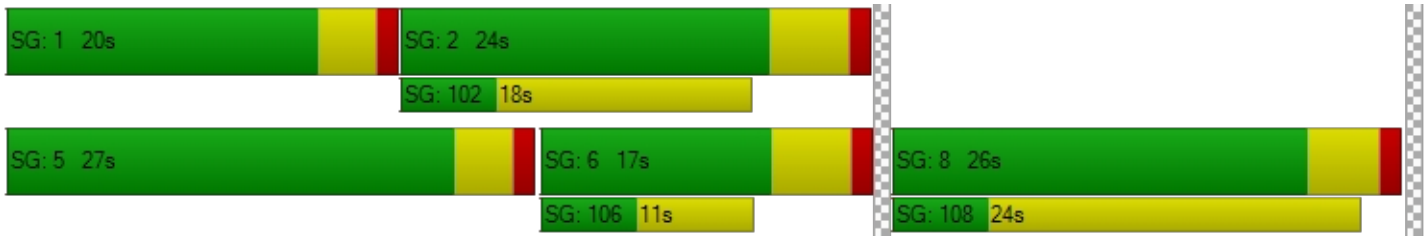
Vehicle Miles Traveled [mph]	1.43	11.10	10.71	54.93	15.78	15.42	13.90	56.03	11.85	
Stops [stops/h]	33.26	230.59	224.64	592.24	93.87	91.96	61.77	357.13	52.68	
Fuel consumption [US gal/h]	0.57	3.77	3.68	10.68	1.79	1.75	1.32	7.02	1.12	
CO [g/h]	39.59	263.82	257.12	746.58	125.04	122.37	92.02	490.39	78.42	
NOx [g/h]	7.70	51.33	50.03	145.26	24.33	23.81	17.90	95.41	15.26	
VOC [g/h]	9.18	61.14	59.59	173.03	28.98	28.36	21.33	113.65	18.17	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.531	2.774	2.272	2.288
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	340	540	609	0
d_b, Bicycle Delay [s]	24.11	18.65	16.94	35.00
l_b,int, Bicycle LOS Score for Intersection	2.257	2.742	2.696	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.452

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	155	446	0	522	205	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	78	0	200	57	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	524	0	722	262	0
Peak Hour Factor	0.9570	0.9570	0.9500	0.9570	0.9570	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	137	0	189	68	0
Total Analysis Volume [veh/h]	194	548	0	754	274	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	26	0	0	24	24	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	50	50	50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	14	14	28	28
g / C, Green / Cycle	0.27	0.27	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.12	0.22	0.24	0.09
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	444	701	1760	1760
d1, Uniform Delay [s]	14.88	16.69	6.64	5.55
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	1.95	0.76	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.78	0.43	0.16
d, Delay for Lane Group [s/veh]	15.56	18.64	7.41	5.74
Lane Group LOS	B	B	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.62	2.62	1.84	0.55
50th-Percentile Queue Length [ft/ln]	40.51	65.61	45.95	13.69
95th-Percentile Queue Length [veh/ln]	2.92	4.72	3.31	0.99
95th-Percentile Queue Length [ft/ln]	72.91	118.09	82.70	24.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.56	18.64	0.00	7.41	5.74	0.00
Movement LOS	B	B		A	A	
d_A, Approach Delay [s/veh]	17.83		7.41		5.74	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	11.52					
Intersection LOS	B					
Intersection V/C	0.452					

Emissions

Vehicle Miles Traveled [mph]	16.26	45.94	37.22	13.15
Stops [stops/h]	116.66	377.90	264.66	78.88
Fuel consumption [US gal/h]	2.11	6.67	4.13	1.30
CO [g/h]	147.59	466.38	288.78	90.68
NOx [g/h]	28.72	90.74	56.19	17.64
VOC [g/h]	34.21	108.09	66.93	21.02

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.313	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	880	772	772
d_b, Bicycle Delay [s]	7.84	9.42	9.42
l_b,int, Bicycle LOS Score for Intersection	1.774	2.396	2.000
Bicycle LOS	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	43.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.790

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	87	291	45	0	0	0	359	317	0	0	118	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	42	0	0	0	141	90	0	5	57	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	319	87	0	0	0	500	407	0	5	175	171
Peak Hour Factor	0.8650	0.8650	0.8650	0.9500	0.9500	0.9500	0.8650	0.8650	0.9500	0.9500	0.8650	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	92	25	0	0	0	145	118	0	1	51	49
Total Analysis Volume [veh/h]	101	369	101	0	0	0	578	471	0	5	202	198
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	31	0	0	0	0	35	54	0	0	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	85	85		85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	26	26		31	49	14	14
g / C, Green / Cycle	0.30	0.30		0.36	0.58	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.29		0.36	0.15	0.12	0.14
s, saturation flow rate [veh/h]	1603	1621		1603	3204	1683	1433
c, Capacity [veh/h]	488	494		585	1859	283	241
d1, Uniform Delay [s]	21.93	28.93		26.83	8.79	33.37	34.17
k, delay calibration	0.11	0.38		0.44	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	25.26		32.45	0.33	13.84	26.93
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.95		0.99	0.25	0.71	0.83
d, Delay for Lane Group [s/veh]	22.14	54.19		59.28	9.12	47.21	61.11
Lane Group LOS	C	D		E	A	D	E
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.46	12.27		16.22	2.03	4.89	5.70
50th-Percentile Queue Length [ft/ln]	36.56	306.82		405.56	50.66	122.29	142.45
95th-Percentile Queue Length [veh/ln]	2.63	18.02		22.83	3.65	8.52	9.61
95th-Percentile Queue Length [ft/ln]	65.81	450.45		570.69	91.18	212.97	240.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.14	54.19	54.19	0.00	0.00	0.00	59.28	9.12	0.00	0.00	47.35	61.11
Movement LOS	C	D	D				E	A			D	E
d_A, Approach Delay [s/veh]	48.52			0.00			36.76			54.16		
Approach LOS	D			A			D			D		
d_I, Intersection Delay [s/veh]	43.53											
Intersection LOS	D											
Intersection V/C	0.790											

Emissions

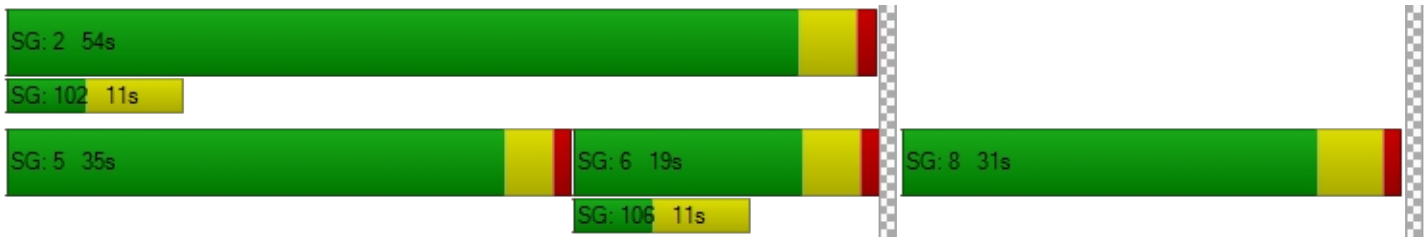
Vehicle Miles Traveled [mph]	8.80	40.95		27.73	22.60	7.32	7.32
Stops [stops/h]	61.94	519.78		687.06	171.64	207.17	241.32
Fuel consumption [US gal/h]	1.26	10.65		11.91	2.75	3.37	4.12
CO [g/h]	87.81	744.60		832.50	192.41	235.38	288.09
NOx [g/h]	17.08	144.87		161.97	37.44	45.80	56.05
VOC [g/h]	20.35	172.57		192.94	44.59	54.55	66.77

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.038	2.272	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	609	0	1160	336
d_b, Bicycle Delay [s]	20.55	42.50	7.50	29.40
l_b,int, Bicycle LOS Score for Intersection	2.716	4.132	2.639	2.104
Bicycle LOS	B	D	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	264	113	379	0	0	0	230	814	0	0	489	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	96	31	31	0	0	5	12	85	0	0	75	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	360	144	410	0	0	5	242	899	0	0	564	133
Peak Hour Factor	0.9290	0.9290	0.9290	0.9500	0.9500	0.9500	0.9290	0.9290	0.9500	0.9500	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	39	110	0	0	1	65	242	0	0	152	36
Total Analysis Volume [veh/h]	388	155	441	0	0	5	260	968	0	0	607	143
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	17	30	0	0	13	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	25	25	25		7	25	13	13
g / C, Green / Cycle	0.42	0.42	0.42		0.12	0.42	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.15	0.15	0.28		0.08	0.27	0.17	0.09
s, saturation flow rate [veh/h]	1781	1831	1589		3459	3560	3560	1589
c, Capacity [veh/h]	753	774	672		410	1479	790	352
d1, Uniform Delay [s]	11.79	11.73	13.83		25.20	14.08	21.90	19.97
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.34	1.25	4.95		1.62	0.50	1.61	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.35	0.66		0.63	0.65	0.77	0.41
d, Delay for Lane Group [s/veh]	13.13	12.98	18.78		26.82	14.58	23.52	20.72
Lane Group LOS	B	B	B		C	B	C	C
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.36	2.34	4.89		1.79	4.81	3.78	1.62
50th-Percentile Queue Length [ft/ln]	59.09	58.55	122.33		44.67	120.36	94.45	40.50
95th-Percentile Queue Length [veh/ln]	4.25	4.22	8.52		3.22	8.41	6.80	2.92
95th-Percentile Queue Length [ft/ln]	106.36	105.38	213.02		80.40	210.32	170.01	72.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.08	12.98	18.78	0.00	0.00	0.00	26.82	14.58	0.00	0.00	23.52	20.72
Movement LOS	B	B	B				C	B			C	C
d_A, Approach Delay [s/veh]	15.62			0.00			17.17			22.98		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	18.13											
Intersection LOS	B											
Intersection V/C	0.549											

Emissions

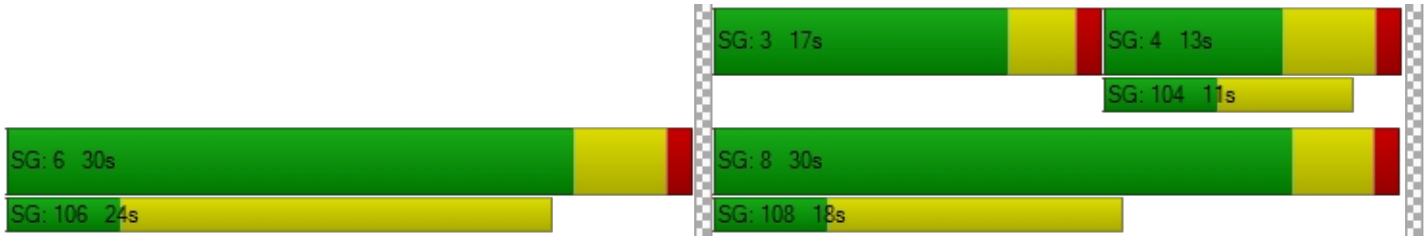
Vehicle Miles Traveled [mph]	10.63	10.63	17.26		18.77	69.88	30.70	7.23
Stops [stops/h]	141.82	140.51	293.59		214.40	577.72	453.36	97.21
Fuel consumption [US gal/h]	2.20	2.18	4.55		3.09	8.23	7.48	1.61
CO [g/h]	153.58	152.32	318.12		215.67	575.30	523.20	112.52
NOx [g/h]	29.88	29.64	61.90		41.96	111.93	101.79	21.89
VOC [g/h]	35.59	35.30	73.73		49.98	133.33	121.26	26.08

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.392	1.968	2.735	0.000
Crosswalk LOS	B	A	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	263
d_b, Bicycle Delay [s]	10.27	30.00	9.98	22.62
l_b,int, Bicycle LOS Score for Intersection	3.398	4.132	2.787	2.393
Bicycle LOS	C	D	C	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix I-4
Background Conditions + Project with Improvements

Option 1: RT Restriction on 11th St

Number	17											
Intersection	Market St @ 11th St											
Control Type	Two-way stop											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	20	444	38	35	642	20	4	6	12	8	3	18
Total Analysis Volume [veh/h]	24	794	46	42	1174	24	5	7	14	10	4	22

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane												
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No			No		
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	2	1	1	2	1	1	0	0	2	0	0	2
v_c, Conflicting Flow Rate	1198	0	0	840	0	0	0	0	599	0	0	420
v_c, Stage 1	1198	0	0	840	0	0	0	0	599	0	0	420
v_c, Stage 2	0	0	0	0	0	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	578	0	0	791	0	0	0	0	445	0	0	582
c_p,x, Stage 1 [veh/h]	2263	0	0	2058	0	0	0	0	1402	0	0	1302
c_p,x, Stage 2 [veh/h]	1622	0	0	1622	0	0	0	0	1084	0	0	1084
c_m,x, Movement Capacity [veh/h]	578	100000	100000	791	100000	100000	0	0	445	0	0	582
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	578	100000	100000	791	100000	100000	0	0	445	0	0	582

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	11.49	0.00	0.00	9.81	0.00	0.00	0.00	0.00	13.36	0.00	0.00	11.43
Movement LOS	B	A	A	A	A	A			B			B
Critical Movement	No	No	No	No	No	No			Yes			No
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.12
95th-Percentile Queue Length [ft/ln]	3.24	0.00	0.00	4.20	0.00	0.00	0.00	0.00	2.43	0.00	0.00	2.94
d_A, Approach Delay [s/veh]	0.32			0.33			13.36			11.43		
Approach LOS	A			A			B			B		
V/C_I, Worst Movement V/C Ratio	0.03											
d_I, Worst Movement Control Delay [s/veh]	13.36											
d_I, Intersection Delay [s/veh]	0.53											
Intersection LOS	B											

Option 1: RT Restriction on 11th St

Number	17											
Intersection	Market St @ 11th St											
Control Type	Two-way stop											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	11	733	4	3	699	7	7	0	40	4	0	20
Total Analysis Volume [veh/h]	12	1170	4	3	1042	8	8	0	44	4	0	22

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane												
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No			No		
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	2	1	1	2	1	1	0	0	2	0	0	2
v_c, Conflicting Flow Rate	1050	0	0	1174	0	0	0	0	525	0	0	587
v_c, Stage 1	1050	0	0	1174	0	0	0	0	525	0	0	587
v_c, Stage 2	0	0	0	0	0	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	659	0	0	591	0	0	0	0	497	0	0	453
c_p,x, Stage 1 [veh/h]	2177	0	0	2249	0	0	0	0	1360	0	0	1395
c_p,x, Stage 2 [veh/h]	1622	0	0	1622	0	0	0	0	1084	0	0	1084
c_m,x, Movement Capacity [veh/h]	659	100000	100000	591	100000	100000	0	0	497	0	0	453
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	659	100000	100000	591	100000	100000	0	0	497	0	0	453

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.09	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	10.57	0.00	0.00	11.13	0.00	0.00	0.00	0.00	12.94	0.00	0.00	13.35
Movement LOS	B	A	A	B	A	A			B			B
Critical Movement	No	No	No	No	No	No			No			Yes
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.15
95th-Percentile Queue Length [ft/ln]	1.39	0.00	0.00	0.38	0.00	0.00	0.00	0.00	7.24	0.00	0.00	3.82
d_A, Approach Delay [s/veh]	0.11			0.03			12.94			13.35		
Approach LOS	A			A			B			B		
V/C_I, Worst Movement V/C Ratio	0.05											
d_I, Worst Movement Control Delay [s/veh]	13.35											
d_I, Intersection Delay [s/veh]	0.44											
Intersection LOS	B											

Option 1: RT Restriction on 13th St

Number	19											
Intersection	Market St @ 13th St											
Control Type	Two-way stop											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	25	544	26	30	474	18	0	3	8	4	4	24
Total Analysis Volume [veh/h]	30	885	31	36	942	21	0	4	9	5	5	28

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane												
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No			No		
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	2	1	1	2	1	1	0	0	2	0	0	2
v_c, Conflicting Flow Rate	963	0	0	916	0	0	0	0	482	0	0	458
v_c, Stage 1	963	0	0	916	0	0	0	0	482	0	0	458
v_c, Stage 2	0	0	0	0	0	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	711	0	0	740	0	0	0	0	531	0	0	550
c_p,x, Stage 1 [veh/h]	2128	0	0	2101	0	0	0	0	1336	0	0	1323
c_p,x, Stage 2 [veh/h]	1622	0	0	1622	0	0	0	0	1084	0	0	1084
c_m,x, Movement Capacity [veh/h]	711	100000	100000	740	100000	100000	0	0	531	0	0	550
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	711	100000	100000	740	100000	100000	0	0	531	0	0	550

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	10.29	0.00	0.00	10.11	0.00	0.00	0.00	0.00	11.90	0.00	0.00	11.90
Movement LOS	B	A	A	B	A	A			B			B
Critical Movement	No	No	No	No	No	No			Yes			No
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.16
95th-Percentile Queue Length [ft/ln]	3.30	0.00	0.00	3.83	0.00	0.00	0.00	0.00	1.29	0.00	0.00	4.01
d_A, Approach Delay [s/veh]	0.33			0.36			11.90			11.90		
Approach LOS	A			A			B			B		
V/C_I, Worst Movement V/C Ratio	0.02											
d_I, Worst Movement Control Delay [s/veh]	11.90											
d_I, Intersection Delay [s/veh]	0.56											
Intersection LOS	B											

Option 1: RT Restriction on 13th St

Number	19											
Intersection	Market St @ 13th St											
Control Type	Two-way stop											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	6	603	15	28	742	8	4	9	53	2	4	51
Total Analysis Volume [veh/h]	7	1025	17	31	1081	9	4	10	58	2	4	56

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane												
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No			No		
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	2	1	1	2	1	1	0	0	2	0	0	2
v_c, Conflicting Flow Rate	1090	0	0	1042	0	0	0	0	545	0	0	521
v_c, Stage 1	1090	0	0	1042	0	0	0	0	545	0	0	521
v_c, Stage 2	0	0	0	0	0	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	636	0	0	663	0	0	0	0	482	0	0	500
c_p,x, Stage 1 [veh/h]	2200	0	0	2173	0	0	0	0	1371	0	0	1358
c_p,x, Stage 2 [veh/h]	1622	0	0	1622	0	0	0	0	1084	0	0	1084
c_m,x, Movement Capacity [veh/h]	636	100000	100000	663	100000	100000	0	0	482	0	0	500
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	636	100000	100000	663	100000	100000	0	0	482	0	0	500

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.05	0.01	0.00	0.00	0.00	0.12	0.00	0.00	0.11
d_M, Delay for Movement [s/veh]	10.72	0.00	0.00	10.69	0.00	0.00	0.00	0.00	13.48	0.00	0.00	13.10
Movement LOS	B	A	A	B	A	A			B			B
Critical Movement	No	No	No	No	No	No			Yes			No
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.38
95th-Percentile Queue Length [ft/ln]	0.83	0.00	0.00	3.67	0.00	0.00	0.00	0.00	10.17	0.00	0.00	9.39
d_A, Approach Delay [s/veh]	0.07			0.30			13.48			13.10		
Approach LOS	A			A			B			B		
V/C_I, Worst Movement V/C Ratio	0.12											
d_I, Worst Movement Control Delay [s/veh]	13.48											
d_I, Intersection Delay [s/veh]	0.84											
Intersection LOS	B											

Appendix I-5

Cumulative Conditions

Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\4 Cumulative AM.pdf
Scenario 7 Cumulative AM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	NB Left	0.694	27.9	C
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	EB Right	0.687	27.0	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	EB Left	0.389	10.0	A
4	Main St @ First St	Signalized	HCM 7th Edition	EB Left	0.276	10.3	B
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.013	11.1	B
6	Main St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.381	23.2	C
7	Market St @ First St	Signalized	HCM 7th Edition	WB Left	0.301	9.0	A
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.007	17.4	C
9	Market St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.454	17.7	B
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	EB Left	0.093	25.4	D
11	Market St @ Fifth St	Signalized	HCM 7th Edition	WB Right	0.345	10.2	B
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	EB Right	0.031	12.2	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.555	24.6	C
14	Market St @ University Ave	Signalized	HCM 7th Edition	SB Left	0.548	25.1	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Right	0.339	3.3	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	WB Left	0.304	7.8	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	EB Thru	0.107	59.4	F
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Thru	0.254	6.5	A

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	WB Thru	0.064	46.2	E
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	EB Left	0.495	32.1	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.318	13.3	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.395	22.7	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.275	8.2	A
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.001	9.4	A
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	NB Left	0.154	8.1	A
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	NB Left	0.068	7.8	A
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.327	8.4	A
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.285	10.7	B
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Right	0.181	10.5	B
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.234	11.3	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Thru	0.002	11.3	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.055	15.6	C
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	WB Left	0.548	27.3	C
34	Lime St @ University Ave	Signalized	HCM 7th Edition	EB Left	0.473	31.1	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Left	0.307	17.3	B
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	SB Right	0.564	14.8	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.424	19.1	B
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.404	16.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	135	326	0	0	733	143	0	0	0	46	78	322
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	159	384	0	0	864	169	0	0	0	54	92	380
Peak Hour Factor	0.8950	0.8950	0.9500	0.9500	0.8950	0.8950	0.9500	0.9500	0.9500	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	107	0	0	241	47	0	0	0	15	26	106
Total Analysis Volume [veh/h]	178	429	0	0	965	189	0	0	0	60	103	425
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	28	42	0	0	14	0	0	0	0	0	33	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	75	75	75	75		75	75
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	9	43	29	29		22	22
g / C, Green / Cycle	0.13	0.57	0.39	0.39		0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.10	0.12	0.31	0.33		0.09	0.27
s, saturation flow rate [veh/h]	1781	3560	1870	1768		1836	1589
c, Capacity [veh/h]	225	2018	724	684		546	472
d1, Uniform Delay [s]	31.79	8.00	20.37	20.91		20.33	25.29
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	6.12	0.24	8.90	12.07		0.30	12.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.21	0.80	0.84		0.30	0.90
d, Delay for Lane Group [s/veh]	37.91	8.24	29.27	32.98		20.64	37.37
Lane Group LOS	D	A	C	C		C	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	3.37	1.51	9.83	10.55		2.11	8.28
50th-Percentile Queue Length [ft/ln]	84.26	37.72	245.79	263.75		52.73	206.89
95th-Percentile Queue Length [veh/ln]	6.07	2.72	14.97	15.88		3.80	12.99
95th-Percentile Queue Length [ft/ln]	151.66	67.90	374.35	396.92		94.92	324.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.91	8.24	0.00	0.00	30.76	32.98	0.00	0.00	0.00	20.64	20.64	37.37
Movement LOS	D	A			C	C				C	C	D
d_A, Approach Delay [s/veh]	16.94			31.12			0.00			32.73		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	27.86											
Intersection LOS	C											
Intersection V/C	0.694											

Emissions

Vehicle Miles Traveled [mph]	10.59	25.52	21.36	21.36		5.98	15.59
Stops [stops/h]	161.77	144.86	471.93	506.40		101.25	397.22
Fuel consumption [US gal/h]	2.99	2.78	7.80	8.49		1.67	6.81
CO [g/h]	209.25	194.42	545.21	593.80		117.01	476.25
NOx [g/h]	40.71	37.83	106.08	115.53		22.77	92.66
VOC [g/h]	48.50	45.06	126.36	137.62		27.12	110.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.874	2.156
Crosswalk LOS	F	F	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	984	237	0	744
d_b, Bicycle Delay [s]	9.68	29.13	37.50	14.79
l_b,int, Bicycle LOS Score for Intersection	2.060	2.512	4.132	2.530
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.687

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	328	219	455	319	0	133	3	198	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	387	258	536	376	0	157	4	233	0	0	0
Peak Hour Factor	0.9500	0.8880	0.8880	0.8880	0.8880	0.9500	0.8880	0.8880	0.8880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	109	73	151	106	0	44	1	66	0	0	0
Total Analysis Volume [veh/h]	0	436	291	604	423	0	177	5	262	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	34	52	0	0	18	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	17	17	26	47	13	13	
g / C, Green / Cycle	0.25	0.25	0.37	0.67	0.18	0.18	
(v / s)_i Volume / Saturation Flow Rate	0.12	0.18	0.34	0.12	0.10	0.16	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1783	1589	
c, Capacity [veh/h]	873	390	655	2385	329	293	
d1, Uniform Delay [s]	22.73	24.41	21.17	4.33	25.94	27.89	
k, delay calibration	0.50	0.50	0.30	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.04	12.31	13.89	0.16	1.46	9.39	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.50	0.75	0.92	0.18	0.55	0.89	
d, Delay for Lane Group [s/veh]	24.77	36.72	35.06	4.49	27.39	37.28	
Lane Group LOS	C	D	D	A	C	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.12	5.45	10.94	0.85	2.72	4.76	
50th-Percentile Queue Length [ft/ln]	77.92	136.16	273.39	21.18	67.94	119.11	
95th-Percentile Queue Length [veh/ln]	5.61	9.27	16.36	1.53	4.89	8.34	
95th-Percentile Queue Length [ft/ln]	140.25	231.84	408.98	38.13	122.29	208.60	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.77	36.72	35.06	4.49	0.00	27.39	27.39	37.28	0.00	0.00	0.00
Movement LOS		C	D	D	A		C	C	D			
d_A, Approach Delay [s/veh]	29.55			22.47			33.23			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	26.98											
Intersection LOS	C											
Intersection V/C	0.687											

Emissions

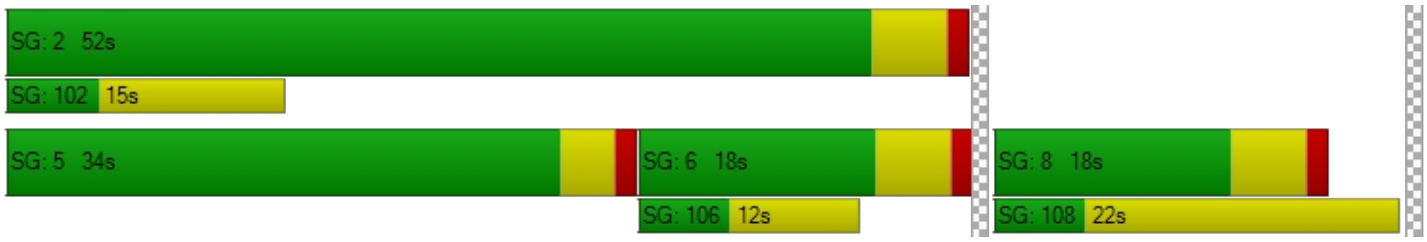
Vehicle Miles Traveled [mph]	59.45	39.68	35.93	25.16	5.55	7.99	
Stops [stops/h]	320.58	280.09	562.41	87.15	139.75	245.02	
Fuel consumption [US gal/h]	6.87	5.79	9.91	2.00	2.28	4.13	
CO [g/h]	480.55	404.97	692.62	139.87	159.18	289.02	
NOx [g/h]	93.50	78.79	134.76	27.21	30.97	56.23	
VOC [g/h]	111.37	93.86	160.52	32.42	36.89	66.98	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.610	0.000	2.097	2.142
Crosswalk LOS	B	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	369	1340	369	0
d_b, Bicycle Delay [s]	23.29	3.81	23.29	35.00
l_b,int, Bicycle LOS Score for Intersection	2.159	2.407	1.926	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.389

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	311	23	97	289	8	21	53	12	56	31	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	367	27	114	341	9	25	62	14	66	37	113
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	101	7	31	94	2	7	17	4	18	10	31
Total Analysis Volume [veh/h]	8	404	30	125	375	10	28	68	15	73	41	124
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	11	21	0	0	23	0	0	23	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	37	37	8	8	8	8
g / C, Green / Cycle	0.68	0.68	0.14	0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.24	0.32	0.02	0.05	0.06	0.10
s, saturation flow rate [veh/h]	1846	1585	1220	1812	1315	1651
c, Capacity [veh/h]	1410	1237	188	264	258	241
d1, Uniform Delay [s]	3.75	3.94	25.59	21.02	23.77	22.29
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.58	1.02	0.36	0.67	0.59	3.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.41	0.15	0.31	0.28	0.68
d, Delay for Lane Group [s/veh]	4.34	4.96	25.95	21.69	24.36	25.71
Lane Group LOS	A	A	C	C	C	C
Critical Lane Group	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.27	1.61	0.36	0.96	0.91	2.14
50th-Percentile Queue Length [ft/ln]	31.70	40.24	9.02	23.88	22.64	53.46
95th-Percentile Queue Length [veh/ln]	2.28	2.90	0.65	1.72	1.63	3.85
95th-Percentile Queue Length [ft/ln]	57.05	72.43	16.24	42.98	40.76	96.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.34	4.34	4.34	4.96	4.96	4.96	25.95	21.69	21.69	24.36	25.71	25.71
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	4.34			4.96			22.77			25.30		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.99											
Intersection LOS	A											
Intersection V/C	0.389											

Emissions

Vehicle Miles Traveled [mph]	196.28	69.54	0.79	2.35	2.05	4.63
Stops [stops/h]	82.99	105.35	23.62	62.52	59.29	139.96
Fuel consumption [US gal/h]	8.50	3.96	0.27	0.71	0.68	1.61
CO [g/h]	593.85	276.66	19.16	49.77	47.63	112.43
NOx [g/h]	115.54	53.83	3.73	9.68	9.27	21.88
VOC [g/h]	137.63	64.12	4.44	11.53	11.04	26.06

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	2.309	2.360	2.591	2.766
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	978	978	669	669
d_b, Bicycle Delay [s]	7.18	7.18	12.18	12.18
l_b,int, Bicycle LOS Score for Intersection	2.289	2.401	1.743	1.952
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.276

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	225	9	3	235	45	79	40	30	25	26	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	265	11	4	277	53	93	47	35	29	31	14
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	71	3	1	74	14	25	13	9	8	8	4
Total Analysis Volume [veh/h]	6	283	12	4	296	57	99	50	37	31	33	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	0.00	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	32	43	32	7	7	7
g / C, Green / Cycle	0.72	0.54	0.72	0.54	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.17	0.01	0.17	0.04	0.07	0.05	0.07
s, saturation flow rate [veh/h]	1709	1589	1726	1589	1357	1739	1179
c, Capacity [veh/h]	1307	857	1324	857	180	201	220
d1, Uniform Delay [s]	2.84	6.42	2.84	6.61	25.59	24.69	24.94
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	0.03	0.40	0.15	2.62	1.46	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.01	0.23	0.07	0.55	0.43	0.36
d, Delay for Lane Group [s/veh]	3.23	6.45	3.24	6.76	28.22	26.15	25.93
Lane Group LOS	A	A	A	A	C	C	C
Critical Lane Group	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.65	0.06	0.68	0.30	1.44	1.19	1.11
50th-Percentile Queue Length [ft/ln]	16.31	1.55	17.00	7.61	35.95	29.74	27.65
95th-Percentile Queue Length [veh/ln]	1.17	0.11	1.22	0.55	2.59	2.14	1.99
95th-Percentile Queue Length [ft/ln]	29.36	2.79	30.60	13.71	64.71	53.54	49.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.23	3.23	6.45	3.24	3.24	6.76	28.22	26.15	26.15	25.93	25.93	25.93
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	3.36			3.80			27.25			25.93		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.28											
Intersection LOS	B											
Intersection V/C	0.276											

Emissions

Vehicle Miles Traveled [mph]	21.81	0.91	133.22	25.31	8.19	7.20	2.23
Stops [stops/h]	39.14	3.73	40.80	18.27	86.27	71.38	66.36
Fuel consumption [US gal/h]	1.32	0.08	5.58	1.18	1.27	1.06	0.77
CO [g/h]	91.97	5.47	390.22	82.52	88.62	74.13	53.95
NOx [g/h]	17.89	1.06	75.92	16.06	17.24	14.42	10.50
VOC [g/h]	21.32	1.27	90.44	19.13	20.54	17.18	12.50

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.217	2.467	2.408	2.181
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	897	897	780	780
d_b, Bicycle Delay [s]	9.13	9.13	11.16	11.16
l_b,int, Bicycle LOS Score for Intersection	2.271	2.363	2.081	1.904
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	28	1	3	287	6	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	1	4	338	7	9
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	1	91	2	2
Total Analysis Volume [veh/h]	35	1	4	363	8	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.29	0.00	11.12	8.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.17	0.17	1.76	1.76
d_A, Approach Delay [s/veh]	0.00		0.08		9.71	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.48					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	2	1	4	169	10	118	141	247	51	83	160	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	5	199	12	139	166	291	60	98	189	94
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	53	3	37	44	77	16	26	50	25
Total Analysis Volume [veh/h]	2	1	5	211	13	147	176	308	63	104	200	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	15	28	0	11	24	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	4.55	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	33	22	32	32	28	28	18	28	17
g / C, Green / Cycle	0.47	0.32	0.46	0.46	0.39	0.40	0.26	0.40	0.24
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.08	0.10	0.10	0.15	0.23	0.09	0.19
s, saturation flow rate [veh/h]	1150	1467	1362	1194	1431	1175	1634	1109	1590
c, Capacity [veh/h]	488	465	764	718	562	453	423	401	389
d1, Uniform Delay [s]	13.91	16.40	11.03	12.60	14.37	15.30	24.88	15.15	24.60
k, delay calibration	0.50	0.50	0.50	0.33	0.50	0.35	0.18	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.05	0.37	0.34	1.13	1.74	9.34	0.34	3.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.01	0.14	0.17	0.26	0.39	0.88	0.26	0.77
d, Delay for Lane Group [s/veh]	13.92	16.45	11.39	12.94	15.50	17.05	34.22	15.49	28.02
Lane Group LOS	B	B	B	B	B	B	C	B	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.02	0.07	0.90	1.14	1.60	1.95	6.63	1.01	4.72
50th-Percentile Queue Length [ft/ln]	0.45	1.83	22.48	28.49	39.92	48.64	165.79	25.22	117.90
95th-Percentile Queue Length [veh/ln]	0.03	0.13	1.62	2.05	2.87	3.50	10.86	1.82	8.28
95th-Percentile Queue Length [ft/ln]	0.82	3.30	40.47	51.28	71.85	87.55	271.38	45.39	206.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.92	16.45	16.45	12.18	12.94	15.50	17.05	34.22	34.22	15.49	28.02	28.02
Movement LOS	B	B	B	B	B	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	15.82			13.52			28.70			24.79		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	23.20											
Intersection LOS	C											
Intersection V/C	0.381											

Emissions

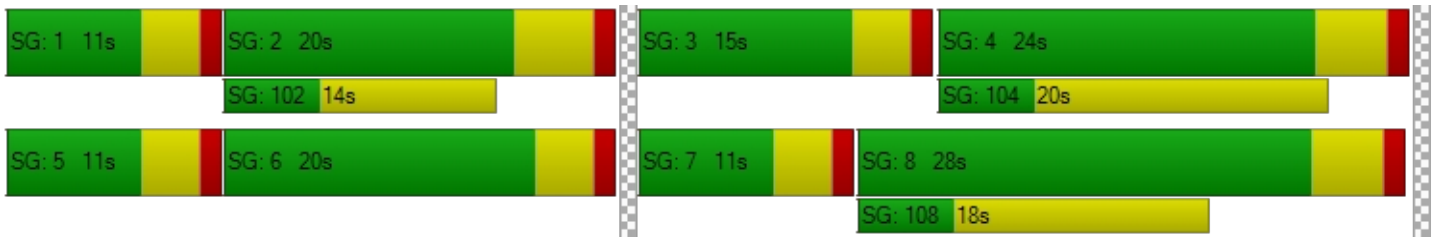
Vehicle Miles Traveled [mph]	0.05	0.14	7.80	9.13	11.11	14.78	31.15	7.96	22.89
Stops [stops/h]	0.93	3.77	46.25	58.61	82.11	100.06	341.06	51.88	242.54
Fuel consumption [US gal/h]	0.01	0.03	0.88	1.11	1.50	1.77	5.75	0.94	3.99
CO [g/h]	0.67	2.31	61.85	77.35	105.18	123.85	401.96	65.87	278.70
NOx [g/h]	0.13	0.45	12.03	15.05	20.46	24.10	78.21	12.82	54.23
VOC [g/h]	0.15	0.54	14.33	17.93	24.38	28.70	93.16	15.27	64.59

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.185	2.372	2.223	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	457	740	666	551
d_b, Bicycle Delay [s]	20.83	13.89	15.58	18.36
l_b,int, Bicycle LOS Score for Intersection	1.787	2.386	2.677	2.439
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.301

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	319	45	29	671	5	11	75	17	32	30	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	376	53	34	791	6	13	88	20	38	35	14
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	103	15	9	217	2	4	24	5	10	10	4
Total Analysis Volume [veh/h]	8	413	58	37	868	7	14	97	22	42	38	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	23	0	11	23	0	0	31	0	0	31	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	41	41	48	43	43	7	7	7	7
g / C, Green / Cycle	0.74	0.62	0.62	0.74	0.66	0.66	0.11	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.04	0.04	0.23	0.23	0.01	0.07	0.03	0.03
s, saturation flow rate [veh/h]	708	3560	1589	1021	1870	1865	1351	1811	1273	1781
c, Capacity [veh/h]	590	2217	990	841	1233	1230	208	195	164	192
d1, Uniform Delay [s]	3.02	5.23	4.80	2.52	4.92	4.92	28.28	27.70	30.87	26.67
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.19	0.11	0.10	0.80	0.80	0.13	3.07	0.82	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.19	0.06	0.04	0.36	0.36	0.07	0.61	0.26	0.28
d, Delay for Lane Group [s/veh]	3.03	5.42	4.91	2.62	5.72	5.72	28.41	30.77	31.69	27.44
Lane Group LOS	A	A	A	A	A	A	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.01	0.87	0.24	0.08	1.87	1.87	0.21	1.88	0.67	0.78
50th-Percentile Queue Length [ft/ln]	0.32	21.66	5.99	1.89	46.76	46.65	5.18	46.98	16.83	19.39
95th-Percentile Queue Length [veh/ln]	0.02	1.56	0.43	0.14	3.37	3.36	0.37	3.38	1.21	1.40
95th-Percentile Queue Length [ft/ln]	0.57	38.99	10.78	3.40	84.18	83.98	9.32	84.56	30.29	34.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.03	5.42	4.91	2.62	5.72	5.72	28.41	30.77	30.77	31.69	27.44	27.44
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	5.32			5.60			30.52			29.32		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	8.95											
Intersection LOS	A											
Intersection V/C	0.301											

Emissions

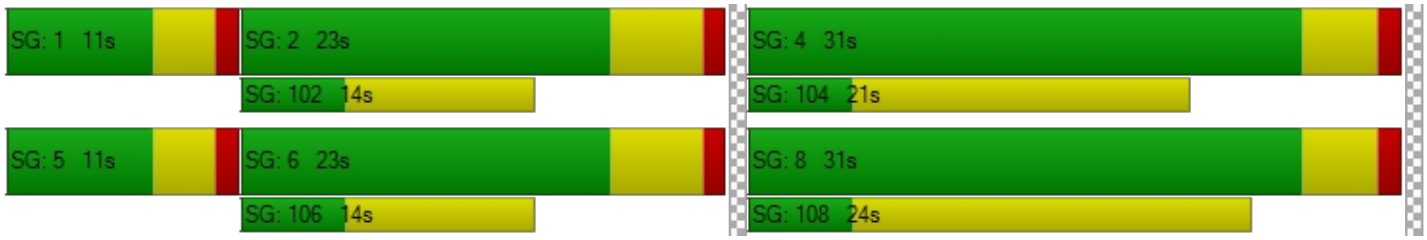
Vehicle Miles Traveled [mph]	0.60	30.83	4.33	1.22	14.47	14.43	0.32	2.74	3.48	4.39
Stops [stops/h]	0.70	95.98	13.27	4.18	103.60	103.35	11.47	104.07	37.28	42.96
Fuel consumption [US gal/h]	0.03	2.50	0.34	0.10	2.05	2.04	0.14	1.27	0.57	0.66
CO [g/h]	2.32	174.94	24.01	7.31	143.03	142.67	9.75	88.60	39.85	46.00
NOx [g/h]	0.45	34.04	4.67	1.42	27.83	27.76	1.90	17.24	7.75	8.95
VOC [g/h]	0.54	40.54	5.56	1.69	33.15	33.07	2.26	20.53	9.24	10.66

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.803	2.657	1.983	2.037
Crosswalk LOS	C	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	542	542	812	812
d_b, Bicycle Delay [s]	17.28	17.28	11.46	11.46
l_b,int, Bicycle LOS Score for Intersection	2.169	2.526	1.993	1.931
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	2	371	713	4	2	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	437	841	5	2	5
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	117	225	1	1	1
Total Analysis Volume [veh/h]	2	468	901	5	2	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	9.83	0.00	0.00	0.00	17.44	11.63
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.20	0.00	0.00	0.00	1.21	1.21
d_A, Approach Delay [s/veh]	0.04		0.00		13.29	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.454

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	282	264	80	622	17	26	92	12	167	39	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	332	311	94	733	20	31	108	14	197	46	79
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	88	82	25	194	5	8	29	4	52	12	21
Total Analysis Volume [veh/h]	1	351	329	99	776	21	33	114	15	208	49	84
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	24	0	11	24	0	11	26	0	14	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	44	34	34	44	39	39	21	8	21	14	14
g / C, Green / Cycle	0.58	0.45	0.45	0.58	0.52	0.52	0.28	0.10	0.28	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.00	0.21	0.23	0.12	0.24	0.24	0.03	0.08	0.15	0.03	0.06
s, saturation flow rate [veh/h]	464	1683	1431	855	1683	1667	1253	1649	1393	1683	1431
c, Capacity [veh/h]	400	757	643	516	882	874	472	167	459	310	264
d1, Uniform Delay [s]	7.69	14.35	14.75	8.37	11.15	11.15	19.60	32.87	22.25	25.70	26.51
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	2.04	2.89	0.83	1.69	1.70	0.06	7.41	0.70	0.24	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.46	0.51	0.19	0.45	0.45	0.07	0.77	0.45	0.16	0.32
d, Delay for Lane Group [s/veh]	7.70	16.40	17.65	9.20	12.84	12.86	19.67	40.28	22.95	25.94	27.20
Lane Group LOS	A	B	B	A	B	B	B	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.01	4.13	4.08	0.69	3.86	3.83	0.41	2.56	2.96	0.73	1.31
50th-Percentile Queue Length [ft/ln]	0.15	103.28	102.08	17.19	96.47	95.68	10.33	64.08	74.08	18.31	32.74
95th-Percentile Queue Length [veh/ln]	0.01	7.44	7.35	1.24	6.95	6.89	0.74	4.61	5.33	1.32	2.36
95th-Percentile Queue Length [ft/ln]	0.26	185.90	183.75	30.94	173.64	172.22	18.60	115.35	133.34	32.95	58.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.70	16.40	17.65	9.20	12.85	12.86	19.67	40.28	40.28	22.95	25.94	27.20
Movement LOS	A	B	B	A	B	B	B	D	D	C	C	C
d_A, Approach Delay [s/veh]	16.99			12.44			36.08			24.43		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	17.74											
Intersection LOS	B											
Intersection V/C	0.454											

Emissions

Vehicle Miles Traveled [mph]	0.04	13.84	12.98	7.49	30.29	30.01	0.85	3.31	17.46	4.11	7.05
Stops [stops/h]	0.28	198.29	196.00	33.00	185.22	183.70	19.84	123.04	142.23	35.15	62.86
Fuel consumption [US gal/h]	0.01	3.19	3.15	0.78	3.95	3.92	0.28	1.87	2.48	0.62	1.10
CO [g/h]	0.36	222.99	220.20	54.37	276.16	273.84	19.33	130.95	173.09	43.49	77.07
NOx [g/h]	0.07	43.39	42.84	10.58	53.73	53.28	3.76	25.48	33.68	8.46	14.99
VOC [g/h]	0.08	51.68	51.03	12.60	64.00	63.46	4.48	30.35	40.12	10.08	17.86

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.712	2.657	2.009	2.405
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	504	496	568	648
d_b, Bicycle Delay [s]	20.98	21.21	19.22	17.14
l_b,int, Bicycle LOS Score for Intersection	2.336	2.513	2.041	2.337
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	25.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.093

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	537	4	14	770	4	14	0	11	2	0	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	633	5	17	908	5	17	0	13	2	0	31
Peak Hour Factor	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	170	1	5	244	1	5	0	3	1	0	8
Total Analysis Volume [veh/h]	9	681	5	18	977	5	18	0	14	2	0	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.02	0.01	0.00	0.09	0.00	0.03	0.01	0.00	0.05
d_M, Delay for Movement [s/veh]	10.22	0.00	0.00	9.07	0.00	0.00	25.38	24.90	13.70	19.66	23.52	10.89
Movement LOS	B	A	A	A	A	A	D	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.06	0.00	0.00	0.40	0.40	0.40	0.19	0.19	0.19
95th-Percentile Queue Length [ft/ln]	0.98	0.00	0.00	1.52	0.00	0.00	10.05	10.05	10.05	4.65	4.65	4.65
d_A, Approach Delay [s/veh]	0.13			0.16			20.27			11.39		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	0.74											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.345

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	485	25	43	737	6	13	10	20	16	5	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	572	29	51	869	7	15	12	24	19	6	59
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	158	8	14	240	2	4	3	7	5	2	16
Total Analysis Volume [veh/h]	13	631	32	56	958	8	17	13	26	21	7	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	24	0	11	24	0	11	44	0	11	44	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	68	59	59	68	62	62	12	5	12	6	6
g / C, Green / Cycle	0.76	0.65	0.65	0.76	0.69	0.69	0.14	0.06	0.14	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.20	0.20	0.07	0.29	0.29	0.01	0.03	0.02	0.00	0.05
s, saturation flow rate [veh/h]	586	1683	1655	792	1683	1678	1341	1506	1377	1683	1431
c, Capacity [veh/h]	485	1096	1077	646	1158	1155	299	93	281	112	95
d1, Uniform Delay [s]	3.63	6.83	6.84	3.28	6.15	6.15	33.80	40.68	33.90	39.39	41.09
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.72	0.73	0.26	1.11	1.11	0.08	3.01	0.11	0.23	8.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.30	0.31	0.09	0.42	0.42	0.06	0.42	0.07	0.06	0.68
d, Delay for Lane Group [s/veh]	3.65	7.55	7.57	3.54	7.26	7.26	33.88	43.70	34.02	39.62	49.48
Lane Group LOS	A	A	A	A	A	A	C	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.04	2.55	2.51	0.22	3.52	3.51	0.33	0.91	0.41	0.15	1.63
50th-Percentile Queue Length [ft/ln]	1.06	63.70	62.84	5.56	88.10	87.87	8.29	22.78	10.28	3.82	40.77
95th-Percentile Queue Length [veh/ln]	0.08	4.59	4.52	0.40	6.34	6.33	0.60	1.64	0.74	0.27	2.94
95th-Percentile Queue Length [ft/ln]	1.91	114.66	113.12	10.00	158.57	158.16	14.92	41.00	18.50	6.87	73.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.65	7.56	7.57	3.54	7.26	7.26	33.88	43.70	43.70	34.02	39.62	49.48
Movement LOS	A	A	A	A	A	A	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	7.48			7.05			40.72			45.25		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.16											
Intersection LOS	B											
Intersection V/C	0.345											

Emissions

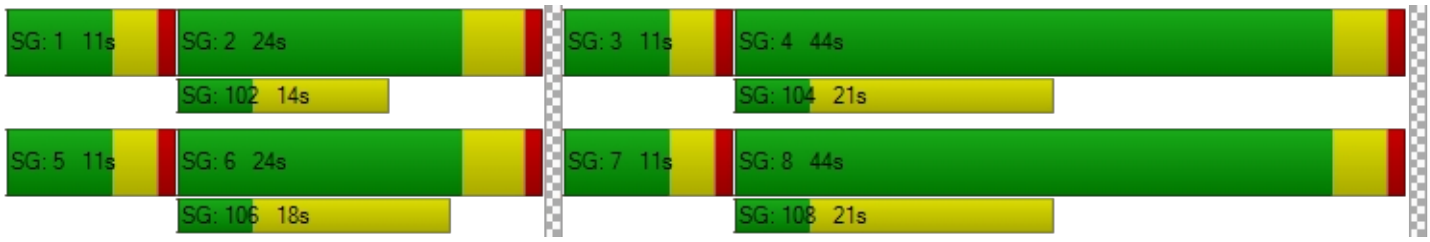
Vehicle Miles Traveled [mph]	0.97	24.91	24.52	4.27	36.86	36.75	0.45	1.03	1.77	0.59	5.49
Stops [stops/h]	1.70	101.92	100.55	8.89	140.96	140.59	13.26	36.45	16.45	6.11	65.24
Fuel consumption [US gal/h]	0.06	2.23	2.20	0.27	3.18	3.17	0.19	0.53	0.29	0.11	1.15
CO [g/h]	4.15	155.83	153.61	18.86	222.23	221.63	13.15	37.23	20.14	7.44	80.49
NOx [g/h]	0.81	30.32	29.89	3.67	43.24	43.12	2.56	7.24	3.92	1.45	15.66
VOC [g/h]	0.96	36.11	35.60	4.37	51.50	51.36	3.05	8.63	4.67	1.72	18.65

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.686	2.698	1.978	2.226
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	420	420	876	876
d_b, Bicycle Delay [s]	28.08	28.08	14.22	14.22
l_b,int, Bicycle LOS Score for Intersection	2.332	2.617	1.866	1.927
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	504	12	5	742	15	0	0	12	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	594	14	6	875	18	0	0	14	0	0	17
Peak Hour Factor	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.9500	0.9500	0.8940	0.9500	0.9500	0.8940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	166	4	2	245	5	0	0	4	0	0	5
Total Analysis Volume [veh/h]	15	664	16	7	979	20	0	0	16	0	0	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	10.34	0.00	0.00	8.99	0.00	0.00	0.00	0.00	12.19	0.00	0.00	10.65
Movement LOS	B	A	A	A	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.07	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.09
95th-Percentile Queue Length [ft/ln]	1.67	0.00	0.00	0.58	0.00	0.00	0.00	0.00	2.39	0.00	0.00	2.23
d_A, Approach Delay [s/veh]	0.22			0.06			12.19			10.65		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.35											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	345	33	29	665	59	143	191	138	114	17	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	407	39	34	784	70	169	225	163	134	20	48
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	113	11	9	218	19	47	63	45	37	6	13
Total Analysis Volume [veh/h]	74	452	43	38	871	78	188	250	181	149	22	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	22	38	0	11	27	0	19	20	0	11	12	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	6	37	37	4	35	35	25	14	14	25	12
g / C, Green / Cycle	0.07	0.46	0.46	0.05	0.44	0.44	0.31	0.17	0.17	0.32	0.15
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.15	0.02	0.29	0.29	0.14	0.15	0.13	0.20	0.05
s, saturation flow rate [veh/h]	1603	1683	1632	1603	1683	1635	1381	1683	1431	728	1496
c, Capacity [veh/h]	115	777	754	80	741	720	503	291	247	410	223
d1, Uniform Delay [s]	36.13	13.61	13.62	36.96	17.55	17.55	21.65	32.13	31.32	21.44	30.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.22	0.11	0.11	0.26	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.87	1.10	1.14	4.25	4.38	4.51	0.93	7.29	4.14	1.30	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.32	0.32	0.47	0.65	0.65	0.37	0.86	0.73	0.36	0.34
d, Delay for Lane Group [s/veh]	42.00	14.71	14.76	41.21	21.94	22.07	22.58	39.42	35.46	22.74	31.38
Lane Group LOS	D	B	B	D	C	C	C	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.55	2.84	2.78	0.80	7.18	7.00	2.73	5.07	3.45	2.21	1.34
50th-Percentile Queue Length [ft/ln]	38.69	71.04	69.52	19.89	179.57	175.06	68.27	126.81	86.21	55.14	33.44
95th-Percentile Queue Length [veh/ln]	2.79	5.12	5.01	1.43	11.58	11.34	4.92	8.77	6.21	3.97	2.41
95th-Percentile Queue Length [ft/ln]	69.64	127.88	125.13	35.80	289.45	283.56	122.89	219.16	155.18	99.24	60.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.00	14.73	14.76	41.21	22.00	22.07	22.58	39.42	35.46	22.74	31.38	31.38
Movement LOS	D	B	B	D	C	C	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	18.28			22.74			33.15			25.63		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.64											
Intersection LOS	C											
Intersection V/C	0.555											

Emissions

Vehicle Miles Traveled [mph]	5.84	19.79	19.29	3.02	38.28	37.18	43.08	57.29	41.48	23.88	12.02
Stops [stops/h]	69.64	127.88	125.13	35.80	323.22	315.11	122.89	228.27	155.18	99.24	60.18
Fuel consumption [US gal/h]	1.38	2.47	2.41	0.70	6.04	5.89	3.43	5.91	4.05	2.14	1.25
CO [g/h]	96.38	172.40	168.51	49.15	422.13	411.49	239.76	412.83	283.39	149.86	87.39
NOx [g/h]	18.75	33.54	32.79	9.56	82.13	80.06	46.65	80.32	55.14	29.16	17.00
VOC [g/h]	22.34	39.95	39.05	11.39	97.83	95.37	55.57	95.68	65.68	34.73	20.25

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.735	2.723	2.476	2.086
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	823	548	373	185
d_b, Bicycle Delay [s]	13.87	21.10	26.49	32.94
l_b,int, Bicycle LOS Score for Intersection	2.243	2.588	2.795	2.144
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	25.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	341	54	60	774	49	31	249	71	46	235	76
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	402	64	71	913	58	37	294	84	54	277	90
Peak Hour Factor	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	120	19	21	271	17	11	87	25	16	82	27
Total Analysis Volume [veh/h]	46	478	76	84	1086	69	44	350	100	64	329	107
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	29	0	21	39	0	11	19	0	11	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	5	38	38	6	39	39	4	13	13	5	14	14
g / C, Green / Cycle	0.06	0.47	0.47	0.08	0.49	0.49	0.05	0.17	0.17	0.07	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.05	0.05	0.34	0.05	0.03	0.14	0.14	0.04	0.13	0.14
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1557	1603	1683	1545
c, Capacity [veh/h]	91	1502	671	122	1565	699	88	279	258	107	301	276
d1, Uniform Delay [s]	36.66	13.27	11.92	36.03	15.83	11.00	36.72	32.28	32.37	36.29	31.15	31.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.35	0.56	0.34	6.72	2.56	0.28	4.29	6.29	7.44	5.26	3.73	4.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.32	0.11	0.69	0.69	0.10	0.50	0.83	0.85	0.60	0.75	0.76
d, Delay for Lane Group [s/veh]	41.00	13.82	12.26	42.75	18.39	11.28	41.01	38.57	39.81	41.55	34.88	35.62
Lane Group LOS	D	B	B	D	B	B	D	D	D	D	C	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.96	2.55	0.76	1.77	7.33	0.65	0.93	4.69	4.51	1.36	4.37	4.14
50th-Percentile Queue Length [ft/ln]	23.88	63.77	18.99	44.35	183.29	16.32	23.13	117.33	112.70	34.05	109.13	103.52
95th-Percentile Queue Length [veh/ln]	1.72	4.59	1.37	3.19	11.77	1.17	1.67	8.25	7.99	2.45	7.79	7.45
95th-Percentile Queue Length [ft/ln]	42.99	114.79	34.18	79.83	294.31	29.37	41.63	206.15	199.76	61.29	194.79	186.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.00	13.82	12.26	42.75	18.39	11.28	41.01	38.99	39.81	41.55	35.11	35.62
Movement LOS	D	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.71			19.65			39.34			36.04		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	25.14											
Intersection LOS	C											
Intersection V/C	0.548											

Emissions

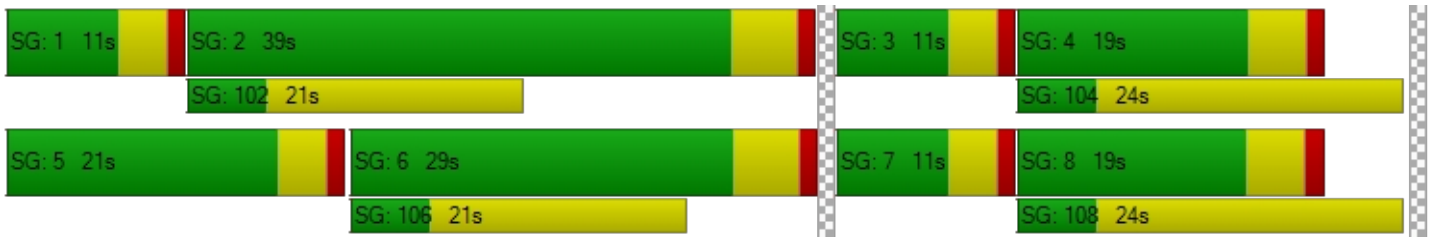
Vehicle Miles Traveled [mph]	3.69	38.36	6.10	6.63	85.74	5.45	10.01	52.69	49.65	10.41	36.63	34.29
Stops [stops/h]	42.99	229.58	34.18	79.83	659.85	29.37	41.63	211.19	202.87	61.29	196.43	186.34
Fuel consumption [US gal/h]	0.85	4.53	0.68	1.58	12.30	0.59	1.01	5.15	4.93	1.24	4.00	3.78
CO [g/h]	59.26	316.88	47.47	110.71	859.50	41.03	70.53	360.27	344.84	86.99	279.56	264.54
NOx [g/h]	11.53	61.65	9.24	21.54	167.23	7.98	13.72	70.10	67.09	16.92	54.39	51.47
VOC [g/h]	13.73	73.44	11.00	25.66	199.20	9.51	16.35	83.50	79.92	20.16	64.79	61.31

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.799	2.803	2.478	2.460
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	598	848	358	360
d_b, Bicycle Delay [s]	19.67	13.28	26.98	26.90
l_b,int, Bicycle LOS Score for Intersection	2.269	2.796	2.182	2.187
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	3.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.339

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	408	38	86	803	6	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	481	45	101	947	7	22
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	14	31	286	2	7
Total Analysis Volume [veh/h]	582	54	122	1145	8	27
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	20	0	11	31	99	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	104	104	115	115	5	5
g / C, Green / Cycle	0.80	0.80	0.89	0.89	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.17	0.18	0.14	0.32	0.00	0.02
s, saturation flow rate [veh/h]	1870	1816	868	3560	1781	1589
c, Capacity [veh/h]	1499	1455	812	3152	71	64
d1, Uniform Delay [s]	3.09	3.11	1.11	1.26	60.18	60.94
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	0.35	0.39	0.33	0.69	4.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.22	0.15	0.36	0.11	0.42
d, Delay for Lane Group [s/veh]	3.41	3.45	1.50	1.58	60.87	65.39
Lane Group LOS	A	A	A	A	E	E
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.68	1.70	0.22	0.99	0.27	0.96
50th-Percentile Queue Length [ft/ln]	42.01	42.38	5.49	24.72	6.78	23.96
95th-Percentile Queue Length [veh/ln]	3.02	3.05	0.40	1.78	0.49	1.72
95th-Percentile Queue Length [ft/ln]	75.62	76.29	9.89	44.50	12.20	43.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.43	3.45	1.50	1.58	60.87	65.39
Movement LOS	A	A	A	A	E	E
d_A, Approach Delay [s/veh]	3.43		1.58		64.36	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	3.32					
Intersection LOS	A					
Intersection V/C	0.339					

Emissions

Vehicle Miles Traveled [mph]	23.53	23.53	9.79	91.88	1.32	4.45
Stops [stops/h]	46.54	46.94	6.08	54.77	7.51	26.54
Fuel consumption [US gal/h]	1.47	1.47	0.46	4.28	0.19	0.66
CO [g/h]	102.58	102.98	31.89	299.38	13.08	46.22
NOx [g/h]	19.96	20.04	6.21	58.25	2.55	8.99
VOC [g/h]	23.77	23.87	7.39	69.38	3.03	10.71

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.31	0.00	56.31
l_p,int, Pedestrian LOS Score for Intersectio	2.659	0.000	2.158
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	229	398	1452
d_b, Bicycle Delay [s]	50.95	41.68	4.87
l_b,int, Bicycle LOS Score for Intersection	2.299	2.819	1.774
Bicycle LOS	B	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	7.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.304

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	414	31	112	647	34	11	32	12	21	20	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	488	37	132	763	40	13	38	14	25	24	25
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	142	11	38	222	12	4	11	4	7	7	7
Total Analysis Volume [veh/h]	20	568	43	154	888	47	15	44	16	29	28	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	17	0	11	17	0	0	52	0	0	52	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	64	53	53	64	58	58	6	6
g / C, Green / Cycle	0.80	0.67	0.67	0.80	0.72	0.72	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.03	0.17	0.17	0.16	0.25	0.25	0.04	0.05
s, saturation flow rate [veh/h]	682	1870	1824	943	1870	1837	1807	1757
c, Capacity [veh/h]	616	1246	1215	827	1345	1321	192	195
d1, Uniform Delay [s]	2.09	5.34	5.34	2.03	4.21	4.21	35.58	35.82
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.48	0.49	0.50	0.72	0.73	1.29	1.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.25	0.25	0.19	0.35	0.35	0.39	0.44
d, Delay for Lane Group [s/veh]	2.11	5.81	5.83	2.53	4.94	4.95	36.87	37.39
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.03	1.75	1.72	0.33	2.23	2.19	1.45	1.68
50th-Percentile Queue Length [ft/ln]	0.74	43.72	42.91	8.30	55.64	54.80	36.25	41.98
95th-Percentile Queue Length [veh/ln]	0.05	3.15	3.09	0.60	4.01	3.95	2.61	3.02
95th-Percentile Queue Length [ft/ln]	1.34	78.70	77.24	14.93	100.15	98.63	65.26	75.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.11	5.82	5.83	2.53	4.94	4.95	36.87	36.87	36.87	37.39	37.39	37.39
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	5.70			4.60			36.87			37.39		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	7.76											
Intersection LOS	A											
Intersection V/C	0.304											

Emissions

Vehicle Miles Traveled [mph]	1.51	23.30	22.79	11.39	34.89	34.28	1.95	14.36
Stops [stops/h]	1.34	78.70	77.24	14.93	100.15	98.63	65.26	75.57
Fuel consumption [US gal/h]	0.08	1.85	1.81	0.63	2.56	2.52	1.00	1.66
CO [g/h]	5.32	128.98	126.40	43.75	178.71	175.82	70.16	116.24
NOx [g/h]	1.04	25.09	24.59	8.51	34.77	34.21	13.65	22.62
VOC [g/h]	1.23	29.89	29.29	10.14	41.42	40.75	16.26	26.94

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.693	2.704	1.815	2.022
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	298	298	1183	1183
d_b, Bicycle Delay [s]	28.99	28.99	6.68	6.68
l_b,int, Bicycle LOS Score for Intersection	2.295	2.672	1.898	1.916
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	59.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.107

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	444	38	35	642	20	4	6	12	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	523	45	41	757	24	5	7	14	9	4	21
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	158	14	12	228	7	2	2	4	3	1	6
Total Analysis Volume [veh/h]	29	631	54	49	913	29	6	8	17	11	5	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.07	0.11	0.03	0.11	0.07	0.04
d_M, Delay for Movement [s/veh]	10.18	0.00	0.00	9.21	0.00	0.00	55.41	59.44	18.14	46.73	57.26	15.64
Movement LOS	B	A	A	A	A	A	F	F	C	E	F	C
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.17	0.00	0.00	0.76	0.76	0.76	0.79	0.79	0.79
95th-Percentile Queue Length [ft/ln]	3.13	0.00	0.00	4.29	0.00	0.00	19.10	19.10	19.10	19.77	19.77	19.77
d_A, Approach Delay [s/veh]	0.41			0.46			36.01			29.05		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	1.72											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.254

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	39	484	45	93	511	25	10	12	10	10	9	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	571	53	110	602	29	12	14	12	12	11	20
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	165	15	32	174	8	3	4	3	3	3	6
Total Analysis Volume [veh/h]	53	661	61	127	697	34	14	16	14	14	13	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	59	0	0	59	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	75	65	65	75	66	66	5	5	5
g / C, Green / Cycle	0.84	0.72	0.72	0.84	0.73	0.73	0.06	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.20	0.15	0.20	0.20	0.04	0.01	0.01
s, saturation flow rate [veh/h]	825	1870	1815	852	1870	1840	1125	1806	1589
c, Capacity [veh/h]	756	1340	1301	776	1373	1350	116	163	90
d1, Uniform Delay [s]	1.51	4.49	4.49	1.62	3.96	3.96	41.77	40.64	40.64
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.50	0.52	0.45	0.48	0.49	2.02	0.47	1.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.27	0.27	0.16	0.27	0.27	0.38	0.17	0.26
d, Delay for Lane Group [s/veh]	1.55	5.00	5.01	2.08	4.44	4.45	43.79	41.11	42.12
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	1.99	1.94	0.23	1.80	1.77	1.03	0.60	0.53
50th-Percentile Queue Length [ft/ln]	1.55	49.75	48.51	5.81	45.00	44.36	25.79	14.88	13.14
95th-Percentile Queue Length [veh/ln]	0.11	3.58	3.49	0.42	3.24	3.19	1.86	1.07	0.95
95th-Percentile Queue Length [ft/ln]	2.79	89.56	87.31	10.45	81.01	79.84	46.42	26.78	23.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.55	5.00	5.01	2.08	4.45	4.45	43.79	43.79	43.79	41.11	41.11	42.12
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	4.77			4.10			43.79			41.58		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.49											
Intersection LOS	A											
Intersection V/C	0.254											

Emissions

Vehicle Miles Traveled [mph]	3.98	27.49	26.71	9.55	27.69	27.25	1.29	0.81	0.69
Stops [stops/h]	2.48	79.61	77.61	9.29	72.00	70.97	41.27	23.80	21.03
Fuel consumption [US gal/h]	0.19	2.02	1.96	0.49	1.93	1.90	0.61	0.35	0.31
CO [g/h]	13.07	141.11	137.35	34.07	134.94	132.88	42.53	24.71	21.58
NOx [g/h]	2.54	27.45	26.72	6.63	26.25	25.85	8.27	4.81	4.20
VOC [g/h]	3.03	32.70	31.83	7.90	31.27	30.80	9.86	5.73	5.00

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.663	2.675	1.832	2.144
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	331	331	1209	1209
d_b, Bicycle Delay [s]	31.33	31.33	7.04	7.04
l_b,int, Bicycle LOS Score for Intersection	2.413	2.482	1.847	1.857
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	46.2
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.064

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	544	26	30	474	18	0	3	8	4	4	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	641	31	35	559	21	0	4	9	5	5	28
Peak Hour Factor	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	190	9	10	166	6	0	1	3	1	1	8
Total Analysis Volume [veh/h]	34	759	37	41	662	25	0	5	11	6	6	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.00	0.05	0.02	0.06	0.06	0.05
d_M, Delay for Movement [s/veh]	9.14	0.00	0.00	9.61	0.00	0.00	38.02	44.78	11.72	41.11	46.17	13.89
Movement LOS	A	A	A	A	A	A	E	E	B	E	E	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.16	0.00	0.00	0.23	0.23	0.23	0.62	0.62	0.62
95th-Percentile Queue Length [ft/ln]	2.93	0.00	0.00	3.93	0.00	0.00	5.64	5.64	5.64	15.44	15.44	15.44
d_A, Approach Delay [s/veh]	0.37			0.54			22.05			21.83		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.26											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.495

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	388	149	74	337	60	83	439	33	176	547	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	457	176	87	397	71	98	518	39	208	645	151
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	125	48	24	109	19	27	142	11	57	177	41
Total Analysis Volume [veh/h]	53	501	193	95	435	78	107	567	43	228	706	165
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	11	27	0	26	23	0	24	21	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	5	30	30	6	32	32	7	17	17	13	23	23
g / C, Green / Cycle	0.06	0.36	0.36	0.07	0.37	0.37	0.08	0.20	0.20	0.15	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.12	0.05	0.12	0.05	0.06	0.16	0.17	0.13	0.24	0.24
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1824	1781	1870	1749
c, Capacity [veh/h]	105	1266	565	131	1330	594	142	377	368	270	511	478
d1, Uniform Delay [s]	38.77	20.54	20.09	38.52	18.99	17.53	38.28	32.45	32.46	35.09	29.56	29.57
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.19	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.68	0.93	1.64	7.50	0.66	0.46	7.77	4.42	4.59	7.12	8.40	9.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.40	0.34	0.72	0.33	0.13	0.75	0.82	0.82	0.84	0.88	0.88
d, Delay for Lane Group [s/veh]	42.45	21.47	21.73	46.02	19.65	17.99	46.06	36.87	37.05	42.20	37.96	38.56
Lane Group LOS	D	C	C	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.14	3.62	2.86	2.16	3.01	1.03	2.43	6.28	6.16	4.96	9.51	8.98
50th-Percentile Queue Length [ft/ln]	28.47	90.55	71.61	53.91	75.26	25.80	60.73	157.04	153.89	124.00	237.63	224.50
95th-Percentile Queue Length [veh/ln]	2.05	6.52	5.16	3.88	5.42	1.86	4.37	10.39	10.22	8.61	14.56	13.89
95th-Percentile Queue Length [ft/ln]	51.25	162.99	128.89	97.04	135.47	46.44	109.32	259.79	255.61	215.32	364.03	347.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.45	21.47	21.73	46.02	19.65	17.99	46.06	36.95	37.05	42.20	38.18	38.56
Movement LOS	D	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	23.03			23.56			38.32			39.07		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.15											
Intersection LOS	C											
Intersection V/C	0.495											

Emissions

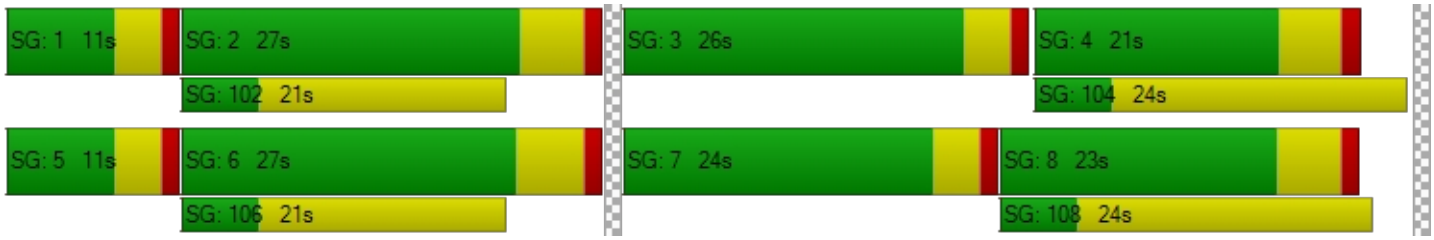
Vehicle Miles Traveled [mph]	2.00	18.93	7.29	7.27	33.29	5.97	4.20	12.12	11.84	8.46	16.69	15.63
Stops [stops/h]	48.24	306.81	121.31	91.33	255.01	43.71	102.89	266.04	260.71	210.08	402.57	380.33
Fuel consumption [US gal/h]	1.00	5.88	2.31	1.85	4.93	0.84	1.94	4.78	4.68	3.86	7.14	6.76
CO [g/h]	70.14	411.09	161.23	129.57	344.35	58.85	135.38	333.94	327.46	269.84	498.98	472.61
NOx [g/h]	13.65	79.98	31.37	25.21	67.00	11.45	26.34	64.97	63.71	52.50	97.08	91.95
VOC [g/h]	16.26	95.28	37.37	30.03	79.81	13.64	31.38	77.39	75.89	62.54	115.64	109.53

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.766	2.713	2.652	2.743
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	508	515	421	374
d_b, Bicycle Delay [s]	23.64	23.42	26.48	28.09
l_b,int, Bicycle LOS Score for Intersection	2.390	2.276	2.366	2.681
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.318

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	35	52	5	35	5	8	382	117	52	204	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	41	61	6	41	6	9	450	138	61	241	8
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	12	18	2	12	2	3	136	42	18	73	2
Total Analysis Volume [veh/h]	105	50	74	7	50	7	11	544	167	74	291	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	13	0	0	13	0	35	41	0	11	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	8	8	8	8	1	38	38	5	42	42
g / C, Green / Cycle	0.12	0.12	0.12	0.13	0.02	0.58	0.58	0.08	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.08	0.03	0.05	0.04	0.01	0.20	0.20	0.04	0.08	0.08
s, saturation flow rate [veh/h]	1346	1870	1589	1606	1781	1870	1722	1781	1870	1848
c, Capacity [veh/h]	157	227	193	191	38	1086	999	142	1195	1181
d1, Uniform Delay [s]	28.37	25.77	26.31	25.54	31.33	7.12	7.13	28.73	4.61	4.61
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.81	0.48	1.25	1.02	4.19	0.85	0.93	2.97	0.22	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.22	0.38	0.33	0.29	0.34	0.34	0.52	0.13	0.13
d, Delay for Lane Group [s/veh]	33.18	26.26	27.56	26.56	35.52	7.98	8.07	31.70	4.83	4.83
Lane Group LOS	C	C	C	C	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.72	0.69	1.06	0.92	0.21	2.31	2.16	1.16	0.63	0.63
50th-Percentile Queue Length [ft/ln]	43.08	17.14	26.41	23.02	5.13	57.75	54.04	29.00	15.75	15.66
95th-Percentile Queue Length [veh/ln]	3.10	1.23	1.90	1.66	0.37	4.16	3.89	2.09	1.13	1.13
95th-Percentile Queue Length [ft/ln]	77.55	30.85	47.54	41.43	9.24	103.94	97.26	52.19	28.35	28.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.18	26.26	27.56	26.56	26.56	26.56	35.52	8.00	8.07	31.70	4.83	4.83
Movement LOS	C	C	C	C	C	C	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	29.85			26.56			8.44			10.13		
Approach LOS	C			C			A			B		
d_I, Intersection Delay [s/veh]	13.26											
Intersection LOS	B											
Intersection V/C	0.318											

Emissions

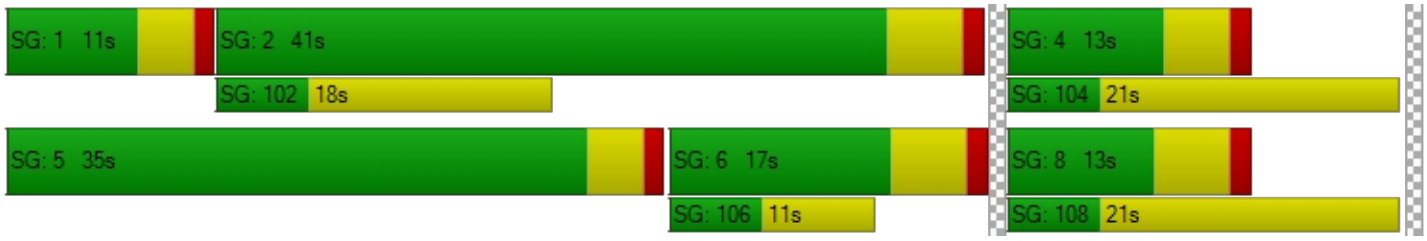
Vehicle Miles Traveled [mph]	8.55	4.07	6.03	1.76	0.35	11.66	10.79	16.96	34.61	34.36
Stops [stops/h]	95.45	37.97	58.51	50.99	11.37	127.93	119.71	64.24	34.89	34.70
Fuel consumption [US gal/h]	1.75	0.71	1.08	0.62	0.18	2.01	1.87	1.61	1.73	1.72
CO [g/h]	122.52	49.49	75.83	43.39	12.46	140.22	130.90	112.32	120.94	120.11
NOx [g/h]	23.84	9.63	14.75	8.44	2.42	27.28	25.47	21.85	23.53	23.37
VOC [g/h]	28.40	11.47	17.57	10.06	2.89	32.50	30.34	26.03	28.03	27.84

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.264	1.755	2.690	2.600
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	243	258	1105	366
d_b, Bicycle Delay [s]	25.08	24.64	6.51	21.69
l_b,int, Bicycle LOS Score for Intersection	2.152	1.880	2.370	2.083
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.395

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	148	58	21	197	4	1	222	180	42	126	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	174	68	25	232	5	1	262	212	50	149	22
Peak Hour Factor	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	52	20	7	69	1	0	78	63	15	45	7
Total Analysis Volume [veh/h]	96	208	81	30	278	6	1	314	254	60	178	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	16	0	12	17	0	28	29	0	18	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	23	16	16	23	13	0	33	33	5	38	38
g / C, Green / Cycle	0.30	0.21	0.21	0.30	0.17	0.00	0.43	0.43	0.07	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.07	0.11	0.05	0.02	0.15	0.00	0.16	0.17	0.03	0.06	0.06
s, saturation flow rate [veh/h]	1337	1870	1589	1250	1863	1781	1870	1600	1781	1870	1789
c, Capacity [veh/h]	386	388	330	413	318	8	812	695	120	948	907
d1, Uniform Delay [s]	20.10	26.50	24.82	18.85	30.44	37.19	14.31	14.38	33.74	9.65	9.66
k, delay calibration	0.19	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	1.15	0.38	0.07	8.73	7.10	1.31	1.59	3.17	0.23	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.54	0.25	0.07	0.89	0.13	0.37	0.38	0.50	0.11	0.11
d, Delay for Lane Group [s/veh]	20.67	27.66	25.20	18.92	39.17	44.29	15.62	15.97	36.92	9.88	9.91
Lane Group LOS	C	C	C	B	D	D	B	B	D	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.21	3.26	1.18	0.36	5.52	0.03	3.34	2.99	1.13	0.86	0.85
50th-Percentile Queue Length [ft/ln]	30.37	81.45	29.45	8.88	137.90	0.82	83.54	74.83	28.35	21.62	21.27
95th-Percentile Queue Length [veh/ln]	2.19	5.86	2.12	0.64	9.37	0.06	6.02	5.39	2.04	1.56	1.53
95th-Percentile Queue Length [ft/ln]	54.67	146.60	53.01	15.99	234.20	1.48	150.38	134.70	51.02	38.91	38.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.67	27.66	25.20	18.92	39.17	39.17	44.29	15.63	15.97	36.92	9.89	9.91
Movement LOS	C	C	C	B	D	D	D	B	B	D	A	A
d_A, Approach Delay [s/veh]	25.40			37.24			15.83			16.04		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	22.66											
Intersection LOS	C											
Intersection V/C	0.395											

Emissions

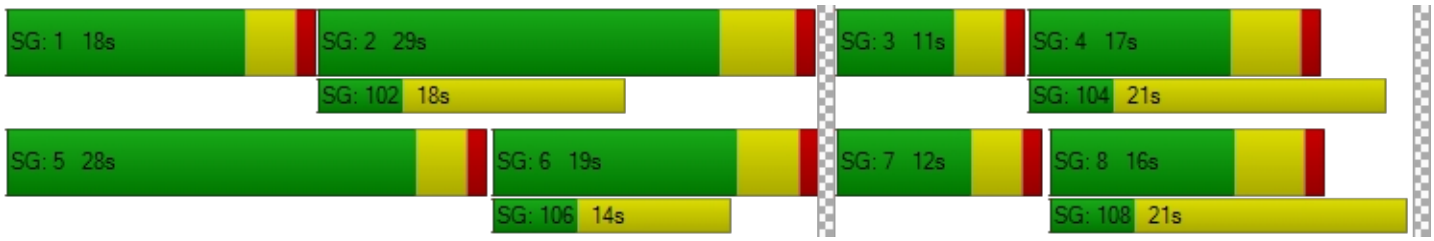
Vehicle Miles Traveled [mph]	3.42	7.40	2.88	2.44	23.14	0.03	8.60	7.54	13.64	23.44	22.95
Stops [stops/h]	58.31	156.37	56.54	17.06	264.77	1.58	160.40	143.68	54.42	41.51	40.83
Fuel consumption [US gal/h]	0.97	2.63	0.95	0.34	5.14	0.03	2.85	2.54	1.31	1.40	1.37
CO [g/h]	67.99	183.76	66.45	23.55	359.08	1.79	198.88	177.85	91.79	97.97	96.04
NOx [g/h]	13.23	35.75	12.93	4.58	69.86	0.35	38.70	34.60	17.86	19.06	18.69
VOC [g/h]	15.76	42.59	15.40	5.46	83.22	0.41	46.09	41.22	21.27	22.70	22.26

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.401	2.141	2.540	2.437
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	291	317	629	381
d_b, Bicycle Delay [s]	27.39	26.54	17.61	24.56
l_b,int, Bicycle LOS Score for Intersection	2.409	2.292	2.243	1.992
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.275

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	0	7	0	0	12	0	345	40	21	290	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	0	8	0	0	14	0	407	47	25	342	52
Peak Hour Factor	0.9340	0.9500	0.9340	0.9500	0.9500	0.9340	0.9500	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	0	2	0	0	4	0	109	13	7	92	14
Total Analysis Volume [veh/h]	61	0	9	0	0	15	0	436	50	27	366	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	0	0	0	0	26	0	26	0	11	37	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	5	5	2	47	47	54	54
g / C, Green / Cycle	0.07	0.07	0.03	0.62	0.62	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.03	0.01	0.01	0.13	0.13	0.03	0.23
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1804	991	1827
c, Capacity [veh/h]	128	114	43	1163	1122	789	1308
d1, Uniform Delay [s]	33.45	32.49	35.83	6.16	6.20	3.27	3.94
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.74	0.29	4.75	0.41	0.44	0.02	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.08	0.35	0.21	0.22	0.03	0.32
d, Delay for Lane Group [s/veh]	36.19	32.78	40.59	6.57	6.64	3.29	4.59
Lane Group LOS	D	C	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.15	0.16	0.32	1.52	1.53	0.09	1.89
50th-Percentile Queue Length [ft/ln]	28.77	4.01	8.10	37.97	38.32	2.16	47.29
95th-Percentile Queue Length [veh/ln]	2.07	0.29	0.58	2.73	2.76	0.16	3.41
95th-Percentile Queue Length [ft/ln]	51.79	7.21	14.57	68.35	68.97	3.89	85.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.19	0.00	32.78	0.00	0.00	40.59	0.00	6.60	6.64	3.29	4.59	4.59
Movement LOS	D		C			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	35.75			40.59			6.61			4.52		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	8.19											
Intersection LOS	A											
Intersection V/C	0.275											

Emissions

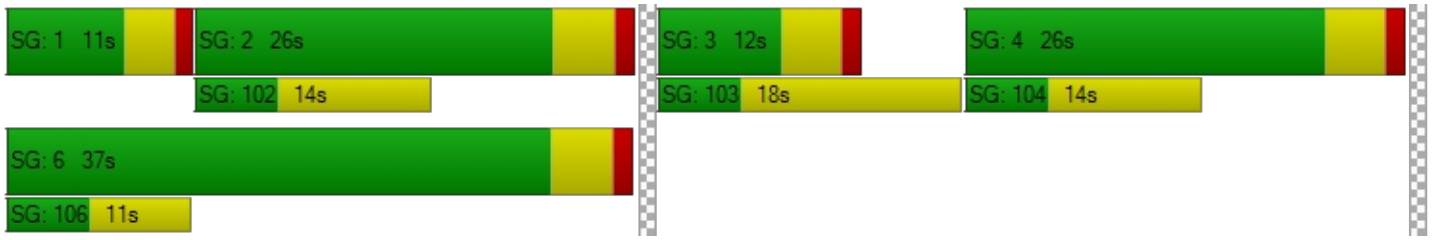
Vehicle Miles Traveled [mph]	4.57	0.67	0.37	18.60	18.60	4.07	63.65
Stops [stops/h]	55.25	7.69	15.55	72.91	73.57	4.15	90.80
Fuel consumption [US gal/h]	0.87	0.12	0.20	1.49	1.50	0.21	3.52
CO [g/h]	60.59	8.38	13.98	104.41	104.90	14.58	245.80
NOx [g/h]	11.79	1.63	2.72	20.32	20.41	2.84	47.82
VOC [g/h]	14.04	1.94	3.24	24.20	24.31	3.38	56.97

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	1.997	1.736	2.234	2.341
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	197	571	568	861
d_b, Bicycle Delay [s]	30.47	19.15	19.22	12.16
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.175	2.515
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	51	4	4	65	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	5	5	77	1	2
Peak Hour Factor	0.8890	0.8890	0.8890	0.8890	0.8890	0.8890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	1	1	22	0	1
Total Analysis Volume [veh/h]	67	6	6	87	1	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.37	0.00	9.41	8.64
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.30	0.00	0.24	0.24
d_A, Approach Delay [s/veh]	0.00		0.48		8.90	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.42					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.154

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	6	2	10	37	17	40	29	13	2	85	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	7	2	12	44	20	47	34	15	2	100	12
Peak Hour Factor	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	2	1	3	12	6	13	10	4	1	28	3
Total Analysis Volume [veh/h]	19	8	2	14	50	23	53	39	17	2	113	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	635	716	641	735	824	840
Degree of Utilization, x	0.03	0.01	0.02	0.10	0.13	0.15

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.09	0.04	0.07	0.33	0.46	0.54
95th-Percentile Queue Length [ft]	2.31	1.06	1.67	8.23	11.38	13.52
Approach Delay [s/veh]	8.29		8.18		8.04	8.06
Approach LOS	A		A		A	A
Intersection Delay [s/veh]	8.10					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	7.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	4	15	9	38	5	7	18	8	7	11	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	5	18	11	45	6	8	21	9	8	13	12
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	5	3	13	2	2	6	3	2	4	3
Total Analysis Volume [veh/h]	17	6	20	12	51	7	9	24	10	9	15	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	667	826	683	754	884	762	772
Degree of Utilization, x	0.03	0.03	0.02	0.07	0.01	0.06	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.08	0.10	0.05	0.22	0.02	0.18	0.15
95th-Percentile Queue Length [ft]	1.96	2.44	1.34	5.42	0.60	4.48	3.77
Approach Delay [s/veh]	7.61		7.76			8.01	7.90
Approach LOS	A		A			A	A
Intersection Delay [s/veh]	7.81						
Intersection LOS	A						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.327

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	11	10	11	24	29	14	241	28	177	338	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	13	12	13	28	34	17	284	33	209	399	27
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	4	3	4	8	9	5	78	9	57	109	7
Total Analysis Volume [veh/h]	19	14	13	14	31	37	19	310	36	228	436	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	31	0	0	31	0	11	23	0	11	23	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	5	5	5	5	50	39	50	44
g / C, Green / Cycle	0.08	0.08	0.08	0.08	0.77	0.61	0.77	0.68
(v / s)_i Volume / Saturation Flow Rate	0.02	0.02	0.01	0.04	0.02	0.21	0.22	0.28
s, saturation flow rate [veh/h]	1199	1551	1245	1536	896	1653	1050	1665
c, Capacity [veh/h]	131	131	163	130	742	1002	868	1133
d1, Uniform Delay [s]	31.94	27.72	30.16	28.50	2.28	6.36	2.47	4.59
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.51	0.77	0.22	3.26	0.06	0.94	0.74	1.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.21	0.09	0.52	0.03	0.35	0.26	0.41
d, Delay for Lane Group [s/veh]	32.45	28.49	30.38	31.76	2.35	7.31	3.21	5.69
Lane Group LOS	C	C	C	C	A	A	A	A
Critical Lane Group	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.31	0.41	0.22	1.11	0.04	2.20	0.55	2.34
50th-Percentile Queue Length [ft/ln]	7.75	10.24	5.44	27.63	1.01	55.09	13.82	58.49
95th-Percentile Queue Length [veh/ln]	0.56	0.74	0.39	1.99	0.07	3.97	0.99	4.21
95th-Percentile Queue Length [ft/ln]	13.96	18.43	9.79	49.73	1.81	99.16	24.87	105.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.45	28.49	28.49	30.38	31.76	31.76	2.35	7.31	7.31	3.21	5.69	5.69
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.13			31.53			7.05			4.88		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	8.37											
Intersection LOS	A											
Intersection V/C	0.327											

Emissions

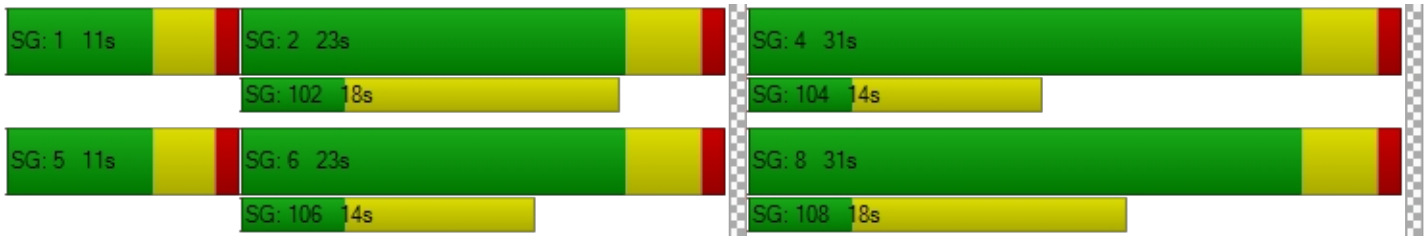
Vehicle Miles Traveled [mph]	1.54	2.18	1.10	5.35	3.04	55.45	34.12	69.58
Stops [stops/h]	17.18	22.68	12.05	61.21	2.23	122.04	30.61	129.58
Fuel consumption [US gal/h]	0.26	0.34	0.18	0.92	0.15	3.48	1.80	4.16
CO [g/h]	18.20	23.89	12.75	63.96	10.80	242.98	125.86	291.11
NOx [g/h]	3.54	4.65	2.48	12.44	2.10	47.28	24.49	56.64
VOC [g/h]	4.22	5.54	2.95	14.82	2.50	56.31	29.17	67.47

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.392	1.983	2.184	2.345
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	812	812	566	566
d_b, Bicycle Delay [s]	11.46	11.46	16.70	16.70
l_b,int, Bicycle LOS Score for Intersection	1.850	1.909	2.376	2.917
Bicycle LOS	A	A	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.285

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	10	150	38	12	315	37	120	320	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	12	177	45	14	371	44	141	377	28
Peak Hour Factor	0.9500	0.9500	0.9500	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	4	53	14	4	112	13	42	114	8
Total Analysis Volume [veh/h]	0	0	0	14	213	54	17	447	53	170	454	34
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	30	0	11	19	0	11	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		8	8	43	33	33	43	37	37
g / C, Green / Cycle		0.13	0.13	0.72	0.54	0.54	0.72	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate		0.09	0.09	0.02	0.15	0.15	0.18	0.15	0.15
s, saturation flow rate [veh/h]		1675	1575	886	1683	1621	966	1683	1642
c, Capacity [veh/h]		213	200	747	914	880	794	1049	1023
d1, Uniform Delay [s]		24.98	25.05	2.57	7.38	7.39	2.96	4.99	4.99
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.61	4.20	0.06	0.76	0.79	0.62	0.53	0.54
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.67	0.69	0.02	0.28	0.28	0.21	0.24	0.24
d, Delay for Lane Group [s/veh]		28.58	29.25	2.63	8.14	8.19	3.58	5.52	5.53
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.07	2.04	0.05	1.67	1.63	0.52	1.20	1.17
50th-Percentile Queue Length [ft/ln]		51.73	50.95	1.15	41.74	40.79	12.94	29.88	29.34
95th-Percentile Queue Length [veh/ln]		3.72	3.67	0.08	3.01	2.94	0.93	2.15	2.11
95th-Percentile Queue Length [ft/ln]		93.12	91.71	2.08	75.14	73.41	23.29	53.78	52.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.58	28.85	29.25	2.63	8.16	8.19	3.58	5.52	5.53
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			28.91			7.98			5.02		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.68											
Intersection LOS	B											
Intersection V/C	0.285											

Emissions

Vehicle Miles Traveled [mph]		11.54	11.18	2.77	41.26	40.07	25.52	37.03	36.22
Stops [stops/h]		124.16	122.28	2.77	100.19	97.89	31.06	71.71	70.41
Fuel consumption [US gal/h]		1.83	1.80	0.14	2.66	2.59	1.39	2.22	2.17
CO [g/h]		127.57	125.49	10.07	185.93	180.90	97.19	154.98	151.74
NOx [g/h]		24.82	24.42	1.96	36.17	35.20	18.91	30.15	29.52
VOC [g/h]		29.57	29.08	2.33	43.09	41.93	22.53	35.92	35.17

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.202	2.027	2.447	2.462
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	847	480	480
d_b, Bicycle Delay [s]	30.00	9.98	17.33	17.33
l_b,int, Bicycle LOS Score for Intersection	4.132	2.006	2.201	2.317
Bicycle LOS	D	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.181

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	97	55	0	126	31	37	69	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	37	114	65	0	149	37	44	81	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.8850	0.8850	0.8850	0.9500	0.8850	0.8850	0.8850	0.8850	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	10	32	18	0	42	10	12	23	0
Total Analysis Volume [veh/h]	0	0	0	42	129	73	0	168	42	50	92	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	24	0	0	26	0	0	26	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		7	7	7	34	34	34
g / C, Green / Cycle		0.14	0.14	0.14	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate		0.05	0.05	0.05	0.13	0.05	0.05
s, saturation flow rate [veh/h]		1642	1683	1431	1626	1054	1683
c, Capacity [veh/h]		229	234	199	1097	746	1136
d1, Uniform Delay [s]		19.53	19.52	19.52	3.04	4.82	2.80
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.00	0.96	1.13	0.39	0.17	0.14
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.37	0.37	0.37	0.19	0.07	0.08
d, Delay for Lane Group [s/veh]		20.54	20.48	20.64	3.42	5.00	2.94
Lane Group LOS		C	C	C	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.90	0.91	0.78	0.51	0.20	0.20
50th-Percentile Queue Length [ft/ln]		22.50	22.68	19.49	12.64	4.89	5.01
95th-Percentile Queue Length [veh/ln]		1.62	1.63	1.40	0.91	0.35	0.36
95th-Percentile Queue Length [ft/ln]		40.50	40.82	35.08	22.74	8.80	9.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.54	20.50	20.64	0.00	3.42	3.42	5.00	2.94	0.00
Movement LOS				C	C	C		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			20.55			3.42			3.66		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.49											
Intersection LOS	B											
Intersection V/C	0.181											

Emissions

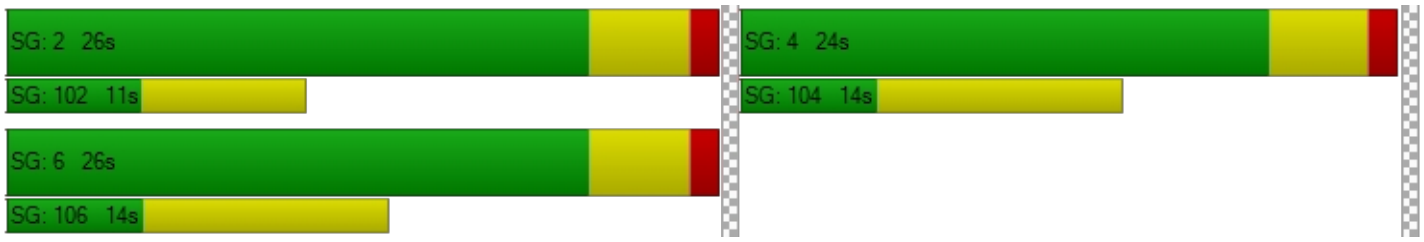
Vehicle Miles Traveled [mph]		6.41	6.48	5.50	35.06	7.31	13.46
Stops [stops/h]		64.80	65.31	56.13	36.39	14.08	14.42
Fuel consumption [US gal/h]		0.89	0.90	0.77	1.79	0.43	0.69
CO [g/h]		62.37	62.93	53.79	125.18	30.04	48.14
NOx [g/h]		12.14	12.24	10.47	24.36	5.84	9.37
VOC [g/h]		14.46	14.58	12.47	29.01	6.96	11.16

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.864	1.977	1.868	2.025
Crosswalk LOS	A	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	776	852	852
d_b, Bicycle Delay [s]	25.00	9.36	8.24	8.24
l_b,int, Bicycle LOS Score for Intersection	4.132	1.975	2.121	2.008
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.234

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	93	0	43	0	0	5	0	285	81	50	250	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	0	51	0	0	6	0	336	95	59	295	0
Peak Hour Factor	0.9530	0.9500	0.9530	0.9500	0.9500	0.9530	0.9500	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	0	13	0	0	2	0	88	25	15	77	0
Total Analysis Volume [veh/h]	115	0	54	0	0	6	0	353	100	62	310	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	14	0	0	0	0	25	0	25	0	11	36	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	7	7	1	45	45	54	54
g / C, Green / Cycle	0.09	0.09	0.01	0.60	0.60	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.06	0.03	0.00	0.12	0.13	0.06	0.17
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1735	1049	1870
c, Capacity [veh/h]	162	144	21	1117	1037	830	1344
d1, Uniform Delay [s]	33.13	32.08	36.67	6.91	6.99	3.28	3.56
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.65	1.60	7.52	0.41	0.48	0.04	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.37	0.29	0.20	0.22	0.07	0.23
d, Delay for Lane Group [s/veh]	38.78	33.68	44.18	7.32	7.47	3.32	3.96
Lane Group LOS	D	C	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.20	0.95	0.15	1.54	1.57	0.20	1.25
50th-Percentile Queue Length [ft/ln]	55.01	23.73	3.78	38.44	39.14	4.96	31.15
95th-Percentile Queue Length [veh/ln]	3.96	1.71	0.27	2.77	2.82	0.36	2.24
95th-Percentile Queue Length [ft/ln]	99.01	42.71	6.80	69.19	70.45	8.92	56.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.78	0.00	33.68	0.00	0.00	44.18	0.00	7.37	7.47	3.32	3.96	3.96
Movement LOS	D		C			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	37.15			44.18			7.40			3.85		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	11.33											
Intersection LOS	B											
Intersection V/C	0.234											

Emissions

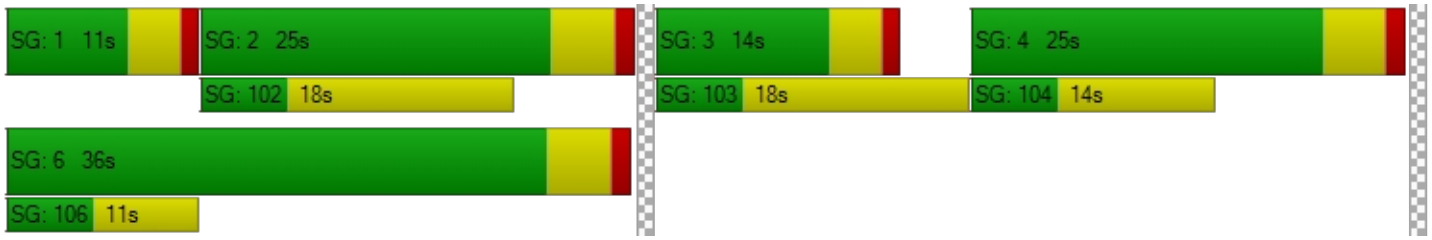
Vehicle Miles Traveled [mph]	8.69	4.08	0.16	34.16	34.16	2.10	10.50
Stops [stops/h]	105.61	45.56	7.25	73.81	75.15	9.52	59.81
Fuel consumption [US gal/h]	2.03	0.87	0.09	2.15	2.17	0.18	1.01
CO [g/h]	142.10	60.69	6.23	150.40	151.40	12.65	70.78
NOx [g/h]	27.65	11.81	1.21	29.26	29.46	2.46	13.77
VOC [g/h]	32.93	14.07	1.44	34.86	35.09	2.93	16.40

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.273	1.710	2.220	2.313
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	267	544	541	835
d_b, Bicycle Delay [s]	28.17	19.87	19.95	12.73
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.148	2.388
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	131	4	1	131	1	0	0	8	3	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	154	5	1	154	1	0	0	9	4	1	2
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	40	1	0	40	0	0	0	2	1	0	1
Total Analysis Volume [veh/h]	9	159	5	1	159	1	0	0	9	4	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	7.55	0.00	0.00	10.45	11.31	8.77	10.51	11.31	8.80
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.01	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.38	0.19	0.00	0.04	0.02	0.00	0.71	0.71	0.71	0.75	0.75	0.75
d_A, Approach Delay [s/veh]	0.39			0.05			8.77			10.13		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.64											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	139	16	6	131	6	3	5	37	14	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	164	19	7	154	7	4	6	44	17	1	2
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	48	6	2	45	2	1	2	13	5	0	1
Total Analysis Volume [veh/h]	78	192	22	8	180	8	5	7	51	20	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.06	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	7.69	0.00	0.00	7.66	0.00	0.00	14.35	14.47	9.69	15.55	14.50	9.90
Movement LOS	A	A	A	A	A	A	B	B	A	C	B	A
95th-Percentile Queue Length [veh/ln]	0.14	0.14	0.14	0.01	0.01	0.01	0.29	0.29	0.29	0.19	0.19	0.19
95th-Percentile Queue Length [ft/ln]	3.47	3.47	3.47	0.34	0.34	0.34	7.32	7.32	7.32	4.78	4.78	4.78
d_A, Approach Delay [s/veh]	2.05			0.31			10.59			15.02		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	2.92											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	108	26	28	192	25	8	207	46	311	507	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	127	31	33	226	29	9	244	54	367	598	158
Peak Hour Factor	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	38	9	10	68	9	3	74	16	111	181	48
Total Analysis Volume [veh/h]	1	153	37	40	273	35	11	295	65	443	722	191
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	13	0	11	13	0	11	26	0	30	45	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	17	9	9	17	13	13	2	25	25	24	47	47
g / C, Green / Cycle	0.21	0.11	0.11	0.21	0.16	0.16	0.02	0.32	0.32	0.30	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.00	0.09	0.03	0.03	0.09	0.09	0.01	0.11	0.11	0.28	0.43	0.13
s, saturation flow rate [veh/h]	1048	1683	1431	1264	1683	1617	1603	1683	1580	1603	1683	1431
c, Capacity [veh/h]	267	189	161	305	272	261	32	533	500	477	998	848
d1, Uniform Delay [s]	25.02	34.65	32.34	25.64	31.00	31.05	38.68	20.97	21.04	27.27	11.61	7.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.34	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	7.91	0.72	0.19	1.91	2.06	6.17	1.77	1.95	20.20	4.56	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.81	0.23	0.13	0.57	0.58	0.34	0.34	0.35	0.93	0.72	0.23
d, Delay for Lane Group [s/veh]	25.03	42.57	33.06	25.83	32.91	33.12	44.85	22.74	22.98	47.47	16.17	8.27
Lane Group LOS	C	D	C	C	C	C	D	C	C	D	B	A
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.01	3.21	0.66	0.60	2.81	2.76	0.27	2.84	2.76	10.47	9.04	1.50
50th-Percentile Queue Length [ft/ln]	0.37	80.28	16.57	15.12	70.19	68.89	6.67	71.05	68.98	261.66	225.98	37.52
95th-Percentile Queue Length [veh/ln]	0.03	5.78	1.19	1.09	5.05	4.96	0.48	5.12	4.97	15.77	13.97	2.70
95th-Percentile Queue Length [ft/ln]	0.66	144.50	29.83	27.21	126.35	124.00	12.01	127.90	124.17	394.30	349.25	67.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.03	42.57	33.06	25.83	33.00	33.12	44.85	22.83	22.98	47.47	16.17	8.27
Movement LOS	C	D	C	C	C	C	D	C	C	D	B	A
d_A, Approach Delay [s/veh]	40.63			32.19			23.51			25.28		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	27.35											
Intersection LOS	C											
Intersection V/C	0.548											

Emissions

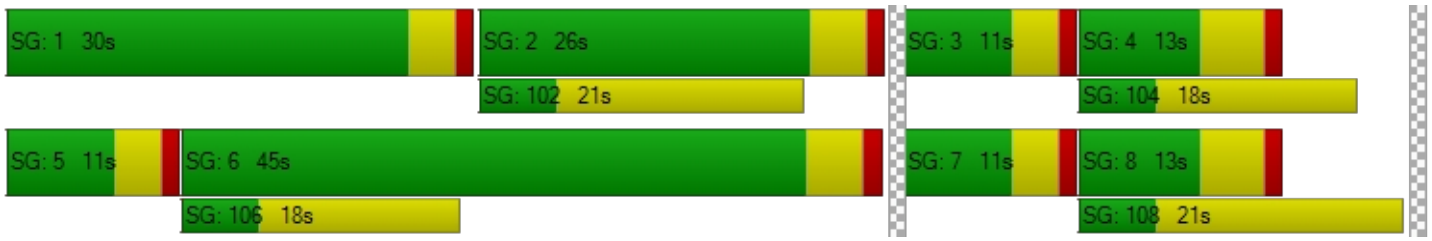
Vehicle Miles Traveled [mph]	0.08	12.44	3.01	3.13	12.20	11.92	1.65	27.46	26.40	21.87	35.64	9.43
Stops [stops/h]	0.66	144.50	29.83	27.21	126.35	124.00	12.01	127.90	124.17	470.99	406.76	67.53
Fuel consumption [US gal/h]	0.01	2.89	0.59	0.53	2.46	2.41	0.22	2.57	2.49	7.78	6.09	1.08
CO [g/h]	0.92	201.74	41.10	37.35	171.87	168.62	15.41	179.99	173.99	543.91	425.74	75.68
NOx [g/h]	0.18	39.25	8.00	7.27	33.44	32.81	3.00	35.02	33.85	105.83	82.83	14.73
VOC [g/h]	0.21	46.75	9.52	8.66	39.83	39.08	3.57	41.71	40.32	126.06	98.67	17.54

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.517	2.327	2.356	2.640
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	198	198	535	1008
d_b, Bicycle Delay [s]	32.49	32.49	21.46	9.85
l_b,int, Bicycle LOS Score for Intersection	2.089	2.061	2.080	4.011
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	31.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.473

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	67	97	56	472	26	2	233	113	282	434	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	79	114	66	556	31	2	275	133	332	512	94
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	24	35	20	172	10	1	85	41	102	158	29
Total Analysis Volume [veh/h]	21	98	141	81	686	38	2	340	164	410	632	116
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	24	0	11	24	0	29	29	0	26	26	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	28	18	18	28	22	22	0	34	34	14	47	47
g / C, Green / Cycle	0.32	0.20	0.20	0.32	0.24	0.24	0.00	0.37	0.37	0.16	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.10	0.07	0.22	0.22	0.00	0.11	0.11	0.13	0.23	0.23
s, saturation flow rate [veh/h]	820	3204	1431	1191	1683	1652	1603	3204	1431	3113	1683	1593
c, Capacity [veh/h]	234	652	291	465	402	395	10	1195	534	496	886	839
d1, Uniform Delay [s]	23.48	29.45	31.68	22.24	33.29	33.30	44.52	19.79	19.99	36.62	13.08	13.08
k, delay calibration	0.11	0.11	0.11	0.11	0.28	0.28	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	0.11	1.25	0.18	17.52	17.85	10.57	0.60	1.49	3.57	1.54	1.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.15	0.48	0.17	0.91	0.91	0.21	0.28	0.31	0.83	0.43	0.43
d, Delay for Lane Group [s/veh]	23.64	29.56	32.92	22.42	50.81	51.15	55.10	20.39	21.48	40.20	14.62	14.72
Lane Group LOS	C	C	C	C	D	D	E	C	C	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.31	0.86	2.73	1.22	9.38	9.25	0.07	2.57	2.63	4.58	4.93	4.70
50th-Percentile Queue Length [ft/ln]	7.71	21.47	68.22	30.43	234.48	231.20	1.81	64.37	65.80	114.53	123.34	117.58
95th-Percentile Queue Length [veh/ln]	0.56	1.55	4.91	2.19	14.40	14.24	0.13	4.63	4.74	8.09	8.58	8.26
95th-Percentile Queue Length [ft/ln]	13.89	38.65	122.80	54.78	360.05	355.88	3.26	115.86	118.44	202.28	214.41	206.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.64	29.56	32.92	22.42	50.97	51.15	55.10	20.39	21.48	40.20	14.66	14.72
Movement LOS	C	C	C	C	D	D	E	C	C	D	B	B
d_A, Approach Delay [s/veh]	30.91			48.10			20.88			23.71		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	31.07											
Intersection LOS	C											
Intersection V/C	0.473											

Emissions

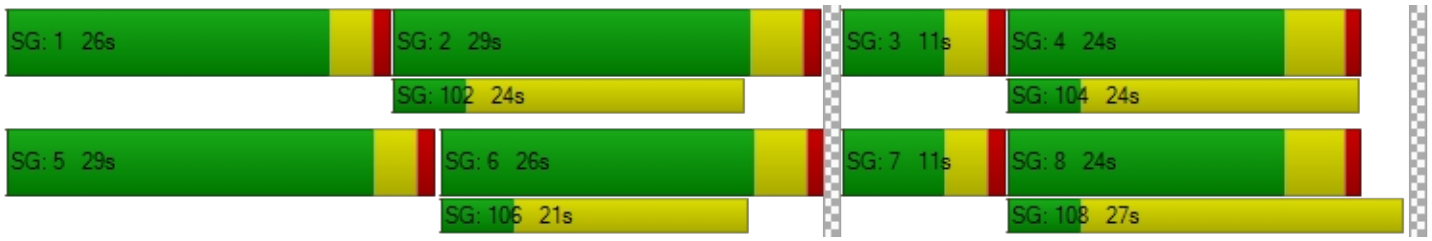
Vehicle Miles Traveled [mph]	1.63	7.60	10.94	6.58	29.69	29.16	0.30	51.03	24.62	29.60	27.71	26.29
Stops [stops/h]	12.34	68.70	109.16	48.69	375.17	369.92	2.90	205.97	105.28	366.49	197.35	188.13
Fuel consumption [US gal/h]	0.26	1.40	2.18	0.99	7.73	7.63	0.05	4.50	2.23	6.09	3.15	2.99
CO [g/h]	17.89	97.58	152.56	68.97	540.33	533.15	3.29	314.28	155.71	425.72	219.87	209.33
NOx [g/h]	3.48	18.98	29.68	13.42	105.13	103.73	0.64	61.15	30.30	82.83	42.78	40.73
VOC [g/h]	4.15	22.61	35.36	15.98	125.23	123.56	0.76	72.84	36.09	98.67	50.96	48.51

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.743	2.534	2.624	2.821
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	420	420	542	476
d_b, Bicycle Delay [s]	28.08	28.08	23.91	26.14
l_b,int, Bicycle LOS Score for Intersection	1.989	2.438	2.191	2.729
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.307

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	211	5	316	301	109	14	87	27	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	249	6	373	355	129	17	103	32	0	0	0
Peak Hour Factor	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	74	2	112	106	39	5	31	10	0	0	0
Total Analysis Volume [veh/h]	62	298	7	446	425	154	20	123	38	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	17	0	18	24	0	0	30	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	5	33	33	11	40	40	7	7	7	
g / C, Green / Cycle	0.07	0.51	0.51	0.18	0.61	0.61	0.10	0.10	0.10	
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.09	0.14	0.18	0.18	0.01	0.07	0.03	
s, saturation flow rate [veh/h]	1603	1683	1669	3113	1683	1532	1603	1683	1431	
c, Capacity [veh/h]	117	852	845	547	1025	933	170	178	151	
d1, Uniform Delay [s]	29.06	8.72	8.72	25.78	6.06	6.06	26.31	28.03	26.69	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.71	0.46	0.47	3.04	0.74	0.81	0.31	4.72	0.86	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.53	0.18	0.18	0.82	0.30	0.30	0.12	0.69	0.25	
d, Delay for Lane Group [s/veh]	32.78	9.18	9.19	28.82	6.79	6.87	26.62	32.75	27.55	
Lane Group LOS	C	A	A	C	A	A	C	C	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	1.00	1.08	1.08	3.30	1.66	1.53	0.28	2.00	0.55	
50th-Percentile Queue Length [ft/ln]	24.99	27.04	26.94	82.39	41.50	38.26	7.09	49.89	13.86	
95th-Percentile Queue Length [veh/ln]	1.80	1.95	1.94	5.93	2.99	2.75	0.51	3.59	1.00	
95th-Percentile Queue Length [ft/ln]	44.98	48.68	48.49	148.30	74.71	68.87	12.75	89.80	24.96	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.78	9.18	9.19	28.82	6.81	6.87	26.62	32.75	27.55	0.00	0.00	0.00
Movement LOS	C	A	A	C	A	A	C	C	C			
d_A, Approach Delay [s/veh]	13.17			16.40			30.98			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	17.32											
Intersection LOS	B											
Intersection V/C	0.307											

Emissions

Vehicle Miles Traveled [mph]	2.46	6.06	6.03	32.75	22.25	20.26	2.93	17.99	5.56
Stops [stops/h]	55.36	59.91	59.69	365.03	91.95	84.77	15.70	110.53	30.71
Fuel consumption [US gal/h]	0.92	0.97	0.96	6.61	1.96	1.80	0.32	2.17	0.61
CO [g/h]	64.56	67.61	67.33	461.97	136.92	125.51	22.05	151.76	42.75
NOx [g/h]	12.56	13.15	13.10	89.88	26.64	24.42	4.29	29.53	8.32
VOC [g/h]	14.96	15.67	15.60	107.07	31.73	29.09	5.11	35.17	9.91

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.474	2.692	2.213	1.981
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	366	582	778	0
d_b, Bicycle Delay [s]	21.69	16.35	12.12	32.50
l_b,int, Bicycle LOS Score for Intersection	2.077	2.620	2.073	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.564

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	124	827	0	260	126	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	146	975	0	307	149	0
Peak Hour Factor	0.8530	0.8530	0.9500	0.8530	0.8530	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	286	0	90	44	0
Total Analysis Volume [veh/h]	171	1143	0	360	175	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	32	0	0	23	23	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	55	55	55	55
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	27	27	19	19
g / C, Green / Cycle	0.49	0.49	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.11	0.45	0.11	0.05
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	784	1238	1131	1131
d1, Uniform Delay [s]	8.04	13.09	12.97	12.18
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	3.44	0.74	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.92	0.32	0.15
d, Delay for Lane Group [s/veh]	8.18	16.53	13.71	12.47
Lane Group LOS	A	B	B	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.93	5.50	1.53	0.69
50th-Percentile Queue Length [ft/ln]	23.33	137.62	38.31	17.30
95th-Percentile Queue Length [veh/ln]	1.68	9.35	2.76	1.25
95th-Percentile Queue Length [ft/ln]	41.99	233.82	68.96	31.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.18	16.53	0.00	13.71	12.47	0.00
Movement LOS	A	B		B	B	
d_A, Approach Delay [s/veh]	15.45		13.71		12.47	
Approach LOS	B		B		B	
d_I, Intersection Delay [s/veh]	14.83					
Intersection LOS	B					
Intersection V/C	0.564					

Emissions

Vehicle Miles Traveled [mph]	14.34	95.82	17.77	8.40
Stops [stops/h]	61.07	720.64	200.61	90.59
Fuel consumption [US gal/h]	1.29	12.92	2.84	1.29
CO [g/h]	90.20	902.97	198.86	90.20
NOx [g/h]	17.55	175.69	38.69	17.55
VOC [g/h]	20.90	209.27	46.09	20.90

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.481	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1018	665	665
d_b, Bicycle Delay [s]	6.63	12.24	12.24
l_b,int, Bicycle LOS Score for Intersection	1.774	2.071	1.918
Bicycle LOS	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	74	171	43	0	0	0	213	165	0	0	50	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	202	51	0	0	0	251	195	0	0	59	105
Peak Hour Factor	0.9110	0.9110	0.9110	0.9500	0.9500	0.9500	0.9110	0.9110	0.9500	0.9500	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	55	14	0	0	0	69	54	0	0	16	29
Total Analysis Volume [veh/h]	95	222	56	0	0	0	276	214	0	0	65	115
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	17	0	0	0	0	17	33	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	50	50		50	50	50	50
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	10	10		10	30	16	16
g / C, Green / Cycle	0.21	0.21		0.21	0.60	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.06	0.17		0.17	0.07	0.04	0.08
s, saturation flow rate [veh/h]	1603	1625		1603	3204	1683	1431
c, Capacity [veh/h]	332	337		330	1912	523	444
d1, Uniform Delay [s]	16.70	18.96		19.03	4.35	12.36	12.92
k, delay calibration	0.11	0.16		0.17	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	7.53		8.25	0.12	0.49	1.41
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.83		0.84	0.11	0.12	0.26
d, Delay for Lane Group [s/veh]	17.17	26.49		27.28	4.47	12.84	14.33
Lane Group LOS	B	C		C	A	B	B
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.84	3.36		3.48	0.34	0.52	1.01
50th-Percentile Queue Length [ft/ln]	21.05	83.92		86.90	8.55	13.05	25.20
95th-Percentile Queue Length [veh/ln]	1.52	6.04		6.26	0.62	0.94	1.81
95th-Percentile Queue Length [ft/ln]	37.88	151.05		156.42	15.39	23.48	45.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.17	26.49	26.49	0.00	0.00	0.00	27.28	4.47	0.00	0.00	12.84	14.33
Movement LOS	B	C	C				C	A			B	B
d_A, Approach Delay [s/veh]	24.12			0.00			17.32			13.79		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	19.14											
Intersection LOS	B											
Intersection V/C	0.424											

Emissions

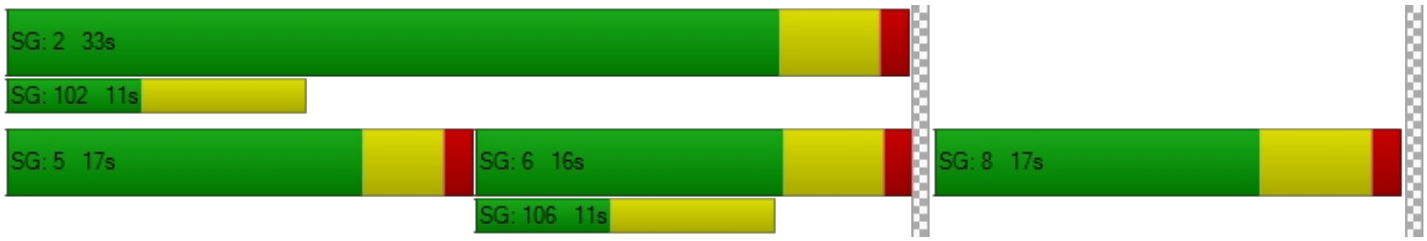
Vehicle Miles Traveled [mph]	8.28	24.22		13.24	10.27	2.38	4.21
Stops [stops/h]	60.61	241.68		250.27	49.25	37.58	72.57
Fuel consumption [US gal/h]	1.10	4.24		3.46	0.89	0.48	0.91
CO [g/h]	77.12	296.34		241.89	62.19	33.24	63.58
NOx [g/h]	15.01	57.66		47.06	12.10	6.47	12.37
VOC [g/h]	17.87	68.68		56.06	14.41	7.70	14.73

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.897	1.984	0.000	0.000
Crosswalk LOS	A	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	476	0	1132	452
d_b, Bicycle Delay [s]	14.52	25.00	4.71	14.98
l_b,int, Bicycle LOS Score for Intersection	2.389	4.132	2.178	1.923
Bicycle LOS	B	D	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	331	94	231	0	0	0	80	308	0	0	468	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	390	111	272	0	0	0	94	363	0	0	552	113
Peak Hour Factor	0.8760	0.8760	0.8760	0.9500	0.9500	0.9500	0.8760	0.8760	0.9500	0.9500	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	111	32	78	0	0	0	27	104	0	0	158	32
Total Analysis Volume [veh/h]	445	127	311	0	0	0	107	414	0	0	630	129
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	14	30	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	26	26	26		6	24	14	14
g / C, Green / Cycle	0.44	0.44	0.44		0.10	0.40	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.20		0.03	0.12	0.18	0.08
s, saturation flow rate [veh/h]	1781	1819	1589		3459	3560	3560	1589
c, Capacity [veh/h]	774	790	691		343	1438	817	365
d1, Uniform Delay [s]	11.42	11.39	11.93		25.12	12.07	21.63	19.38
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.35	1.29	2.12		0.51	0.11	1.57	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.36	0.45		0.31	0.29	0.77	0.35
d, Delay for Lane Group [s/veh]	12.77	12.68	14.04		25.63	12.17	23.21	19.96
Lane Group LOS	B	B	B		C	B	C	B
Critical Lane Group	No	No	Yes		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.43	2.43	2.84		0.71	1.73	3.90	1.42
50th-Percentile Queue Length [ft/ln]	60.69	60.78	71.06		17.69	43.24	97.52	35.61
95th-Percentile Queue Length [veh/ln]	4.37	4.38	5.12		1.27	3.11	7.02	2.56
95th-Percentile Queue Length [ft/ln]	109.24	109.41	127.90		31.84	77.84	175.53	64.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.74	12.68	14.04	0.00	0.00	0.00	25.63	12.17	0.00	0.00	23.21	19.96
Movement LOS	B	B	B				C	B			C	B
d_A, Approach Delay [s/veh]	13.19			0.00			14.94			22.66		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	16.93											
Intersection LOS	B											
Intersection V/C	0.404											

Emissions

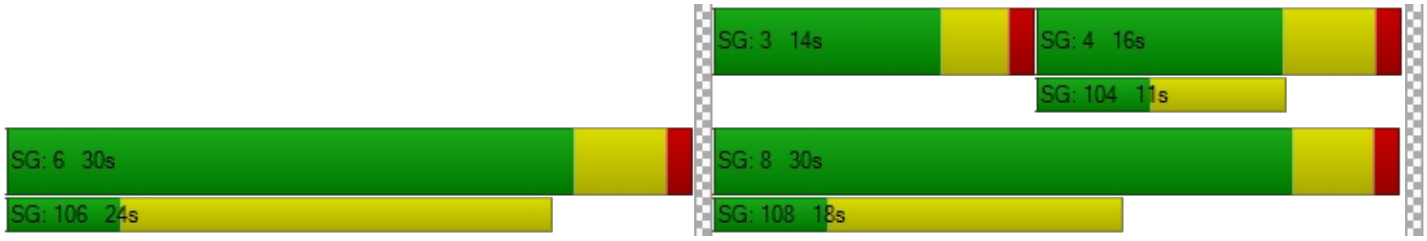
Vehicle Miles Traveled [mph]	11.15	11.24	12.17		7.72	29.89	31.86	6.52
Stops [stops/h]	145.65	145.88	170.54		84.90	207.57	468.07	85.45
Fuel consumption [US gal/h]	2.26	2.27	2.64		1.23	3.17	7.71	1.42
CO [g/h]	158.05	158.42	184.22		86.06	221.31	538.95	98.93
NOx [g/h]	30.75	30.82	35.84		16.74	43.06	104.86	19.25
VOC [g/h]	36.63	36.71	42.70		19.94	51.29	124.91	22.93

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.363	1.872	2.650	0.000
Crosswalk LOS	B	A	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	363
d_b, Bicycle Delay [s]	10.27	30.00	9.98	20.09
l_b,int, Bicycle LOS Score for Intersection	3.231	4.132	2.204	2.400
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\4 Cumulative PM.pdf
Scenario 8 Cumulative PM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	WB Right	0.735	31.5	C
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	SB Left	0.596	24.0	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	WB Left	0.539	13.3	B
4	Main St @ First St	Signalized	HCM 7th Edition	EB Right	0.426	13.3	B
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.044	18.9	C
6	Main St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.701	33.0	C
7	Market St @ First St	Signalized	HCM 7th Edition	WB Left	0.439	13.1	B
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.069	27.3	D
9	Market St @ Third St	Signalized	HCM 7th Edition	NB Right	0.733	35.7	D
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	EB Left	0.062	26.4	D
11	Market St @ Fifth St	Signalized	HCM 7th Edition	WB Right	0.366	10.7	B
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	WB Right	0.122	13.4	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	SB Left	0.722	33.7	C
14	Market St @ University Ave	Signalized	HCM 7th Edition	SB Left	0.623	31.8	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Right	0.345	7.1	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	WB Right	0.337	9.3	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	WB Left	0.060	49.6	E
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Right	0.369	10.4	B

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	EB Thru	0.175	67.4	F
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	WB Left	0.564	33.6	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.426	17.5	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.474	23.4	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.455	10.7	B
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.011	10.0	A
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	EB Thru	0.259	8.7	A
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	NB Left	0.136	8.5	A
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.404	11.1	B
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.357	9.9	A
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Left	0.250	9.5	A
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.485	15.3	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.008	12.2	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.093	16.4	C
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	WB Left	0.449	25.2	C
34	Lime St @ University Ave	Signalized	HCM 7th Edition	EB Left	0.724	34.5	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Left	0.619	24.0	C
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	SB Right	0.418	11.7	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.720	33.4	C
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.593	18.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	31.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.735

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	280	415	0	0	700	164	0	0	0	34	107	286
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	330	489	0	0	825	193	0	0	0	40	126	337
Peak Hour Factor	0.9350	0.9350	0.9500	0.9500	0.9350	0.9350	0.9500	0.9500	0.9500	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	88	131	0	0	221	52	0	0	0	11	34	90
Total Analysis Volume [veh/h]	353	523	0	0	882	206	0	0	0	43	135	360
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	37	51	0	0	14	0	0	0	0	0	39	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	20	57	33	33		23	23
g / C, Green / Cycle	0.22	0.63	0.37	0.37		0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.20	0.15	0.29	0.31		0.10	0.23
s, saturation flow rate [veh/h]	1781	3560	1870	1753		1848	1589
c, Capacity [veh/h]	397	2251	683	640		470	404
d1, Uniform Delay [s]	33.89	7.13	25.59	26.31		27.69	32.35
k, delay calibration	0.12	0.50	0.50	0.50		0.11	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	7.34	0.24	9.39	13.33		0.50	9.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.23	0.80	0.85		0.38	0.89
d, Delay for Lane Group [s/veh]	41.24	7.37	34.97	39.64		28.19	41.40
Lane Group LOS	D	A	C	D		C	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	8.00	1.94	11.56	12.43		3.13	8.25
50th-Percentile Queue Length [ft/ln]	199.92	48.45	289.09	310.73		78.15	206.18
95th-Percentile Queue Length [veh/ln]	12.63	3.49	17.14	18.21		5.63	12.96
95th-Percentile Queue Length [ft/ln]	315.86	87.22	428.51	455.27		140.66	323.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.24	7.37	0.00	0.00	36.76	39.64	0.00	0.00	0.00	28.19	28.19	41.40
Movement LOS	D	A			D	D				C	C	D
d_A, Approach Delay [s/veh]	21.02			37.31			0.00			37.03		
Approach LOS	C			D			A			D		
d_I, Intersection Delay [s/veh]	31.55											
Intersection LOS	C											
Intersection V/C	0.735											

Emissions

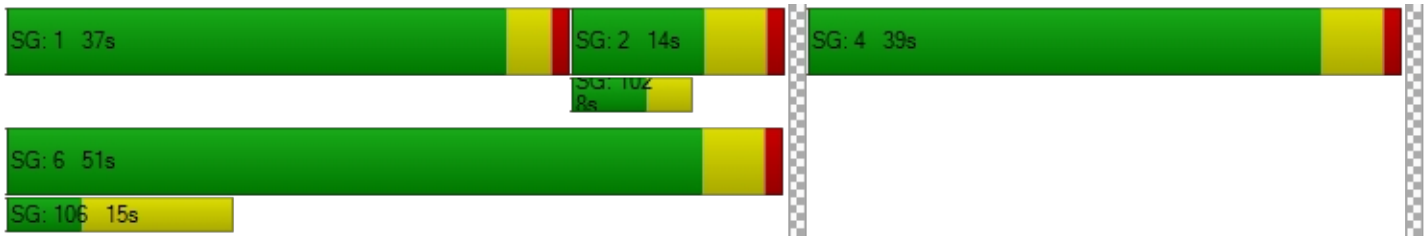
Vehicle Miles Traveled [mph]	21.00	31.11	20.14	20.14		6.53	13.21
Stops [stops/h]	319.87	155.05	462.54	497.16		125.03	329.89
Fuel consumption [US gal/h]	6.17	3.14	8.12	8.89		2.21	6.02
CO [g/h]	431.17	219.26	567.44	621.75		154.51	420.63
NOx [g/h]	83.89	42.66	110.40	120.97		30.06	81.84
VOC [g/h]	99.93	50.82	131.51	144.10		35.81	97.48

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.102	2.146
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1020	198	0	753
d_b, Bicycle Delay [s]	10.80	36.54	45.00	17.48
l_b,int, Bicycle LOS Score for Intersection	2.282	2.457	4.132	2.447
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	608	180	391	337	0	87	29	174	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	717	212	461	397	0	103	34	205	0	0	0
Peak Hour Factor	0.9500	0.9880	0.9880	0.9880	0.9880	0.9500	0.9880	0.9880	0.9880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	181	54	117	100	0	26	9	52	0	0	0
Total Analysis Volume [veh/h]	0	726	215	467	402	0	104	34	207	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	29	47	0	0	28	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	75	75	75	75	75	75	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	27	27	22	53	12	12	
g / C, Green / Cycle	0.36	0.36	0.29	0.70	0.16	0.16	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.14	0.26	0.11	0.08	0.13	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1802	1589	
c, Capacity [veh/h]	1282	572	512	2495	294	260	
d1, Uniform Delay [s]	19.29	17.76	25.82	3.79	28.43	30.18	
k, delay calibration	0.50	0.50	0.29	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.82	1.88	15.23	0.14	1.16	5.56	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.57	0.38	0.91	0.16	0.47	0.80	
d, Delay for Lane Group [s/veh]	21.11	19.64	41.05	3.93	29.59	35.74	
Lane Group LOS	C	B	D	A	C	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.97	2.83	9.60	0.75	2.24	3.81	
50th-Percentile Queue Length [ft/ln]	124.29	70.83	239.91	18.76	55.97	95.37	
95th-Percentile Queue Length [veh/ln]	8.63	5.10	14.68	1.35	4.03	6.87	
95th-Percentile Queue Length [ft/ln]	215.71	127.50	366.92	33.78	100.74	171.66	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.11	19.64	41.05	3.93	0.00	29.59	29.59	35.74	0.00	0.00	0.00
Movement LOS		C	B	D	A		C	C	D			
d_A, Approach Delay [s/veh]	20.77			23.88			33.28			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	24.03											
Intersection LOS	C											
Intersection V/C	0.596											

Emissions

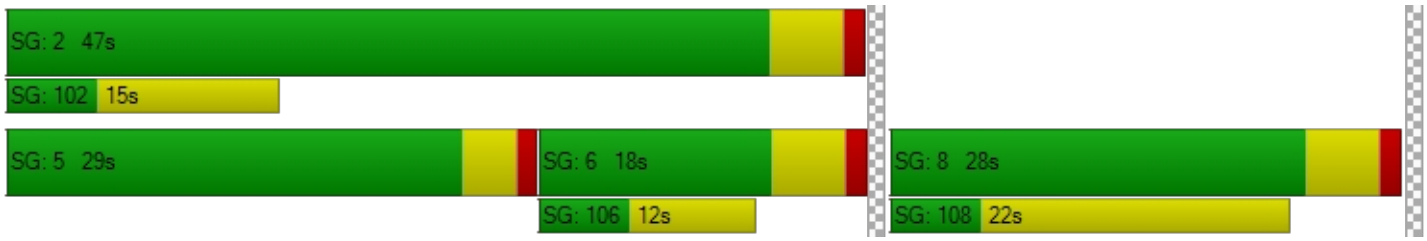
Vehicle Miles Traveled [mph]	99.00	29.32	27.78	23.91	4.21	6.31	
Stops [stops/h]	477.27	136.00	460.63	72.05	107.45	183.11	
Fuel consumption [US gal/h]	10.48	3.00	8.42	1.77	1.80	3.12	
CO [g/h]	732.63	209.67	588.87	124.05	125.78	218.31	
NOx [g/h]	142.54	40.79	114.57	24.14	24.47	42.48	
VOC [g/h]	169.79	48.59	136.48	28.75	29.15	50.60	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	0.00	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.645	0.000	2.063	2.056
Crosswalk LOS	B	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	344	1117	611	0
d_b, Bicycle Delay [s]	25.71	7.30	18.10	37.50
l_b,int, Bicycle LOS Score for Intersection	2.336	2.277	1.844	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	476	28	136	285	9	65	202	25	54	31	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	561	33	160	336	11	77	238	29	64	37	138
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	152	9	43	91	3	21	64	8	17	10	37
Total Analysis Volume [veh/h]	8	606	36	173	363	12	83	257	31	69	40	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	11	21	0	0	23	0	0	23	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	14	14	14	14
g / C, Green / Cycle	0.58	0.58	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.35	0.40	0.07	0.16	0.06	0.12
s, saturation flow rate [veh/h]	1852	1371	1194	1835	1091	1642
c, Capacity [veh/h]	1202	964	296	451	237	404
d1, Uniform Delay [s]	7.35	7.70	21.95	18.54	23.91	17.67
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.75	2.43	0.51	1.50	0.67	0.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.57	0.28	0.64	0.29	0.47
d, Delay for Lane Group [s/veh]	9.09	10.13	22.46	20.05	24.59	18.51
Lane Group LOS	A	B	C	C	C	B
Critical Lane Group	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.93	3.81	0.98	3.21	0.86	1.99
50th-Percentile Queue Length [ft/ln]	98.34	95.20	24.47	80.34	21.59	49.65
95th-Percentile Queue Length [veh/ln]	7.08	6.85	1.76	5.78	1.55	3.57
95th-Percentile Queue Length [ft/ln]	177.01	171.37	44.05	144.61	38.87	89.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.09	9.09	9.09	10.13	10.13	10.13	22.46	20.05	20.05	24.59	18.51	18.51
Movement LOS	A	A	A	B	B	B	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	9.09			10.13			20.59			20.14		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	13.30											
Intersection LOS	B											
Intersection V/C	0.539											

Emissions

Vehicle Miles Traveled [mph]	288.64	74.72	2.35	8.16	1.94	5.30
Stops [stops/h]	257.47	249.26	64.07	210.34	56.53	130.00
Fuel consumption [US gal/h]	14.14	5.85	0.73	2.35	0.65	1.45
CO [g/h]	988.51	409.13	51.09	164.17	45.38	101.30
NOx [g/h]	192.33	79.60	9.94	31.94	8.83	19.71
VOC [g/h]	229.10	94.82	11.84	38.05	10.52	23.48

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	2.422	2.560	2.957	2.892
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	978	978	669	669
d_b, Bicycle Delay [s]	7.18	7.18	12.18	12.18
l_b,int, Bicycle LOS Score for Intersection	2.632	2.464	2.172	1.985
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.426

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	330	10	6	264	65	84	68	145	31	52	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	389	12	7	311	77	99	80	171	37	61	13
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	104	3	2	83	21	26	21	46	10	16	3
Total Analysis Volume [veh/h]	5	414	13	7	331	82	105	85	182	39	65	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	17	0	14	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	0.00	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	24	38	27	12	12	12
g / C, Green / Cycle	0.64	0.41	0.64	0.45	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.24	0.01	0.20	0.05	0.08	0.16	0.14
s, saturation flow rate [veh/h]	1720	1589	1679	1589	1320	1669	821
c, Capacity [veh/h]	1165	642	1138	721	182	336	245
d1, Uniform Delay [s]	5.19	10.75	4.95	9.44	22.65	22.78	20.81
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.86	0.06	0.67	0.32	2.89	4.27	1.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.02	0.30	0.11	0.58	0.79	0.48
d, Delay for Lane Group [s/veh]	6.06	10.81	5.61	9.76	25.54	27.05	22.27
Lane Group LOS	A	B	A	A	C	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.86	0.10	1.41	0.58	1.47	3.79	1.45
50th-Percentile Queue Length [ft/ln]	46.38	2.49	35.36	14.51	36.81	94.79	36.15
95th-Percentile Queue Length [veh/ln]	3.34	0.18	2.55	1.04	2.65	6.82	2.60
95th-Percentile Queue Length [ft/ln]	83.49	4.48	63.64	26.12	66.26	170.62	65.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.06	6.06	10.81	5.61	5.61	9.76	25.54	27.05	27.05	22.27	22.27	22.27
Movement LOS	A	A	B	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	6.20			6.42			26.62			22.27		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	13.34											
Intersection LOS	B											
Intersection V/C	0.426											

Emissions

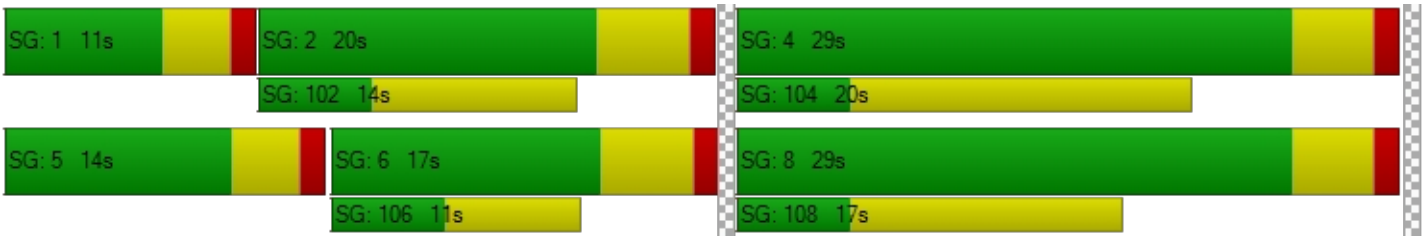
Vehicle Miles Traveled [mph]	31.62	0.98	150.09	36.41	8.69	22.09	3.33
Stops [stops/h]	111.32	5.97	84.86	34.83	88.35	227.49	86.75
Fuel consumption [US gal/h]	2.56	0.11	6.75	1.81	1.28	3.34	1.02
CO [g/h]	178.87	7.75	471.51	126.72	89.14	233.16	71.12
NOx [g/h]	34.80	1.51	91.74	24.66	17.34	45.37	13.84
VOC [g/h]	41.46	1.80	109.28	29.37	20.66	54.04	16.48

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.349	2.532	2.659	2.267
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	863	863	813	813
d_b, Bicycle Delay [s]	9.69	9.69	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.487	2.467	2.388	1.969
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.044

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	340	7	5	432	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	401	8	6	509	11	6
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	108	2	2	137	3	2
Total Analysis Volume [veh/h]	430	9	6	546	12	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.01	0.04	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.22	0.00	18.94	11.41
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.17	0.17
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.25	0.25	4.27	4.27
d_A, Approach Delay [s/veh]	0.00		0.09		16.43	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.34					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	7	6	17	299	4	140	146	687	10	13	283	203
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	7	20	353	5	165	172	810	12	15	334	239
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	5	92	1	43	45	211	3	4	87	62
Total Analysis Volume [veh/h]	8	7	21	367	5	172	179	843	12	16	348	249
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	95
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	19	0	12	20	0	36	53	0	11	28	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	4.55	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	30	18	29	29	21	56	50	56	45
g / C, Green / Cycle	0.31	0.19	0.30	0.30	0.23	0.59	0.53	0.59	0.48
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.12	0.20	0.12	0.20	0.51	0.02	0.38
s, saturation flow rate [veh/h]	1140	1486	1369	1037	1431	879	1679	661	1568
c, Capacity [veh/h]	235	279	504	444	321	393	885	217	747
d1, Uniform Delay [s]	33.59	31.95	25.81	28.22	32.49	15.36	21.66	19.67	21.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.16	0.40	0.11	0.27
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	0.72	1.75	3.45	6.29	1.23	20.05	0.14	4.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.10	0.33	0.46	0.54	0.46	0.97	0.07	0.80
d, Delay for Lane Group [s/veh]	33.86	32.67	27.56	31.67	38.78	16.59	41.71	19.82	25.97
Lane Group LOS	C	C	C	C	D	B	D	B	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.15	0.60	3.09	4.21	3.95	1.71	21.65	0.13	11.56
50th-Percentile Queue Length [ft/ln]	3.64	15.11	77.15	105.27	98.74	42.74	541.25	3.37	289.02
95th-Percentile Queue Length [veh/ln]	0.26	1.09	5.55	7.58	7.11	3.08	29.28	0.24	17.14
95th-Percentile Queue Length [ft/ln]	6.54	27.20	138.86	189.40	177.74	76.94	732.02	6.07	428.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.86	32.67	32.67	29.81	31.67	38.78	16.59	41.71	41.71	19.82	25.97	25.97
Movement LOS	C	C	C	C	C	D	B	D	D	B	C	C
d_A, Approach Delay [s/veh]	32.94			32.66			37.36			25.81		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	32.96											
Intersection LOS	C											
Intersection V/C	0.701											

Emissions

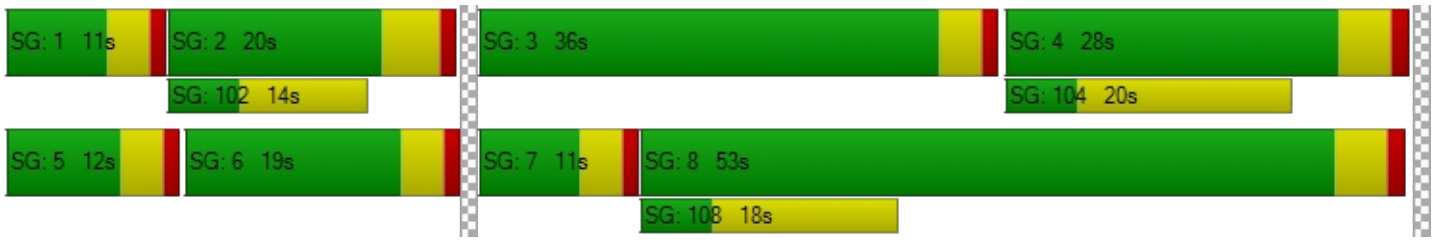
Vehicle Miles Traveled [mph]	0.19	0.66	12.58	15.54	13.00	15.03	71.79	1.23	45.71
Stops [stops/h]	5.51	22.91	116.94	159.57	149.67	64.79	820.42	5.11	438.10
Fuel consumption [US gal/h]	0.07	0.25	2.29	3.12	2.98	1.58	14.74	0.14	7.46
CO [g/h]	5.11	17.76	160.22	217.91	208.19	110.52	1030.62	10.01	521.26
NOx [g/h]	0.99	3.46	31.17	42.40	40.51	21.50	200.52	1.95	101.42
VOC [g/h]	1.18	4.12	37.13	50.50	48.25	25.61	238.86	2.32	120.81

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.93	38.93	38.93	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.156	2.540	2.463	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	316	545	1017	491
d_b, Bicycle Delay [s]	33.68	25.13	11.48	27.06
l_b,int, Bicycle LOS Score for Intersection	1.833	2.672	3.480	2.785
Bicycle LOS	A	B	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.439

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	619	71	115	983	24	21	103	15	47	47	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	730	84	136	1159	28	25	121	18	55	55	39
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	200	23	37	318	8	7	33	5	15	15	11
Total Analysis Volume [veh/h]	24	801	92	149	1272	31	27	133	20	60	60	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	29	0	11	29	0	0	30	0	0	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	47	37	37	47	41	41	13	13	13	13
g / C, Green / Cycle	0.68	0.52	0.52	0.68	0.58	0.58	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.04	0.22	0.06	0.18	0.35	0.35	0.02	0.08	0.05	0.06
s, saturation flow rate [veh/h]	555	3560	1589	834	1870	1854	1291	1828	1234	1742
c, Capacity [veh/h]	436	1862	831	635	1085	1076	229	334	194	318
d1, Uniform Delay [s]	5.51	10.27	8.45	4.84	9.48	9.49	29.12	25.53	31.56	24.86
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.73	0.27	0.87	2.48	2.51	0.23	0.98	0.90	0.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.43	0.11	0.23	0.60	0.60	0.12	0.46	0.31	0.32
d, Delay for Lane Group [s/veh]	5.56	11.00	8.72	5.70	11.96	12.01	29.35	26.51	32.45	25.45
Lane Group LOS	A	B	A	A	B	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.08	3.25	0.64	0.64	5.58	5.56	0.43	2.30	1.02	1.50
50th-Percentile Queue Length [ft/ln]	1.96	81.17	16.00	15.90	139.44	138.90	10.64	57.61	25.44	37.57
95th-Percentile Queue Length [veh/ln]	0.14	5.84	1.15	1.14	9.45	9.42	0.77	4.15	1.83	2.71
95th-Percentile Queue Length [ft/ln]	3.54	146.11	28.81	28.62	236.27	235.54	19.15	103.70	45.78	67.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.56	11.00	8.72	5.70	11.98	12.01	29.35	26.51	26.51	32.45	25.45	25.45
Movement LOS	A	B	A	A	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.63			11.34			26.94			28.03		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.14											
Intersection LOS	B											
Intersection V/C	0.439											

Emissions

Vehicle Miles Traveled [mph]	1.79	59.80	6.87	4.92	21.58	21.45	0.62	3.53	4.96	8.52
Stops [stops/h]	4.04	333.97	32.92	32.71	286.85	285.74	21.89	118.52	52.32	77.29
Fuel consumption [US gal/h]	0.13	7.22	0.73	0.67	5.18	5.16	0.27	1.44	0.82	1.21
CO [g/h]	9.16	504.42	51.22	46.87	362.25	360.84	19.10	100.56	57.33	84.80
NOx [g/h]	1.78	98.14	9.97	9.12	70.48	70.21	3.72	19.57	11.15	16.50
VOC [g/h]	2.12	116.90	11.87	10.86	83.95	83.63	4.43	23.31	13.29	19.65

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	3.019	2.931	2.030	2.192
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	674	674	726	726
d_b, Bicycle Delay [s]	15.38	15.38	14.21	14.21
l_b,int, Bicycle LOS Score for Intersection	2.531	2.972	2.071	2.043
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	27.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.069

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	11	700	1035	6	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	825	1220	7	11	6
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	217	321	2	3	2
Total Analysis Volume [veh/h]	14	868	1283	7	12	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.07	0.01
d_M, Delay for Movement [s/veh]	11.93	0.00	0.00	0.00	27.32	15.20
Movement LOS	B	A	A	A	D	C
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	0.27	0.27
95th-Percentile Queue Length [ft/ln]	2.02	0.00	0.00	0.00	6.78	6.78
d_A, Approach Delay [s/veh]	0.19		0.00		23.28	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.27					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	35.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.733

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	557	311	398	606	28	30	133	13	177	104	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	657	367	469	714	33	35	157	15	209	123	147
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	168	94	120	182	8	9	40	4	53	31	38
Total Analysis Volume [veh/h]	13	670	374	479	729	34	36	160	15	213	126	150
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	27	28	0	23	24	0	11	26	0	13	28	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	56	33	33	55	49	49	24	11	24	16	16
g / C, Green / Cycle	0.62	0.36	0.36	0.62	0.55	0.55	0.27	0.13	0.27	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.33	0.33	0.53	0.23	0.23	0.03	0.11	0.16	0.07	0.10
s, saturation flow rate [veh/h]	461	1683	1483	909	1683	1657	1147	1658	1320	1683	1431
c, Capacity [veh/h]	368	612	540	523	924	910	362	211	364	305	259
d1, Uniform Delay [s]	8.32	27.16	27.18	23.48	11.85	11.86	24.62	38.32	28.10	32.63	33.72
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	19.41	21.46	23.30	1.38	1.40	0.12	8.11	1.54	0.90	2.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.91	0.91	0.92	0.42	0.42	0.10	0.83	0.59	0.41	0.58
d, Delay for Lane Group [s/veh]	8.36	46.57	48.64	46.77	13.23	13.26	24.74	46.43	29.64	33.53	35.77
Lane Group LOS	A	D	D	D	B	B	C	D	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.09	13.89	12.56	7.66	4.30	4.24	0.58	4.18	3.92	2.47	3.10
50th-Percentile Queue Length [ft/ln]	2.20	347.15	313.88	191.45	107.45	106.08	14.41	104.50	98.00	61.80	77.38
95th-Percentile Queue Length [veh/ln]	0.16	20.00	18.37	12.20	7.70	7.62	1.04	7.52	7.06	4.45	5.57
95th-Percentile Queue Length [ft/ln]	3.95	499.94	459.16	304.92	192.45	190.54	25.93	188.11	176.41	111.24	139.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.36	46.93	48.64	46.77	13.25	13.26	24.74	46.43	46.43	29.64	33.53	35.77
Movement LOS	A	D	D	D	B	B	C	D	D	C	C	D
d_A, Approach Delay [s/veh]	47.06			26.18			42.73			32.52		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	35.74											
Intersection LOS	D											
Intersection V/C	0.733											

Emissions

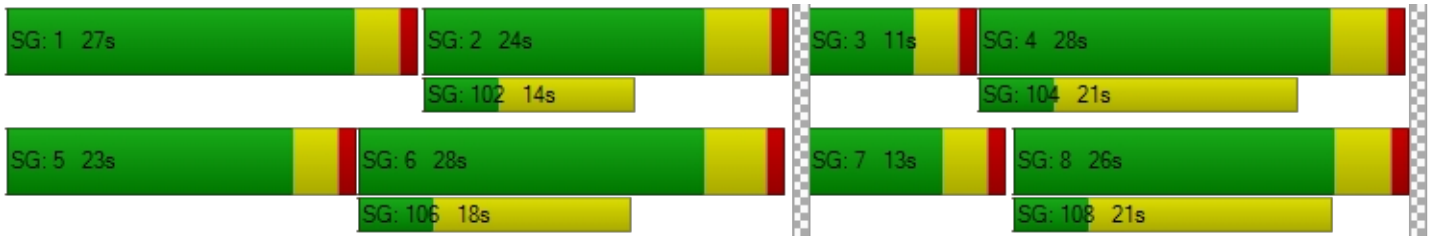
Vehicle Miles Traveled [mph]	0.51	21.88	19.30	36.24	29.08	28.66	0.92	4.49	17.88	10.58	12.59
Stops [stops/h]	3.51	555.44	502.21	306.33	171.92	169.73	23.05	167.21	156.81	98.88	123.81
Fuel consumption [US gal/h]	0.07	10.27	9.35	8.87	3.77	3.72	0.35	2.76	2.89	1.84	2.29
CO [g/h]	4.76	717.80	653.88	619.75	263.20	259.75	24.23	193.06	201.82	128.72	160.37
NOx [g/h]	0.93	139.66	127.22	120.58	51.21	50.54	4.71	37.56	39.27	25.04	31.20
VOC [g/h]	1.10	166.36	151.54	143.63	61.00	60.20	5.61	44.74	46.77	29.83	37.17

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.805	2.857	2.077	2.760
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	509	413	473	518
d_b, Bicycle Delay [s]	25.01	28.32	26.22	24.72
l_b,int, Bicycle LOS Score for Intersection	2.646	2.799	2.122	2.581
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	26.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	879	1	5	780	6	9	0	13	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	1036	1	6	920	7	11	0	15	0	0	17
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	270	0	2	240	2	3	0	4	0	0	4
Total Analysis Volume [veh/h]	27	1080	1	6	959	7	11	0	16	0	0	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.01	0.01	0.00	0.06	0.00	0.03	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	10.28	0.00	0.00	10.67	0.00	0.00	26.41	29.74	13.03	28.48	29.35	12.70
Movement LOS	B	A	A	B	A	A	D	D	B	D	D	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.03	0.00	0.00	0.30	0.30	0.30	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	2.97	0.00	0.00	0.71	0.00	0.00	7.52	7.52	7.52	2.88	2.88	2.88
d_A, Approach Delay [s/veh]	0.25			0.07			18.48			12.70		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	0.50											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.366

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	801	30	82	734	19	14	9	17	19	21	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	944	35	97	865	22	17	11	20	22	25	58
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	240	9	25	220	6	4	3	5	6	6	15
Total Analysis Volume [veh/h]	21	959	36	99	879	22	17	11	20	22	25	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	37	0	11	37	0	11	50	0	12	51	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	87	76	76	87	80	80	13	6	13	7	7
g / C, Green / Cycle	0.79	0.69	0.69	0.79	0.72	0.72	0.12	0.05	0.12	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.03	0.30	0.30	0.16	0.27	0.27	0.01	0.02	0.02	0.01	0.04
s, saturation flow rate [veh/h]	621	1683	1662	618	1683	1669	1334	1511	1387	1683	1431
c, Capacity [veh/h]	521	1165	1151	510	1216	1206	246	83	245	101	86
d1, Uniform Delay [s]	3.21	7.41	7.41	3.97	5.78	5.78	42.81	50.17	42.96	49.31	50.67
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	1.16	1.17	0.85	0.87	0.88	0.12	2.78	0.16	1.25	9.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.43	0.43	0.19	0.37	0.37	0.07	0.37	0.09	0.25	0.69
d, Delay for Lane Group [s/veh]	3.24	8.56	8.58	4.82	6.66	6.66	42.93	52.95	43.11	50.57	59.91
Lane Group LOS	A	A	A	A	A	A	D	D	D	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	4.84	4.78	0.47	3.60	3.57	0.42	0.89	0.55	0.70	1.83
50th-Percentile Queue Length [ft/ln]	1.87	120.96	119.55	11.71	89.92	89.21	10.59	22.37	13.75	17.43	45.65
95th-Percentile Queue Length [veh/ln]	0.13	8.45	8.37	0.84	6.47	6.42	0.76	1.61	0.99	1.25	3.29
95th-Percentile Queue Length [ft/ln]	3.37	211.15	209.21	21.08	161.86	160.59	19.06	40.26	24.75	31.37	82.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.24	8.57	8.58	4.82	6.66	6.66	42.93	52.95	52.95	43.11	50.57	59.91
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	E
d_A, Approach Delay [s/veh]	8.46			6.48			49.40			54.22		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.69											
Intersection LOS	B											
Intersection V/C	0.366											

Emissions

Vehicle Miles Traveled [mph]	1.57	37.33	36.86	7.54	34.47	34.18	0.45	0.81	1.86	2.11	4.98
Stops [stops/h]	2.45	158.35	156.50	15.33	117.72	116.79	13.86	29.28	18.00	22.82	59.76
Fuel consumption [US gal/h]	0.09	3.49	3.44	0.50	2.81	2.79	0.22	0.48	0.35	0.44	1.17
CO [g/h]	6.43	243.70	240.80	34.95	196.58	194.99	15.50	33.76	24.16	30.73	81.96
NOx [g/h]	1.25	47.41	46.85	6.80	38.25	37.94	3.02	6.57	4.70	5.98	15.95
VOC [g/h]	1.49	56.48	55.81	8.10	45.56	45.19	3.59	7.82	5.60	7.12	19.00

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.754	2.776	2.005	2.294
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	580	825	844
d_b, Bicycle Delay [s]	27.73	27.73	18.97	18.39
l_b,int, Bicycle LOS Score for Intersection	2.612	2.599	1.853	1.949
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	13.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.122

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	823	36	19	683	42	0	0	49	0	0	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	970	42	22	805	50	0	0	58	0	0	57
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9500	0.9500	0.9460	0.9500	0.9500	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	256	11	6	213	13	0	0	15	0	0	15
Total Analysis Volume [veh/h]	41	1025	44	23	851	53	0	0	61	0	0	60
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.00	0.04	0.01	0.00	0.00	0.00	0.11	0.00	0.00	0.12
d_M, Delay for Movement [s/veh]	10.09	0.00	0.00	10.76	0.00	0.00	0.00	0.00	12.29	0.00	0.00	13.37
Movement LOS	B	A	A	B	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.42
95th-Percentile Queue Length [ft/ln]	4.34	0.00	0.00	2.76	0.00	0.00	0.00	0.00	9.21	0.00	0.00	10.38
d_A, Approach Delay [s/veh]	0.37			0.27			12.29			13.37		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	1.03											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	33.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.722

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	101	622	89	72	587	73	219	298	184	66	223	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	733	105	85	692	86	258	351	217	78	263	62
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	194	28	22	183	23	68	93	57	21	70	16
Total Analysis Volume [veh/h]	126	775	111	90	732	91	273	371	229	82	278	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	16	22	0	21	27	0	13	31	0	11	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	8	32	32	6	30	30	32	22	22	33	20
g / C, Green / Cycle	0.10	0.38	0.38	0.07	0.35	0.35	0.38	0.26	0.26	0.39	0.23
(v / s)_i Volume / Saturation Flow Rate	0.08	0.27	0.27	0.06	0.25	0.25	0.24	0.22	0.16	0.15	0.21
s, saturation flow rate [veh/h]	1603	1683	1610	1603	1683	1619	1160	1683	1431	552	1628
c, Capacity [veh/h]	155	634	606	119	596	574	377	445	378	369	382
d1, Uniform Delay [s]	37.64	22.60	22.60	38.57	23.60	23.60	21.91	29.52	27.40	18.89	31.55
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.21	0.11	0.11	0.24
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.77	6.75	7.05	9.20	6.81	7.07	11.49	7.63	1.57	0.30	15.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.71	0.71	0.75	0.70	0.70	0.72	0.83	0.61	0.22	0.90
d, Delay for Lane Group [s/veh]	47.40	29.35	29.65	47.77	30.41	30.67	33.40	37.15	28.96	19.19	46.62
Lane Group LOS	D	C	C	D	C	C	C	D	C	B	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.91	8.36	8.05	2.09	7.90	7.64	4.98	7.73	4.05	1.05	8.32
50th-Percentile Queue Length [ft/ln]	72.81	209.11	201.31	52.36	197.61	191.12	124.54	193.25	101.33	26.26	208.03
95th-Percentile Queue Length [veh/ln]	5.24	13.11	12.71	3.77	12.52	12.18	8.64	12.29	7.30	1.89	13.05
95th-Percentile Queue Length [ft/ln]	131.06	327.69	317.65	94.25	312.88	304.48	216.05	307.24	182.40	47.27	326.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.40	29.48	29.65	47.77	30.52	30.67	33.40	37.15	28.96	19.19	46.62	46.62
Movement LOS	D	C	C	D	C	C	C	D	C	B	D	D
d_A, Approach Delay [s/veh]	31.73			32.24			33.83			41.34		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	33.71											
Intersection LOS	C											
Intersection V/C	0.722											

Emissions

Vehicle Miles Traveled [mph]	9.95	35.75	34.20	7.16	33.35	32.08	62.56	85.02	52.48	13.14	55.12
Stops [stops/h]	123.35	354.26	341.04	88.70	334.78	323.78	210.99	327.38	171.67	44.49	352.44
Fuel consumption [US gal/h]	2.52	6.73	6.48	1.81	6.39	6.18	5.83	8.51	4.64	1.08	7.09
CO [g/h]	176.30	470.53	453.11	126.84	446.34	431.75	407.28	594.64	324.41	75.62	495.87
NOx [g/h]	34.30	91.55	88.16	24.68	86.84	84.00	79.24	115.70	63.12	14.71	96.48
VOC [g/h]	40.86	109.05	105.01	29.40	103.44	100.06	94.39	137.81	75.19	17.52	114.92

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.797	2.858	2.610	2.209
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	398	515	609	574
d_b, Bicycle Delay [s]	27.28	23.42	20.55	21.60
l_b,int, Bicycle LOS Score for Intersection	2.609	2.527	3.214	2.477
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	31.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.623

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	609	132	173	632	56	48	400	79	67	278	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	718	156	204	745	66	57	472	93	79	328	137
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	195	42	55	202	18	15	128	25	21	89	37
Total Analysis Volume [veh/h]	86	779	169	221	808	72	62	512	101	86	356	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	27	0	18	33	0	11	29	0	11	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	6	29	29	13	37	37	5	18	18	6	19	19
g / C, Green / Cycle	0.07	0.34	0.34	0.16	0.43	0.43	0.06	0.22	0.22	0.07	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.05	0.24	0.12	0.14	0.25	0.05	0.04	0.19	0.19	0.05	0.16	0.16
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1588	1603	1683	1518
c, Capacity [veh/h]	116	1100	491	253	1374	614	102	366	346	115	382	344
d1, Uniform Delay [s]	38.65	24.22	20.78	34.96	18.54	14.60	38.74	32.00	32.04	38.69	30.13	30.22
k, delay calibration	0.11	0.50	0.50	0.29	0.50	0.50	0.11	0.16	0.17	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.99	3.86	1.91	20.88	1.85	0.39	5.65	8.60	9.46	9.61	2.24	2.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.71	0.34	0.87	0.59	0.12	0.61	0.86	0.86	0.75	0.69	0.70
d, Delay for Lane Group [s/veh]	47.65	28.07	22.70	55.85	20.39	14.99	44.39	40.60	41.50	48.30	32.37	32.82
Lane Group LOS	D	C	C	E	C	B	D	D	D	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.00	6.96	2.63	5.77	5.95	0.85	1.40	6.91	6.64	2.06	5.12	4.73
50th-Percentile Queue Length [ft/ln]	49.95	174.02	65.83	144.19	148.66	21.28	35.01	172.75	165.99	51.45	127.88	118.20
95th-Percentile Queue Length [veh/ln]	3.60	11.29	4.74	9.71	9.95	1.53	2.52	11.22	10.87	3.70	8.82	8.29
95th-Percentile Queue Length [ft/ln]	89.91	282.19	118.50	242.66	248.64	38.31	63.02	280.52	271.64	92.61	220.61	207.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.65	28.07	22.70	55.85	20.39	14.99	44.39	40.95	41.50	48.30	32.49	32.82
Movement LOS	D	C	C	E	C	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	28.82			27.15			41.35			34.87		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	31.82											
Intersection LOS	C											
Intersection V/C	0.623											

Emissions

Vehicle Miles Traveled [mph]	6.90	62.51	13.56	17.45	63.79	5.68	14.10	71.54	67.86	13.99	42.88	39.27
Stops [stops/h]	84.62	589.61	111.53	244.28	503.69	36.06	59.32	292.66	281.21	87.16	216.65	200.24
Fuel consumption [US gal/h]	1.73	11.27	2.14	5.01	9.57	0.71	1.47	7.16	6.87	1.81	4.50	4.15
CO [g/h]	121.16	787.58	149.32	350.45	669.09	49.45	102.62	500.55	480.02	126.43	314.28	289.81
NOx [g/h]	23.57	153.24	29.05	68.19	130.18	9.62	19.97	97.39	93.39	24.60	61.15	56.39
VOC [g/h]	28.08	182.53	34.61	81.22	155.07	11.46	23.78	116.01	111.25	29.30	72.84	67.17

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.836	2.848	2.530	2.541
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	515	656	572	574
d_b, Bicycle Delay [s]	23.42	19.18	21.67	21.60
l_b,int, Bicycle LOS Score for Intersection	2.627	2.682	2.331	2.262
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	7.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.345

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	751	42	38	717	43	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	885	50	45	845	51	91
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	239	13	12	228	14	25
Total Analysis Volume [veh/h]	955	54	49	912	55	98
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30	0	11	41	34	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	50	50	59	59	7	7
g / C, Green / Cycle	0.67	0.67	0.78	0.78	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.27	0.27	0.07	0.26	0.03	0.06
s, saturation flow rate [veh/h]	1870	1835	694	3560	1781	1589
c, Capacity [veh/h]	1245	1221	605	2773	164	146
d1, Uniform Delay [s]	5.75	5.79	2.73	2.47	31.91	32.96
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.98	1.03	0.26	0.32	1.20	5.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.41	0.08	0.33	0.34	0.67
d, Delay for Lane Group [s/veh]	6.73	6.82	2.99	2.78	33.11	38.21
Lane Group LOS	A	A	A	A	C	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.99	3.02	0.12	1.03	0.98	1.91
50th-Percentile Queue Length [ft/ln]	74.65	75.38	2.96	25.63	24.47	47.85
95th-Percentile Queue Length [veh/ln]	5.37	5.43	0.21	1.85	1.76	3.45
95th-Percentile Queue Length [ft/ln]	134.37	135.69	5.32	46.13	44.05	86.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.77	6.82	2.99	2.78	33.11	38.21
Movement LOS	A	A	A	A	C	D
d_A, Approach Delay [s/veh]	6.77		2.79		36.38	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	7.11					
Intersection LOS	A					
Intersection V/C	0.345					

Emissions

Vehicle Miles Traveled [mph]	37.32	37.32	3.93	73.18	9.07	16.15
Stops [stops/h]	143.32	144.74	5.68	98.41	46.98	91.87
Fuel consumption [US gal/h]	3.19	3.21	0.22	4.05	0.96	1.84
CO [g/h]	223.08	224.47	15.54	282.84	67.00	128.68
NOx [g/h]	43.40	43.67	3.02	55.03	13.04	25.04
VOC [g/h]	51.70	52.02	3.60	65.55	15.53	29.82

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	0.00	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.685	0.000	2.050
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	664	957	784
d_b, Bicycle Delay [s]	16.73	10.19	13.86
l_b,int, Bicycle LOS Score for Intersection	2.606	2.567	1.774
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.337

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	723	26	60	660	26	34	50	16	24	27	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	852	31	71	778	31	40	59	19	28	32	58
Peak Hour Factor	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	224	8	19	204	8	11	15	5	7	8	15
Total Analysis Volume [veh/h]	18	895	33	75	817	33	42	62	20	29	34	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	25	0	11	25	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	49	40	40	49	43	43	6	6
g / C, Green / Cycle	0.75	0.61	0.61	0.75	0.66	0.66	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.25	0.10	0.23	0.23	0.07	0.07
s, saturation flow rate [veh/h]	741	1870	1847	777	1870	1845	1724	1769
c, Capacity [veh/h]	646	1139	1125	662	1232	1215	244	242
d1, Uniform Delay [s]	2.49	6.62	6.62	2.88	4.91	4.91	28.42	28.42
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.09	1.11	0.35	0.78	0.79	1.64	1.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.41	0.41	0.11	0.35	0.35	0.51	0.51
d, Delay for Lane Group [s/veh]	2.51	7.71	7.72	3.22	5.68	5.69	30.06	30.09
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.03	2.79	2.76	0.17	1.94	1.92	1.90	1.90
50th-Percentile Queue Length [ft/ln]	0.70	69.69	68.93	4.27	48.59	48.02	47.54	47.52
95th-Percentile Queue Length [veh/ln]	0.05	5.02	4.96	0.31	3.50	3.46	3.42	3.42
95th-Percentile Queue Length [ft/ln]	1.26	125.44	124.07	7.69	87.46	86.44	85.56	85.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.51	7.71	7.72	3.22	5.69	5.69	30.06	30.06	30.06	30.09	30.09	30.09
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.62			5.49			30.06			30.09		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.32											
Intersection LOS	A											
Intersection V/C	0.337											

Emissions

Vehicle Miles Traveled [mph]	1.36	35.22	34.78	5.55	31.66	31.23	3.23	20.70
Stops [stops/h]	1.55	154.39	152.70	9.47	107.64	106.38	105.31	105.27
Fuel consumption [US gal/h]	0.07	3.24	3.20	0.33	2.51	2.48	1.47	2.19
CO [g/h]	5.08	226.21	223.60	23.20	175.52	173.31	102.99	153.31
NOx [g/h]	0.99	44.01	43.51	4.51	34.15	33.72	20.04	29.83
VOC [g/h]	1.18	52.43	51.82	5.38	40.68	40.17	23.87	35.53

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.738	2.782	1.819	1.912
Crosswalk LOS	B	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	612	612	748	748
d_b, Bicycle Delay [s]	15.65	15.65	12.74	12.74
l_b,int, Bicycle LOS Score for Intersection	2.554	2.537	1.979	1.979
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	49.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.060

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	733	4	3	699	7	7	0	40	4	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	864	5	4	824	8	8	0	47	5	0	24
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	236	1	1	225	2	2	0	13	1	0	7
Total Analysis Volume [veh/h]	14	945	5	4	902	9	9	0	51	5	0	26
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.10	0.00	0.09	0.06	0.00	0.05
d_M, Delay for Movement [s/veh]	9.94	0.00	0.00	10.04	0.00	0.00	47.48	61.06	14.24	49.64	60.03	13.24
Movement LOS	A	A	A	B	A	A	E	F	B	E	F	B
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.02	0.00	0.00	0.70	0.70	0.70	0.36	0.36	0.36
95th-Percentile Queue Length [ft/ln]	1.44	0.00	0.00	0.42	0.00	0.00	17.42	17.42	17.42	9.02	9.02	9.02
d_A, Approach Delay [s/veh]	0.14			0.04			19.22			19.11		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	0.98											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.369

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	625	12	32	705	14	34	38	65	19	14	71
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	737	14	38	831	17	40	45	77	22	17	84
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	202	4	10	228	5	11	12	21	6	5	23
Total Analysis Volume [veh/h]	20	808	15	42	911	19	44	49	84	24	19	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	22	0	11	22	0	0	27	0	0	27	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	34	34	42	36	36	8	8	8
g / C, Green / Cycle	0.70	0.57	0.57	0.70	0.60	0.60	0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.22	0.05	0.25	0.25	0.12	0.03	0.06
s, saturation flow rate [veh/h]	718	1870	1858	815	1870	1857	1538	1570	1589
c, Capacity [veh/h]	577	1067	1061	646	1114	1106	291	314	223
d1, Uniform Delay [s]	3.68	7.09	7.09	3.56	6.53	6.53	25.05	22.70	23.54
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.06	1.07	0.19	1.16	1.17	2.06	0.20	1.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.39	0.39	0.06	0.42	0.42	0.61	0.14	0.41
d, Delay for Lane Group [s/veh]	3.71	8.15	8.16	3.75	7.69	7.70	27.11	22.89	24.76
Lane Group LOS	A	A	A	A	A	A	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.04	2.46	2.45	0.12	2.62	2.60	2.50	0.53	1.21
50th-Percentile Queue Length [ft/ln]	1.08	61.48	61.14	2.96	65.38	64.97	62.46	13.25	30.33
95th-Percentile Queue Length [veh/ln]	0.08	4.43	4.40	0.21	4.71	4.68	4.50	0.95	2.18
95th-Percentile Queue Length [ft/ln]	1.94	110.66	110.05	5.33	117.68	116.95	112.43	23.84	54.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.71	8.15	8.16	3.75	7.70	7.70	27.11	27.11	27.11	22.89	22.89	24.76
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.05			7.53			27.11			24.16		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.42											
Intersection LOS	B											
Intersection V/C	0.369											

Emissions

Vehicle Miles Traveled [mph]	1.50	30.99	30.79	3.16	35.08	34.82	5.20	1.28	2.75
Stops [stops/h]	2.59	147.54	146.74	7.10	156.90	155.93	149.91	31.79	72.78
Fuel consumption [US gal/h]	0.09	2.98	2.96	0.21	3.25	3.23	1.79	0.38	0.87
CO [g/h]	6.42	207.98	206.78	14.38	227.03	225.53	124.78	26.56	60.55
NOx [g/h]	1.25	40.47	40.23	2.80	44.17	43.88	24.28	5.17	11.78
VOC [g/h]	1.49	48.20	47.92	3.33	52.62	52.27	28.92	6.16	14.03

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.738	2.779	1.809	2.022
Crosswalk LOS	B	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	563	563	747	747
d_b, Bicycle Delay [s]	15.48	15.48	11.78	11.78
l_b,int, Bicycle LOS Score for Intersection	2.469	2.576	2.066	1.997
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	67.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.175

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	603	15	28	742	8	4	9	53	2	4	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	711	18	33	875	9	5	11	62	2	5	60
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	196	5	9	241	2	1	3	17	1	1	17
Total Analysis Volume [veh/h]	8	782	20	36	963	10	6	12	68	2	6	66
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.04	0.01	0.00	0.08	0.17	0.13	0.03	0.09	0.11
d_M, Delay for Movement [s/veh]	10.17	0.00	0.00	9.61	0.00	0.00	65.78	67.38	21.80	57.76	60.17	14.15
Movement LOS	B	A	A	A	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.14	0.00	0.00	1.73	1.73	1.73	0.85	0.85	0.85
95th-Percentile Queue Length [ft/ln]	0.86	0.00	0.00	3.45	0.00	0.00	43.23	43.23	43.23	21.15	21.15	21.15
d_A, Approach Delay [s/veh]	0.10			0.34			31.23			19.06		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	2.29											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	33.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.564

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	465	151	150	593	37	66	408	49	176	446	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	548	178	177	699	44	78	481	58	208	526	100
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	149	49	48	191	12	21	131	16	57	143	27
Total Analysis Volume [veh/h]	68	598	194	193	762	48	85	525	63	227	574	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	16	32	0	11	30	0	17	36	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	6	30	30	11	36	36	6	17	17	13	24	24
g / C, Green / Cycle	0.06	0.33	0.33	0.13	0.40	0.40	0.07	0.19	0.19	0.14	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.17	0.12	0.11	0.21	0.03	0.05	0.16	0.16	0.13	0.19	0.19
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1801	1781	1870	1768
c, Capacity [veh/h]	114	1184	529	227	1422	635	122	355	342	257	496	469
d1, Uniform Delay [s]	40.99	24.09	22.83	38.41	20.65	16.73	40.98	35.16	35.18	37.75	29.89	29.89
k, delay calibration	0.11	0.50	0.50	0.26	0.50	0.50	0.11	0.12	0.12	0.32	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.91	1.54	1.96	18.43	1.45	0.23	6.86	5.95	6.36	23.08	1.87	1.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.50	0.37	0.85	0.54	0.08	0.69	0.84	0.85	0.88	0.71	0.71
d, Delay for Lane Group [s/veh]	45.90	25.63	24.79	56.85	22.10	16.96	47.84	41.12	41.54	60.83	31.76	31.87
Lane Group LOS	D	C	C	E	C	B	D	D	D	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.57	5.04	3.23	5.21	6.05	0.63	2.03	6.69	6.51	6.40	6.85	6.49
50th-Percentile Queue Length [ft/ln]	39.36	126.09	80.84	130.29	151.14	15.72	50.85	167.37	162.74	160.11	171.36	162.37
95th-Percentile Queue Length [veh/ln]	2.83	8.73	5.82	8.96	10.08	1.13	3.66	10.94	10.69	10.55	11.15	10.67
95th-Percentile Queue Length [ft/ln]	70.84	218.17	145.51	223.88	251.96	28.30	91.53	273.45	267.35	263.87	278.71	266.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.90	25.63	24.79	56.85	22.10	16.96	47.84	41.30	41.54	60.83	31.80	31.87
Movement LOS	D	C	C	E	C	B	D	D	D	E	C	C
d_A, Approach Delay [s/veh]	27.04			28.54			42.15			39.05		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.60											
Intersection LOS	C											
Intersection V/C	0.564											

Emissions

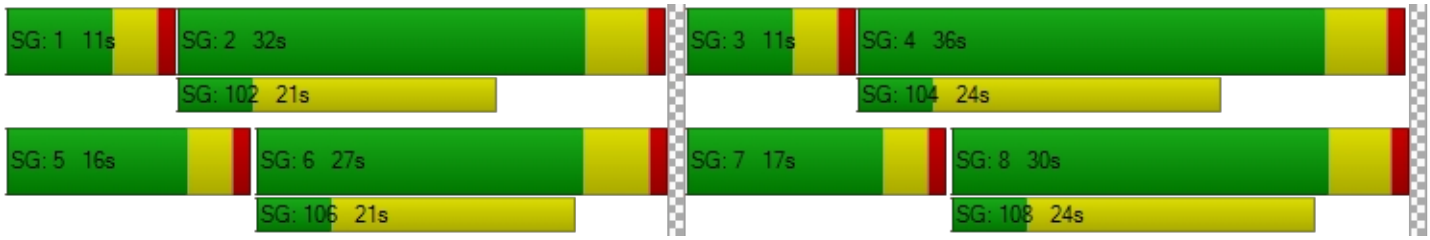
Vehicle Miles Traveled [mph]	2.57	22.60	7.33	14.77	58.32	3.67	3.34	11.74	11.35	8.42	13.03	12.32
Stops [stops/h]	62.97	403.49	129.34	208.46	483.66	25.16	81.36	267.79	260.39	256.18	274.18	259.80
Fuel consumption [US gal/h]	1.35	7.89	2.51	4.36	9.29	0.49	1.57	4.96	4.83	5.06	4.83	4.58
CO [g/h]	94.07	551.65	175.58	305.00	649.14	34.60	109.50	346.94	337.87	353.51	337.43	319.83
NOx [g/h]	18.30	107.33	34.16	59.34	126.30	6.73	21.30	67.50	65.74	68.78	65.65	62.23
VOC [g/h]	21.80	127.85	40.69	70.69	150.44	8.02	25.38	80.41	78.30	81.93	78.20	74.12

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.869	2.795	2.611	2.716
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	598	553	687
d_b, Bicycle Delay [s]	25.99	22.12	23.54	19.40
l_b,int, Bicycle LOS Score for Intersection	2.484	2.601	2.329	2.525
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.426

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	148	101	74	2	94	19	19	570	121	65	297	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	174	119	87	2	111	22	22	672	143	77	350	22
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	31	23	1	29	6	6	176	37	20	92	6
Total Analysis Volume [veh/h]	182	124	91	2	116	23	23	703	150	81	366	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	27	0	0	27	0	21	27	0	11	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	17	17	17	18	2	28	28	5	31	31
g / C, Green / Cycle	0.26	0.26	0.26	0.27	0.04	0.44	0.44	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.15	0.07	0.06	0.08	0.01	0.24	0.24	0.05	0.10	0.11
s, saturation flow rate [veh/h]	1250	1870	1589	1814	1781	1870	1757	1781	1870	1831
c, Capacity [veh/h]	266	493	419	511	65	814	765	147	900	881
d1, Uniform Delay [s]	24.54	18.87	18.69	18.70	30.55	13.56	13.56	28.65	9.77	9.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.12	0.26	0.26	0.29	3.19	2.57	2.73	3.17	0.56	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.25	0.22	0.28	0.35	0.54	0.54	0.55	0.22	0.22
d, Delay for Lane Group [s/veh]	27.66	19.13	18.95	18.99	33.75	16.13	16.30	31.82	10.33	10.35
Lane Group LOS	C	B	B	B	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.72	1.39	1.01	1.65	0.39	4.65	4.41	1.27	1.51	1.49
50th-Percentile Queue Length [ft/ln]	68.11	34.76	25.35	41.19	9.77	116.20	110.17	31.78	37.66	37.19
95th-Percentile Queue Length [veh/ln]	4.90	2.50	1.83	2.97	0.70	8.18	7.85	2.29	2.71	2.68
95th-Percentile Queue Length [ft/ln]	122.59	62.56	45.63	74.14	17.59	204.60	196.23	57.20	67.79	66.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.66	19.13	18.95	18.99	18.99	18.99	33.75	16.19	16.30	31.82	10.34	10.35
Movement LOS	C	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	23.00			18.99			16.67			14.04		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	17.52											
Intersection LOS	B											
Intersection V/C	0.426											

Emissions

Vehicle Miles Traveled [mph]	14.83	10.10	7.41	3.88	0.73	13.88	13.05	18.56	44.91	44.23
Stops [stops/h]	150.88	77.00	56.16	91.25	21.64	257.44	244.06	70.41	83.43	82.38
Fuel consumption [US gal/h]	2.72	1.45	1.06	1.07	0.35	3.91	3.70	1.76	2.75	2.71
CO [g/h]	190.43	101.15	73.80	74.75	24.35	273.19	258.93	123.13	192.32	189.58
NOx [g/h]	37.05	19.68	14.36	14.54	4.74	53.15	50.38	23.96	37.42	36.89
VOC [g/h]	44.13	23.44	17.10	17.32	5.64	63.31	60.01	28.54	44.57	43.94

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.328	1.826	2.873	2.766
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	674	689	674	366
d_b, Bicycle Delay [s]	14.29	13.96	14.29	21.69
l_b,int, Bicycle LOS Score for Intersection	2.429	2.007	2.497	2.162
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	184	299	68	37	237	5	6	329	184	44	284	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	217	353	80	44	279	6	7	388	217	52	335	27
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	93	21	12	73	2	2	102	57	14	88	7
Total Analysis Volume [veh/h]	228	370	84	46	293	6	7	407	228	55	352	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13	29	0	11	27	0	16	24	0	11	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	27	19	19	27	14	1	29	29	5	33	33
g / C, Green / Cycle	0.36	0.25	0.25	0.36	0.19	0.01	0.38	0.38	0.06	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.17	0.20	0.05	0.04	0.16	0.00	0.18	0.18	0.03	0.10	0.10
s, saturation flow rate [veh/h]	1362	1870	1589	1135	1863	1781	1870	1649	1781	1870	1822
c, Capacity [veh/h]	474	467	397	382	352	27	713	629	114	823	802
d1, Uniform Delay [s]	18.62	26.32	22.29	17.04	29.38	36.53	17.48	17.54	33.89	13.11	13.12
k, delay calibration	0.50	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.48	3.11	0.26	0.14	5.74	5.12	2.22	2.58	3.12	0.66	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.79	0.21	0.12	0.85	0.26	0.47	0.48	0.48	0.23	0.23
d, Delay for Lane Group [s/veh]	22.10	29.42	22.55	17.18	35.12	41.65	19.70	20.12	37.01	13.77	13.81
Lane Group LOS	C	C	C	B	D	D	B	C	D	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.12	6.18	1.14	0.50	5.47	0.16	4.34	3.95	1.04	2.02	1.99
50th-Percentile Queue Length [ft/ln]	78.10	154.39	28.47	12.41	136.83	3.97	108.47	98.66	26.05	50.57	49.82
95th-Percentile Queue Length [veh/ln]	5.62	10.25	2.05	0.89	9.31	0.29	7.75	7.10	1.88	3.64	3.59
95th-Percentile Queue Length [ft/ln]	140.59	256.28	51.25	22.34	232.75	7.15	193.87	177.59	46.90	91.03	89.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.10	29.42	22.55	17.18	35.12	35.12	41.65	19.78	20.12	37.01	13.79	13.81
Movement LOS	C	C	C	B	D	D	D	B	C	D	B	B
d_A, Approach Delay [s/veh]	26.13			32.73			20.13			16.73		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	23.44											
Intersection LOS	C											
Intersection V/C	0.474											

Emissions

Vehicle Miles Traveled [mph]	8.12	13.17	2.99	3.75	24.36	0.20	9.53	8.52	12.51	43.60	42.82
Stops [stops/h]	149.96	296.43	54.67	23.83	262.71	7.62	208.26	189.43	50.02	97.10	95.65
Fuel consumption [US gal/h]	2.46	4.95	0.91	0.48	5.04	0.14	3.73	3.39	1.21	2.87	2.82
CO [g/h]	172.13	345.79	63.65	33.75	352.37	9.88	260.84	237.17	84.27	200.51	197.13
NOx [g/h]	33.49	67.28	12.38	6.57	68.56	1.92	50.75	46.14	16.40	39.01	38.35
VOC [g/h]	39.89	80.14	14.75	7.82	81.67	2.29	60.45	54.97	19.53	46.47	45.69

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.481	2.217	2.681	2.500
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	637	584	496	381
d_b, Bicycle Delay [s]	17.41	18.80	21.21	24.56
l_b,int, Bicycle LOS Score for Intersection	2.899	2.343	2.304	2.133
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.455

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	0	48	0	0	16	0	953	40	18	480	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	0	57	0	0	19	0	1124	47	21	566	110
Peak Hour Factor	0.9270	0.9500	0.9270	0.9500	0.9500	0.9270	0.9500	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	15	0	0	5	0	303	13	6	153	30
Total Analysis Volume [veh/h]	72	0	61	0	0	20	0	1213	51	23	611	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	23	0	0	0	0	44	0	32	0	11	43	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	7	7	3	78	78	86	86
g / C, Green / Cycle	0.06	0.06	0.03	0.71	0.71	0.78	0.78
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.01	0.34	0.34	0.04	0.40
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1844	525	1818
c, Capacity [veh/h]	112	100	48	1331	1312	436	1418
d1, Uniform Delay [s]	50.33	50.22	52.37	6.91	6.96	4.25	4.44
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.00	5.87	5.57	1.22	1.27	0.05	1.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.61	0.41	0.47	0.48	0.05	0.51
d, Delay for Lane Group [s/veh]	56.33	56.09	57.94	8.12	8.22	4.30	5.77
Lane Group LOS	E	E	E	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.14	1.81	0.62	6.08	6.13	0.09	5.17
50th-Percentile Queue Length [ft/ln]	53.41	45.28	15.54	152.00	153.33	2.37	129.16
95th-Percentile Queue Length [veh/ln]	3.85	3.26	1.12	10.12	10.19	0.17	8.89
95th-Percentile Queue Length [ft/ln]	96.13	81.51	27.96	253.09	254.87	4.26	222.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.33	0.00	56.09	0.00	0.00	57.94	0.00	8.17	8.22	4.30	5.77	5.77
Movement LOS	E		E			E		A	A	A	A	A
d_A, Approach Delay [s/veh]	56.22			57.94			8.17			5.73		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	10.73											
Intersection LOS	B											
Intersection V/C	0.455											

Emissions

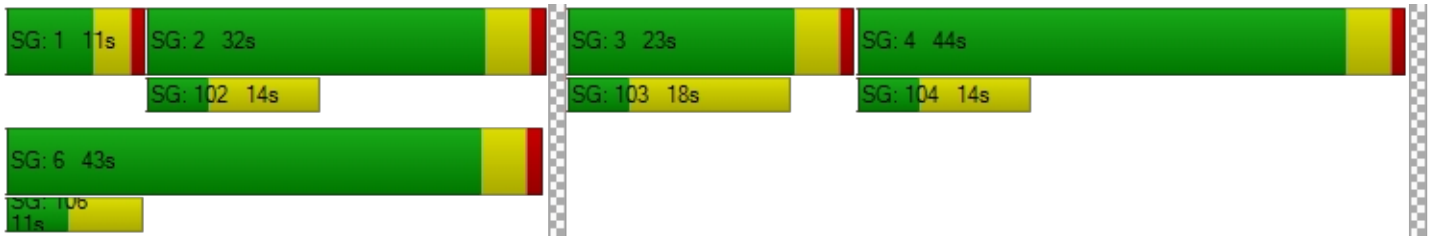
Vehicle Miles Traveled [mph]	5.40	4.57	0.49	48.39	48.39	3.47	110.10
Stops [stops/h]	69.92	59.28	20.34	198.98	200.73	3.10	169.08
Fuel consumption [US gal/h]	1.34	1.13	0.34	4.14	4.16	0.18	6.32
CO [g/h]	93.40	78.94	23.47	289.11	290.70	12.59	442.09
NOx [g/h]	18.17	15.36	4.57	56.25	56.56	2.45	86.02
VOC [g/h]	21.65	18.30	5.44	67.00	67.37	2.92	102.46

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.031	1.782	2.591	2.636
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	335	716	496	696
d_b, Bicycle Delay [s]	38.14	22.66	31.09	23.37
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.817	3.016
Bicycle LOS	A	A	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	6	7	52	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	7	8	61	6	9
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	2	3	19	2	3
Total Analysis Volume [veh/h]	143	9	10	76	8	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.54	0.00	9.97	9.11
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.53	0.00	1.77	1.77
d_A, Approach Delay [s/veh]	0.00		0.88		9.47	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.99					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.259

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	38	3	5	46	7	46	66	35	2	56	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	45	4	6	54	8	54	78	41	2	66	24
Peak Hour Factor	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	14	1	2	17	2	17	24	13	1	20	7
Total Analysis Volume [veh/h]	17	55	5	7	66	10	66	96	50	2	81	29
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	611	675	611	680	817	810
Degree of Utilization, x	0.03	0.09	0.01	0.11	0.26	0.14

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.09	0.29	0.03	0.38	1.04	0.48
95th-Percentile Queue Length [ft]	2.15	7.29	0.87	9.39	25.91	11.97
Approach Delay [s/veh]	8.60		8.66		8.94	8.16
Approach LOS	A		A		A	A
Intersection Delay [s/veh]	8.66					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.136

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	40	39	20	9	58	11	15	38	21	7	28	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	46	24	11	68	13	18	45	25	8	33	7
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	13	7	3	19	4	5	12	7	2	9	2
Total Analysis Volume [veh/h]	52	51	27	12	75	14	20	50	28	9	37	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	631	725	646	709	823	719	702
Degree of Utilization, x	0.08	0.11	0.02	0.11	0.02	0.14	0.08

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.27	0.36	0.06	0.35	0.05	0.47	0.25
95th-Percentile Queue Length [ft]	6.72	9.00	1.42	8.83	1.30	11.77	6.23
Approach Delay [s/veh]	8.53		8.20			8.80	8.55
Approach LOS	A		A			A	A
Intersection Delay [s/veh]	8.51						
Intersection LOS	A						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	26	22	18	55	29	42	393	49	52	315	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	31	26	21	65	34	50	463	58	61	371	29
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	8	7	5	17	9	13	119	15	16	96	7
Total Analysis Volume [veh/h]	15	32	27	22	67	35	52	477	60	63	382	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	26	0	0	26	0	11	23	0	11	23	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	6	6	6	6	45	36	45	37
g / C, Green / Cycle	0.10	0.10	0.10	0.10	0.74	0.60	0.74	0.61
(v / s)_i Volume / Saturation Flow Rate	0.01	0.04	0.02	0.06	0.05	0.33	0.07	0.25
s, saturation flow rate [veh/h]	1163	1557	1209	1587	975	1650	902	1662
c, Capacity [veh/h]	140	162	172	165	773	990	681	1010
d1, Uniform Delay [s]	29.37	25.04	28.00	25.75	2.70	7.12	3.48	6.13
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	1.37	0.33	3.75	0.17	2.13	0.06	1.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.36	0.13	0.62	0.07	0.54	0.09	0.41
d, Delay for Lane Group [s/veh]	29.70	26.41	28.33	29.49	2.87	9.25	3.54	7.35
Lane Group LOS	C	C	C	C	A	A	A	A
Critical Lane Group	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.22	0.82	0.31	1.51	0.12	3.76	0.12	2.45
50th-Percentile Queue Length [ft/ln]	5.54	20.39	7.85	37.79	3.07	94.06	2.92	61.35
95th-Percentile Queue Length [veh/ln]	0.40	1.47	0.57	2.72	0.22	6.77	0.21	4.42
95th-Percentile Queue Length [ft/ln]	9.98	36.70	14.14	68.02	5.52	169.31	5.25	110.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.70	26.41	26.41	28.33	29.49	29.49	2.87	9.25	9.25	3.54	7.35	7.35
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	27.08			29.29			8.69			6.84		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	11.09											
Intersection LOS	B											
Intersection V/C	0.404											

Emissions

Vehicle Miles Traveled [mph]	1.21	4.77	1.73	8.03	8.33	86.05	9.43	61.65
Stops [stops/h]	13.31	48.94	18.85	90.70	7.36	225.74	7.00	147.23
Fuel consumption [US gal/h]	0.20	0.72	0.28	1.32	0.43	5.75	0.50	3.95
CO [g/h]	13.72	50.29	19.37	92.35	30.29	401.68	34.68	276.33
NOx [g/h]	2.67	9.78	3.77	17.97	5.89	78.15	6.75	53.76
VOC [g/h]	3.18	11.65	4.49	21.40	7.02	93.09	8.04	64.04

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.222	2.033	2.219	2.346
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	713	713	613	613
d_b, Bicycle Delay [s]	12.42	12.42	14.42	14.42
l_b,int, Bicycle LOS Score for Intersection	1.896	1.979	2.746	2.558
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.357

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	34	99	38	21	633	53	46	432	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	40	117	45	25	746	62	54	509	32
Peak Hour Factor	0.9500	0.9500	0.9500	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	11	33	13	7	208	17	15	142	9
Total Analysis Volume [veh/h]	0	0	0	45	131	50	28	833	69	60	568	36
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	30	0	11	19	0	11	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		7	7	44	35	35	44	37	37
g / C, Green / Cycle		0.12	0.12	0.73	0.59	0.59	0.73	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate		0.07	0.07	0.03	0.27	0.27	0.08	0.18	0.18
s, saturation flow rate [veh/h]		1651	1560	826	1683	1638	710	1683	1648
c, Capacity [veh/h]		192	182	704	992	966	598	1043	1021
d1, Uniform Delay [s]		25.17	25.23	2.53	6.94	6.94	3.23	5.30	5.31
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.93	3.36	0.11	1.54	1.58	0.08	0.71	0.73
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.60	0.62	0.04	0.46	0.46	0.10	0.29	0.29
d, Delay for Lane Group [s/veh]		28.10	28.59	2.64	8.48	8.52	3.31	6.01	6.03
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.64	1.62	0.07	3.03	2.97	0.13	1.57	1.54
50th-Percentile Queue Length [ft/ln]		41.04	40.58	1.81	75.87	74.14	3.15	39.20	38.59
95th-Percentile Queue Length [veh/ln]		2.95	2.92	0.13	5.46	5.34	0.23	2.82	2.78
95th-Percentile Queue Length [ft/ln]		73.87	73.04	3.26	136.57	133.44	5.67	70.56	69.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.10	28.33	28.59	2.64	8.50	8.52	3.31	6.02	6.03
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			28.34			8.32			5.78		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.88											
Intersection LOS	A											
Intersection V/C	0.357											

Emissions

Vehicle Miles Traveled [mph]		9.25	9.03	4.55	74.35	72.38	9.01	45.76	44.90
Stops [stops/h]		98.50	97.39	4.35	182.09	177.92	7.56	94.08	92.62
Fuel consumption [US gal/h]		1.45	1.43	0.24	4.83	4.71	0.47	2.79	2.74
CO [g/h]		101.18	99.89	16.53	337.68	329.15	33.16	195.16	191.66
NOx [g/h]		19.69	19.44	3.22	65.70	64.04	6.45	37.97	37.29
VOC [g/h]		23.45	23.15	3.83	78.26	76.28	7.69	45.23	44.42

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.059	2.025	2.532	2.531
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	847	480	480
d_b, Bicycle Delay [s]	30.00	9.98	17.33	17.33
l_b,int, Bicycle LOS Score for Intersection	4.132	1.960	2.541	2.322
Bicycle LOS	D	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.250

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	45	61	37	0	201	16	7	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	53	72	44	0	237	19	8	62	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.7720	0.7720	0.7720	0.9500	0.7720	0.7720	0.7720	0.7720	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	17	23	14	0	77	6	3	20	0
Total Analysis Volume [veh/h]	0	0	0	69	93	57	0	307	25	10	80	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	24	0	0	26	0	0	26	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		7	7	7	34	34	34
g / C, Green / Cycle		0.14	0.14	0.14	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate		0.05	0.05	0.04	0.20	0.01	0.05
s, saturation flow rate [veh/h]		1614	1683	1431	1661	943	1683
c, Capacity [veh/h]		222	231	196	1124	652	1139
d1, Uniform Delay [s]		19.58	19.56	19.38	3.27	5.39	2.74
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.99	0.92	0.81	0.67	0.04	0.12
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.36	0.35	0.29	0.30	0.02	0.07
d, Delay for Lane Group [s/veh]		20.58	20.47	20.19	3.94	5.43	2.86
Lane Group LOS		C	C	C	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.85	0.86	0.60	0.86	0.04	0.17
50th-Percentile Queue Length [ft/ln]		21.29	21.54	14.98	21.60	1.08	4.26
95th-Percentile Queue Length [veh/ln]		1.53	1.55	1.08	1.56	0.08	0.31
95th-Percentile Queue Length [ft/ln]		38.32	38.78	26.96	38.88	1.94	7.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.58	20.49	20.19	0.00	3.94	3.94	5.43	2.86	0.00
Movement LOS				C	C	C		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			20.44			3.94			3.15		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.46											
Intersection LOS	A											
Intersection V/C	0.250											

Emissions

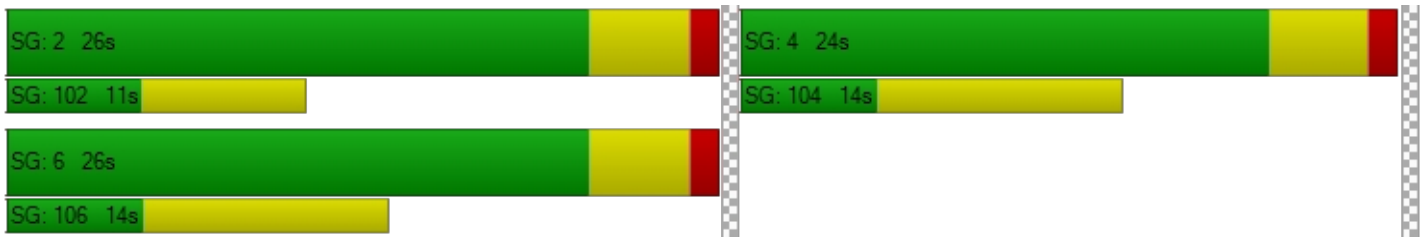
Vehicle Miles Traveled [mph]		6.05	6.16	4.30	55.43	1.46	11.70
Stops [stops/h]		61.31	62.05	43.14	62.22	3.11	12.26
Fuel consumption [US gal/h]		0.84	0.86	0.59	2.89	0.09	0.60
CO [g/h]		58.98	59.79	41.44	202.13	6.18	41.67
NOx [g/h]		11.48	11.63	8.06	39.33	1.20	8.11
VOC [g/h]		13.67	13.86	9.61	46.85	1.43	9.66

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.762	1.970	1.914	2.062
Crosswalk LOS	A	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	776	852	852
d_b, Bicycle Delay [s]	25.00	9.36	8.24	8.24
l_b,int, Bicycle LOS Score for Intersection	4.132	1.955	2.322	1.923
Bicycle LOS	D	A	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	144	0	68	0	0	7	0	960	81	108	389	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	0	80	0	0	8	0	1132	95	127	459	0
Peak Hour Factor	0.9580	0.9500	0.9580	0.9500	0.9500	0.9580	0.9500	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	0	21	0	0	2	0	295	25	33	120	0
Total Analysis Volume [veh/h]	177	0	84	0	0	8	0	1182	99	133	479	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	22	0	0	0	0	27	0	30	0	11	41	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	11	11	1	54	54	64	64
g / C, Green / Cycle	0.12	0.12	0.02	0.59	0.59	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.10	0.05	0.01	0.34	0.35	0.22	0.26
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1820	615	1870
c, Capacity [veh/h]	219	196	25	1110	1081	457	1334
d1, Uniform Delay [s]	38.42	36.53	43.80	11.30	11.46	7.63	4.98
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.87	1.48	6.93	2.19	2.39	1.61	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.43	0.32	0.58	0.59	0.29	0.36
d, Delay for Lane Group [s/veh]	45.28	38.01	50.73	13.49	13.86	9.24	5.73
Lane Group LOS	D	D	D	B	B	A	A
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.12	1.75	0.23	7.73	7.88	0.82	3.02
50th-Percentile Queue Length [ft/ln]	102.90	43.73	5.64	193.35	197.00	20.42	75.59
95th-Percentile Queue Length [veh/ln]	7.41	3.15	0.41	12.29	12.48	1.47	5.44
95th-Percentile Queue Length [ft/ln]	185.21	78.72	10.14	307.37	312.09	36.76	136.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.28	0.00	38.01	0.00	0.00	50.73	0.00	13.66	13.86	9.24	5.73	5.73
Movement LOS	D		D			D		B	B	A	A	A
d_A, Approach Delay [s/veh]	42.94			50.73			13.67			6.50		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15.31											
Intersection LOS	B											
Intersection V/C	0.485											

Emissions

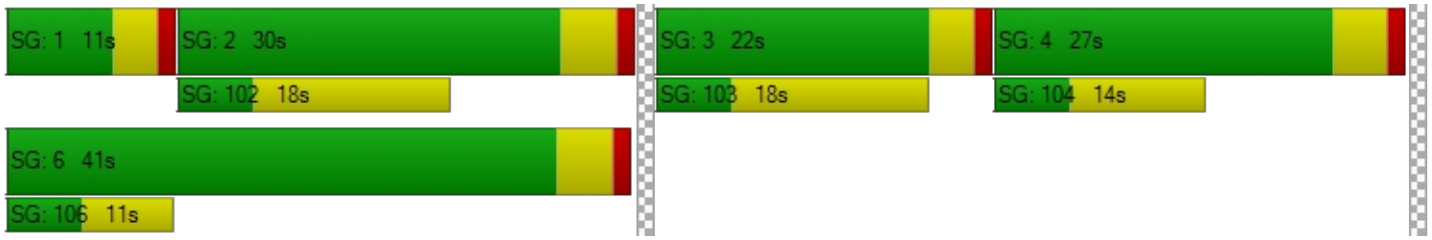
Vehicle Miles Traveled [mph]	13.37	6.35	0.22	96.61	96.61	4.51	16.23
Stops [stops/h]	164.63	69.97	9.02	309.36	315.19	32.68	120.94
Fuel consumption [US gal/h]	3.38	1.42	0.13	7.44	7.52	0.62	1.90
CO [g/h]	236.18	99.11	8.87	520.34	525.96	43.07	132.48
NOx [g/h]	45.95	19.28	1.73	101.24	102.33	8.38	25.78
VOC [g/h]	54.74	22.97	2.06	120.59	121.90	9.98	30.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.390	1.720	2.574	2.590
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	498	562	807
d_b, Bicycle Delay [s]	28.80	25.39	23.26	16.02
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.831	2.784
Bicycle LOS	A	A	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	222	1	2	173	2	3	0	13	3	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	262	1	2	204	2	4	0	15	4	0	2
Peak Hour Factor	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	73	0	1	57	1	1	0	4	1	0	1
Total Analysis Volume [veh/h]	4	292	1	2	227	2	4	0	17	4	0	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.70	0.00	0.00	7.85	0.00	0.00	11.75	13.14	9.05	12.16	13.09	9.18
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.17	0.08	0.00	0.08	0.04	0.00	1.99	1.99	1.99	0.77	0.77	0.77
d_A, Approach Delay [s/veh]	0.10			0.07			9.56			11.17		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.57											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.093

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	189	11	2	184	4	10	2	58	26	6	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	223	13	2	217	5	12	2	68	31	7	18
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	60	3	1	58	1	3	1	18	8	2	5
Total Analysis Volume [veh/h]	41	240	14	2	233	5	13	2	73	33	8	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.09	0.09	0.02	0.02
d_M, Delay for Movement [s/veh]	7.76	0.00	0.00	7.75	0.00	0.00	14.84	14.51	10.25	16.39	14.96	10.83
Movement LOS	A	A	A	A	A	A	B	B	B	C	B	B
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.07	0.00	0.00	0.00	0.44	0.44	0.44	0.47	0.47	0.47
95th-Percentile Queue Length [ft/ln]	1.77	1.77	1.77	0.08	0.08	0.08	10.99	10.99	10.99	11.69	11.69	11.69
d_A, Approach Delay [s/veh]	1.08			0.06			11.03			14.44		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.18											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	183	112	55	276	27	11	355	86	140	355	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	216	132	65	325	32	13	419	101	165	419	183
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	57	35	17	86	8	3	110	27	44	110	48
Total Analysis Volume [veh/h]	47	228	139	69	343	34	14	442	107	174	442	193
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	11	27	0	11	26	0	16	31	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	23	13	13	23	14	14	2	33	33	10	42	42
g / C, Green / Cycle	0.28	0.17	0.17	0.28	0.18	0.18	0.02	0.42	0.42	0.13	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.10	0.06	0.11	0.11	0.01	0.17	0.17	0.11	0.26	0.13
s, saturation flow rate [veh/h]	1106	1683	1431	1141	1683	1630	1603	1683	1572	1603	1683	1431
c, Capacity [veh/h]	353	279	238	341	299	290	39	698	652	207	872	741
d1, Uniform Delay [s]	21.51	32.18	30.81	22.05	30.50	30.53	38.41	16.47	16.51	34.03	12.59	10.74
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.20	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	5.77	2.28	0.29	2.25	2.38	5.44	1.74	1.90	15.28	2.10	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.82	0.59	0.20	0.64	0.64	0.36	0.40	0.41	0.84	0.51	0.26
d, Delay for Lane Group [s/veh]	21.68	37.95	33.10	22.34	32.75	32.92	43.85	18.21	18.41	49.31	14.70	11.59
Lane Group LOS	C	D	C	C	C	C	D	B	B	D	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.64	4.52	2.53	0.95	3.45	3.38	0.33	3.84	3.66	4.09	5.19	1.92
50th-Percentile Queue Length [ft/ln]	15.90	112.92	63.15	23.74	86.19	84.59	8.20	96.08	91.62	102.34	129.64	47.90
95th-Percentile Queue Length [veh/ln]	1.14	8.00	4.55	1.71	6.21	6.09	0.59	6.92	6.60	7.37	8.92	3.45
95th-Percentile Queue Length [ft/ln]	28.61	200.06	113.67	42.73	155.14	152.25	14.76	172.94	164.92	184.21	223.00	86.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.68	37.95	33.10	22.34	32.82	32.92	43.85	18.28	18.41	49.31	14.70	11.59
Movement LOS	C	D	C	C	C	C	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	34.47			31.21			18.94			21.40		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	25.16											
Intersection LOS	C											
Intersection V/C	0.449											

Emissions

Vehicle Miles Traveled [mph]	3.82	18.53	11.30	5.40	14.92	14.59	2.09	42.23	39.91	8.59	21.82	9.53
Stops [stops/h]	28.61	203.26	113.67	42.73	155.14	152.25	14.76	172.94	164.92	184.21	233.35	86.22
Fuel consumption [US gal/h]	0.57	4.00	2.22	0.84	3.01	2.95	0.28	3.61	3.43	3.12	3.51	1.32
CO [g/h]	39.71	279.30	155.30	58.79	210.12	206.18	19.27	252.25	239.52	217.90	245.31	92.53
NOx [g/h]	7.73	54.34	30.22	11.44	40.88	40.12	3.75	49.08	46.60	42.39	47.73	18.00
VOC [g/h]	9.20	64.73	35.99	13.62	48.70	47.78	4.47	58.46	55.51	50.50	56.85	21.45

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.532	2.377	2.361	2.599
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	548	548	535	658
d_b, Bicycle Delay [s]	21.10	21.10	21.46	18.02
l_b,int, Bicycle LOS Score for Intersection	2.457	2.142	2.238	3.109
Bicycle LOS	B	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	34.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.724

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	247	374	102	370	40	8	675	93	202	420	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	291	441	120	436	47	9	796	110	238	495	88
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	77	117	32	116	13	2	212	29	63	132	23
Total Analysis Volume [veh/h]	33	310	469	128	464	50	10	847	117	253	527	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	95
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	41	0	11	41	0	17	30	0	13	26	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	44	33	33	44	36	36	2	28	28	9	36	36
g / C, Green / Cycle	0.46	0.35	0.35	0.46	0.38	0.38	0.02	0.30	0.30	0.09	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.04	0.10	0.33	0.16	0.16	0.16	0.01	0.26	0.08	0.08	0.19	0.19
s, saturation flow rate [veh/h]	910	3204	1431	819	1683	1626	1603	3204	1431	3113	1683	1595
c, Capacity [veh/h]	438	1119	499	445	635	613	30	957	427	295	630	597
d1, Uniform Delay [s]	14.67	22.28	29.93	15.20	21.81	21.83	46.00	31.77	25.45	42.37	22.94	22.94
k, delay calibration	0.11	0.11	0.34	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.07	0.13	21.18	0.35	0.43	0.45	6.15	11.82	1.58	7.16	2.89	3.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.28	0.94	0.29	0.41	0.41	0.33	0.89	0.27	0.86	0.51	0.51
d, Delay for Lane Group [s/veh]	14.75	22.41	51.12	15.55	22.24	22.28	52.15	43.58	27.03	49.53	25.82	25.99
Lane Group LOS	B	C	D	B	C	C	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.38	2.43	12.75	1.58	4.19	4.07	0.29	10.69	2.21	3.22	5.94	5.66
50th-Percentile Queue Length [ft/ln]	9.55	60.85	318.81	39.60	104.72	101.73	7.15	267.37	55.19	80.42	148.54	141.56
95th-Percentile Queue Length [veh/ln]	0.69	4.38	18.61	2.85	7.54	7.32	0.51	16.06	3.97	5.79	9.94	9.56
95th-Percentile Queue Length [ft/ln]	17.19	109.54	465.22	71.28	188.50	183.11	12.87	401.46	99.34	144.75	248.47	239.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.75	22.41	51.12	15.55	22.26	22.28	52.15	43.58	27.03	49.53	25.89	25.99
Movement LOS	B	C	D	B	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	38.68			20.92			41.68			32.74		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	34.54											
Intersection LOS	C											
Intersection V/C	0.724											

Emissions

Vehicle Miles Traveled [mph]	2.56	24.05	36.38	10.41	21.21	20.58	1.50	127.14	17.56	18.26	23.01	21.82
Stops [stops/h]	14.47	184.48	483.25	60.03	158.73	154.20	10.84	810.56	83.65	243.79	225.15	214.57
Fuel consumption [US gal/h]	0.31	3.72	9.90	1.25	3.18	3.09	0.22	16.34	1.75	4.31	3.57	3.40
CO [g/h]	21.35	259.87	691.97	87.59	222.50	216.08	15.04	1142.05	122.63	301.02	249.77	237.87
NOx [g/h]	4.15	50.56	134.63	17.04	43.29	42.04	2.93	222.20	23.86	58.57	48.60	46.28
VOC [g/h]	4.95	60.23	160.37	20.30	51.57	50.08	3.49	264.68	28.42	69.77	57.89	55.13

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.93	38.93	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	2.769	2.544	2.690	2.935
Crosswalk LOS	C	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	756	756	535	451
d_b, Bicycle Delay [s]	18.38	18.38	25.50	28.51
l_b,int, Bicycle LOS Score for Intersection	2.444	2.304	2.578	2.495
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.619

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	385	54	496	314	23	76	217	58	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	454	64	585	370	27	90	256	68	0	0	0
Peak Hour Factor	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	141	20	182	115	8	28	80	21	0	0	0
Total Analysis Volume [veh/h]	35	565	80	728	460	34	112	318	85	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	17	17	0	24	24	0	0	29	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	4	22	22	18	37	37	16	16	16	
g / C, Green / Cycle	0.05	0.32	0.32	0.26	0.53	0.53	0.22	0.22	0.22	
(v / s)_i Volume / Saturation Flow Rate	0.02	0.20	0.20	0.23	0.15	0.15	0.07	0.19	0.06	
s, saturation flow rate [veh/h]	1603	1683	1611	3113	1683	1643	1603	1683	1431	
c, Capacity [veh/h]	83	533	510	818	888	867	358	376	320	
d1, Uniform Delay [s]	32.19	20.32	20.34	24.82	9.16	9.16	22.69	26.02	22.44	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.42	5.29	5.57	3.58	0.79	0.81	0.49	5.26	0.44	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.42	0.62	0.62	0.89	0.28	0.28	0.31	0.85	0.27	
d, Delay for Lane Group [s/veh]	35.61	25.61	25.92	28.40	9.95	9.97	23.18	31.29	22.88	
Lane Group LOS	D	C	C	C	A	A	C	C	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.63	4.94	4.79	5.74	1.97	1.93	1.52	5.34	1.14	
50th-Percentile Queue Length [ft/ln]	15.70	123.55	119.75	143.46	49.20	48.22	38.01	133.53	28.59	
95th-Percentile Queue Length [veh/ln]	1.13	8.59	8.38	9.67	3.54	3.47	2.74	9.13	2.06	
95th-Percentile Queue Length [ft/ln]	28.25	214.69	209.48	241.68	88.55	86.80	68.43	228.29	51.45	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.61	25.74	25.92	28.40	9.96	9.97	23.18	31.29	22.88	0.00	0.00	0.00
Movement LOS	D	C	C	C	A	A	C	C	C			
d_A, Approach Delay [s/veh]	26.27			20.95			28.14			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	23.98											
Intersection LOS	C											
Intersection V/C	0.619											

Emissions

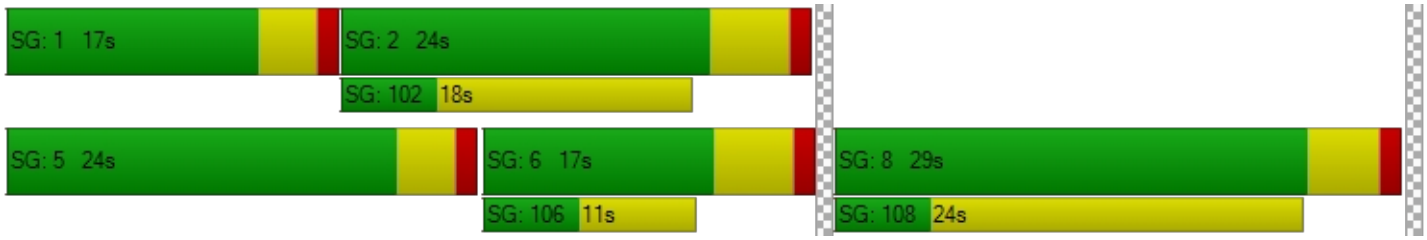
Vehicle Miles Traveled [mph]	1.39	13.04	12.53	53.46	18.34	17.93	16.39	46.52	12.44
Stops [stops/h]	32.29	254.16	246.34	590.25	101.20	99.20	78.20	274.70	58.80
Fuel consumption [US gal/h]	0.55	4.12	4.00	10.68	1.97	1.93	1.64	5.46	1.23
CO [g/h]	38.40	288.20	279.42	746.80	137.44	134.58	114.29	381.48	86.16
NOx [g/h]	7.47	56.07	54.37	145.30	26.74	26.18	22.24	74.22	16.76
VOC [g/h]	8.90	66.79	64.76	173.08	31.85	31.19	26.49	88.41	19.97

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.567	2.802	2.262	2.253
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	340	540	694	0
d_b, Bicycle Delay [s]	24.11	18.65	14.92	35.00
l_b,int, Bicycle LOS Score for Intersection	2.335	2.782	2.624	4.132
Bicycle LOS	B	C	B	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	155	446	0	522	205	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	526	0	615	242	0
Peak Hour Factor	0.9570	0.9570	0.9500	0.9570	0.9570	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	137	0	161	63	0
Total Analysis Volume [veh/h]	191	550	0	643	253	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	26	0	0	24	24	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	50	50	50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	14	14	28	28
g / C, Green / Cycle	0.28	0.28	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.12	0.22	0.20	0.08
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	445	702	1758	1758
d1, Uniform Delay [s]	14.82	16.68	6.37	5.53
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.66	1.96	0.59	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.78	0.37	0.14
d, Delay for Lane Group [s/veh]	15.48	18.63	6.96	5.70
Lane Group LOS	B	B	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.59	2.63	1.49	0.50
50th-Percentile Queue Length [ft/ln]	39.72	65.84	37.37	12.58
95th-Percentile Queue Length [veh/ln]	2.86	4.74	2.69	0.91
95th-Percentile Queue Length [ft/ln]	71.49	118.51	67.26	22.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.48	18.63	0.00	6.96	5.70	0.00
Movement LOS	B	B		A	A	
d_A, Approach Delay [s/veh]	17.82		6.96		5.70	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	11.68					
Intersection LOS	B					
Intersection V/C	0.418					

Emissions

Vehicle Miles Traveled [mph]	16.01	46.11	31.74	12.14
Stops [stops/h]	114.38	379.22	215.22	72.47
Fuel consumption [US gal/h]	2.07	6.70	3.41	1.19
CO [g/h]	144.84	468.00	238.16	83.45
NOx [g/h]	28.18	91.06	46.34	16.24
VOC [g/h]	33.57	108.46	55.20	19.34

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.312	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	880	772	772
d_b, Bicycle Delay [s]	7.84	9.42	9.42
l_b,int, Bicycle LOS Score for Intersection	1.774	2.304	1.983
Bicycle LOS	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	33.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	87	291	45	0	0	0	359	317	0	0	118	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	343	53	0	0	0	423	374	0	0	139	169
Peak Hour Factor	0.8650	0.8650	0.8650	0.9500	0.9500	0.9500	0.8650	0.8650	0.9500	0.9500	0.8650	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	99	15	0	0	0	122	108	0	0	40	49
Total Analysis Volume [veh/h]	119	397	61	0	0	0	489	432	0	0	161	195
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	29	0	0	0	0	30	46	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	75	75		75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	23	23		24	43	14	14
g / C, Green / Cycle	0.30	0.30		0.33	0.57	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.07	0.28		0.31	0.13	0.10	0.14
s, saturation flow rate [veh/h]	1603	1644		1603	3204	1683	1431
c, Capacity [veh/h]	483	496		524	1819	315	268
d1, Uniform Delay [s]	19.76	25.36		24.44	8.10	27.38	28.67
k, delay calibration	0.11	0.32		0.36	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	18.44		20.36	0.31	5.79	15.85
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.92		0.93	0.24	0.51	0.73
d, Delay for Lane Group [s/veh]	20.02	43.80		44.81	8.40	33.17	44.51
Lane Group LOS	C	D		D	A	C	D
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.51	9.81		10.81	1.60	3.00	4.35
50th-Percentile Queue Length [ft/ln]	37.68	245.21		270.19	40.08	75.12	108.67
95th-Percentile Queue Length [veh/ln]	2.71	14.94		16.20	2.89	5.41	7.77
95th-Percentile Queue Length [ft/ln]	67.82	373.61		404.98	72.15	135.21	194.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.02	43.80	43.80	0.00	0.00	0.00	44.81	8.40	0.00	0.00	33.17	44.51
Movement LOS	C	D	D				D	A			C	D
d_A, Approach Delay [s/veh]	38.89			0.00			27.73			39.38		
Approach LOS	D			A			C			D		
d_I, Intersection Delay [s/veh]	33.44											
Intersection LOS	C											
Intersection V/C	0.720											

Emissions

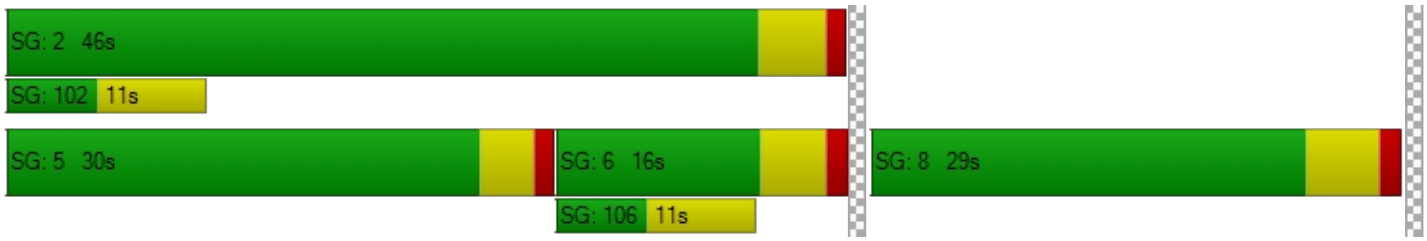
Vehicle Miles Traveled [mph]	10.37	39.90		23.46	20.73	5.89	7.14
Stops [stops/h]	72.34	470.80		518.77	153.93	144.23	208.65
Fuel consumption [US gal/h]	1.42	9.14		8.29	2.44	2.13	3.21
CO [g/h]	99.55	639.12		579.51	170.75	148.62	224.58
NOx [g/h]	19.37	124.35		112.75	33.22	28.92	43.70
VOC [g/h]	23.07	148.12		134.31	39.57	34.45	52.05

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.035	2.234	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	637	0	1101	301
d_b, Bicycle Delay [s]	17.41	37.50	7.57	27.05
l_b,int, Bicycle LOS Score for Intersection	2.726	4.132	2.534	2.068
Bicycle LOS	B	D	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	264	113	379	0	0	0	230	814	0	0	489	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	311	133	447	0	0	0	271	960	0	0	577	124
Peak Hour Factor	0.9290	0.9290	0.9290	0.9500	0.9500	0.9500	0.9290	0.9290	0.9500	0.9500	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	36	120	0	0	0	73	258	0	0	155	33
Total Analysis Volume [veh/h]	335	143	481	0	0	0	292	1033	0	0	621	133
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	13	30	0	0	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	25	25	25		8	26	14	14
g / C, Green / Cycle	0.41	0.41	0.41		0.13	0.43	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.30		0.08	0.29	0.17	0.08
s, saturation flow rate [veh/h]	1781	1833	1589		3459	3560	3560	1589
c, Capacity [veh/h]	728	749	649		447	1530	803	359
d1, Uniform Delay [s]	12.12	12.07	15.05		24.85	13.74	21.79	19.63
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.20	1.12	7.44		1.63	0.53	1.62	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.32	0.74		0.65	0.68	0.77	0.37
d, Delay for Lane Group [s/veh]	13.32	13.19	22.49		26.48	14.27	23.42	20.27
Lane Group LOS	B	B	C		C	B	C	C
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.10	2.09	5.99		1.99	5.09	3.86	1.48
50th-Percentile Queue Length [ft/ln]	52.58	52.23	149.85		49.87	127.35	96.46	37.07
95th-Percentile Queue Length [veh/ln]	3.79	3.76	10.01		3.59	8.80	6.95	2.67
95th-Percentile Queue Length [ft/ln]	94.65	94.01	250.23		89.76	219.89	173.63	66.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.28	13.19	22.49	0.00	0.00	0.00	26.48	14.27	0.00	0.00	23.42	20.27
Movement LOS	B	B	C				C	B			C	C
d_A, Approach Delay [s/veh]	17.89			0.00			16.96			22.86		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	18.72											
Intersection LOS	B											
Intersection V/C	0.593											

Emissions

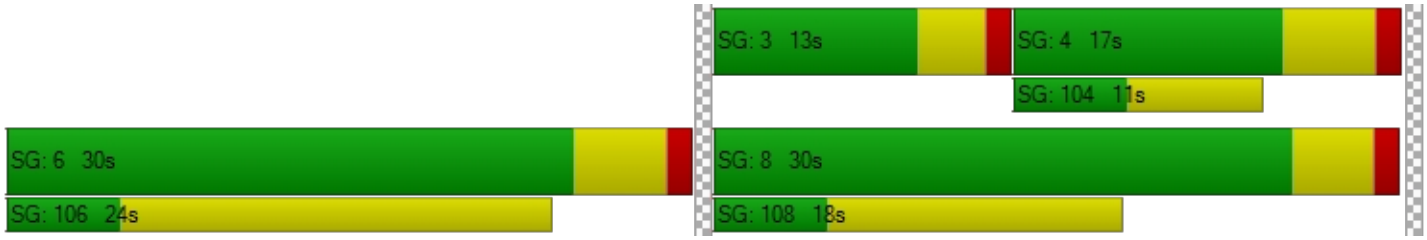
Vehicle Miles Traveled [mph]	9.35	9.36	18.83		21.08	74.57	31.41	6.73
Stops [stops/h]	126.20	125.35	359.65		239.36	611.29	463.02	88.96
Fuel consumption [US gal/h]	1.95	1.94	5.62		3.44	8.70	7.64	1.47
CO [g/h]	136.50	135.73	393.09		240.42	608.02	533.93	103.04
NOx [g/h]	26.56	26.41	76.48		46.78	118.30	103.88	20.05
VOC [g/h]	31.64	31.46	91.10		55.72	140.91	123.74	23.88

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.384	1.972	2.742	0.000
Crosswalk LOS	B	A	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	397
d_b, Bicycle Delay [s]	10.27	30.00	9.98	19.28
l_b,int, Bicycle LOS Score for Intersection	3.356	4.132	2.867	2.396
Bicycle LOS	C	D	C	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix I-6

Cumulative Conditions + Project

Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\5 Cumulative + P AM.pdf

Scenario 9 Cumulative + Project AM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	NB Left	0.729	31.6	C
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	EB Right	0.751	33.8	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	EB Left	0.461	10.2	B
4	Main St @ First St	Signalized	HCM 7th Edition	EB Left	0.352	9.2	A
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.018	13.5	B
6	Main St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.496	24.6	C
7	Market St @ First St	Signalized	HCM 7th Edition	WB Left	0.306	8.9	A
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.007	17.8	C
9	Market St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.549	18.2	B
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	EB Left	0.126	33.2	D
11	Market St @ Fifth St	Signalized	HCM 7th Edition	EB Right	0.394	13.1	B
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	EB Right	0.034	12.8	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.603	26.7	C
14	Market St @ University Ave	Signalized	HCM 7th Edition	SB Left	0.574	25.7	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Right	0.362	3.4	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	EB Thru	0.326	8.0	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	EB Thru	0.134	75.6	F
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Left	0.282	6.9	A

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	WB Thru	0.077	55.1	F
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	SB Left	0.526	34.2	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.330	13.0	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.400	22.5	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.304	9.5	A
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.001	10.4	B
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	EB Right	0.472	12.6	B
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	NB Thru	0.402	10.8	B
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.552	15.6	B
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.320	12.5	B
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Left	0.218	12.7	B
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.250	11.1	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Thru	0.002	11.3	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.079	20.4	C
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.664	32.4	C
34	Lime St @ University Ave	Signalized	HCM 7th Edition	EB Left	0.522	31.5	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Left	0.375	19.1	B
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	EB Thru	0.636	15.8	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.475	21.3	C
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.410	17.1	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	31.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.729

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	135	326	0	0	733	143	0	0	0	46	78	322
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	50	10	0	0	11	0	0	0	0	39	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	209	394	0	0	875	169	0	0	0	93	92	380
Peak Hour Factor	0.8950	0.8950	0.9500	0.9500	0.8950	0.8950	0.9500	0.9500	0.9500	0.8950	0.8950	0.8950
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	110	0	0	244	47	0	0	0	26	26	106
Total Analysis Volume [veh/h]	234	440	0	0	978	189	0	0	0	104	103	425
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	33	47	0	0	14	0	0	0	0	0	38	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	85	85	85	85		85	85
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	13	50	32	32		25	25
g / C, Green / Cycle	0.16	0.58	0.38	0.38		0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.13	0.12	0.31	0.33		0.11	0.27
s, saturation flow rate [veh/h]	1781	3560	1870	1769		1824	1589
c, Capacity [veh/h]	280	2079	710	672		540	470
d1, Uniform Delay [s]	34.76	8.39	23.76	24.39		23.76	28.75
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.21
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	6.53	0.23	10.33	14.25		0.45	11.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.21	0.82	0.87		0.38	0.90
d, Delay for Lane Group [s/veh]	41.29	8.62	34.09	38.64		24.21	40.61
Lane Group LOS	D	A	C	D		C	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	5.03	1.75	11.80	12.69		3.22	9.39
50th-Percentile Queue Length [ft/ln]	125.87	43.78	295.10	317.13		80.56	234.73
95th-Percentile Queue Length [veh/ln]	8.71	3.15	17.44	18.53		5.80	14.41
95th-Percentile Queue Length [ft/ln]	217.87	78.81	435.97	463.16		145.01	360.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.29	8.62	0.00	0.00	35.92	38.64	0.00	0.00	0.00	24.21	24.21	40.61
Movement LOS	D	A			D	D				C	C	D
d_A, Approach Delay [s/veh]	19.97			36.36			0.00			35.24		
Approach LOS	B			D			A			D		
d_I, Intersection Delay [s/veh]	31.61											
Intersection LOS	C											
Intersection V/C	0.729											

Emissions

Vehicle Miles Traveled [mph]	13.92	26.18	21.60	21.60		7.59	15.59
Stops [stops/h]	213.25	148.34	499.94	537.26		136.48	397.66
Fuel consumption [US gal/h]	4.10	2.89	8.63	9.45		2.34	7.10
CO [g/h]	286.63	201.70	603.27	660.66		163.26	496.08
NOx [g/h]	55.77	39.24	117.38	128.54		31.76	96.52
VOC [g/h]	66.43	46.75	139.81	153.11		37.84	114.97

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.935	2.179
Crosswalk LOS	F	F	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	986	209	0	774
d_b, Bicycle Delay [s]	10.93	34.07	42.50	15.97
l_b,int, Bicycle LOS Score for Intersection	2.116	2.522	4.132	2.602
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	33.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.751

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	328	219	455	319	0	133	3	198	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	60	35	0	51	0	0	0	56	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	447	293	536	427	0	157	4	289	0	0	0
Peak Hour Factor	0.9500	0.8880	0.8880	0.8880	0.8880	0.9500	0.8880	0.8880	0.8880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	126	82	151	120	0	44	1	81	0	0	0
Total Analysis Volume [veh/h]	0	503	330	604	481	0	177	5	325	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	23	0	31	54	0	0	21	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	75	75	75	75	75	75	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	18	18	27	49	16	16	
g / C, Green / Cycle	0.24	0.24	0.36	0.65	0.21	0.21	
(v / s)_i Volume / Saturation Flow Rate	0.14	0.21	0.34	0.14	0.10	0.20	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1783	1589	
c, Capacity [veh/h]	858	383	637	2321	378	337	
d1, Uniform Delay [s]	25.15	27.26	23.42	5.25	25.93	29.27	
k, delay calibration	0.50	0.50	0.40	0.50	0.11	0.20	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.92	21.64	21.69	0.20	0.95	23.12	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.59	0.86	0.95	0.21	0.48	0.96	
d, Delay for Lane Group [s/veh]	28.07	48.90	45.11	5.45	26.88	52.39	
Lane Group LOS	C	D	D	A	C	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.07	7.59	13.23	1.22	2.80	7.60	
50th-Percentile Queue Length [ft/ln]	101.67	189.78	330.75	30.41	69.92	190.01	
95th-Percentile Queue Length [veh/ln]	7.32	12.11	19.20	2.19	5.03	12.12	
95th-Percentile Queue Length [ft/ln]	183.01	302.75	479.88	54.73	125.86	303.04	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	28.07	48.90	45.11	5.45	0.00	26.88	26.88	52.39	0.00	0.00	0.00
Movement LOS		C	D	D	A		C	C	D			
d_A, Approach Delay [s/veh]	36.32			27.53			43.24			0.00		
Approach LOS	D			C			D			A		
d_I, Intersection Delay [s/veh]	33.83											
Intersection LOS	C											
Intersection V/C	0.751											

Emissions

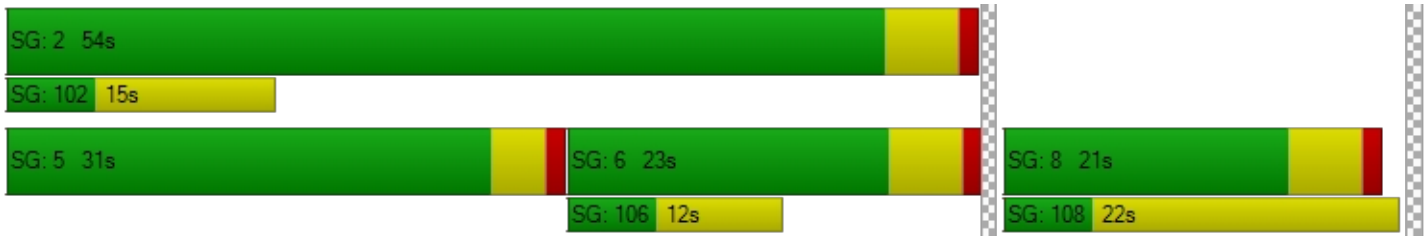
Vehicle Miles Traveled [mph]	68.59	45.00	35.93	28.61	5.55	9.91	
Stops [stops/h]	390.42	364.38	635.04	116.76	134.25	364.81	
Fuel consumption [US gal/h]	8.42	7.74	11.69	2.50	2.22	6.59	
CO [g/h]	588.86	540.98	817.14	174.94	154.96	460.38	
NOx [g/h]	114.57	105.25	158.99	34.04	30.15	89.57	
VOC [g/h]	136.47	125.38	189.38	40.54	35.91	106.70	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	0.00	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.665	0.000	2.125	2.165
Crosswalk LOS	B	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	477	1304	424	0
d_b, Bicycle Delay [s]	21.74	4.54	23.29	37.50
l_b,int, Bicycle LOS Score for Intersection	2.247	2.455	1.978	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	311	23	97	289	8	21	53	12	56	31	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	95	10	0	107	0	0	0	0	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	462	37	114	448	9	25	62	14	77	37	113
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	127	10	31	123	2	7	17	4	21	10	31
Total Analysis Volume [veh/h]	8	508	41	125	493	10	28	68	15	85	41	124
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	23	0	11	23	0	0	21	0	0	21	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	10	10	10	10
g / C, Green / Cycle	0.64	0.64	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.30	0.40	0.02	0.05	0.06	0.10
s, saturation flow rate [veh/h]	1844	1587	1220	1812	1315	1651
c, Capacity [veh/h]	1321	1179	188	325	261	296
d1, Uniform Delay [s]	4.98	5.25	25.56	19.40	23.85	20.57
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	1.73	0.36	0.41	0.71	1.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.53	0.15	0.26	0.33	0.56
d, Delay for Lane Group [s/veh]	5.97	6.98	25.92	19.81	24.57	22.20
Lane Group LOS	A	A	C	B	C	C
Critical Lane Group	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.23	2.79	0.36	0.90	1.06	1.94
50th-Percentile Queue Length [ft/ln]	55.72	69.67	8.99	22.38	26.50	48.57
95th-Percentile Queue Length [veh/ln]	4.01	5.02	0.65	1.61	1.91	3.50
95th-Percentile Queue Length [ft/ln]	100.29	125.41	16.18	40.28	47.69	87.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.97	5.97	5.97	6.98	6.98	6.98	25.92	19.81	19.81	24.57	22.20	22.20
Movement LOS	A	A	A	A	A	A	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	5.97			6.98			21.35			23.01		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.24											
Intersection LOS	B											
Intersection V/C	0.461											

Emissions

Vehicle Miles Traveled [mph]	247.34	85.63	0.79	2.35	2.38	4.63
Stops [stops/h]	145.88	182.41	23.53	58.58	69.37	127.17
Fuel consumption [US gal/h]	11.20	5.53	0.27	0.67	0.80	1.44
CO [g/h]	783.05	386.38	19.13	46.49	55.80	100.76
NOx [g/h]	152.35	75.18	3.72	9.04	10.86	19.60
VOC [g/h]	181.48	89.55	4.43	10.77	12.93	23.35

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	2.466	2.444	2.754	2.940
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1051	1051	596	596
d_b, Bicycle Delay [s]	6.19	6.19	13.55	13.55
l_b,int, Bicycle LOS Score for Intersection	2.479	2.596	1.743	1.972
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.352

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	225	9	3	235	45	79	40	30	25	26	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	105	0	0	118	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	370	11	4	395	53	93	47	35	29	31	14
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	99	3	1	106	14	25	13	9	8	8	4
Total Analysis Volume [veh/h]	6	395	12	4	422	57	99	50	37	31	33	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	11	21	0	0	28	0	0	28	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	0.00	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	32	43	32	7	7	7
g / C, Green / Cycle	0.72	0.54	0.72	0.54	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.23	0.01	0.25	0.04	0.07	0.05	0.07
s, saturation flow rate [veh/h]	1709	1589	1726	1589	1357	1739	1179
c, Capacity [veh/h]	1305	857	1322	857	180	201	220
d1, Uniform Delay [s]	3.05	6.42	3.08	6.61	25.59	24.69	24.94
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.61	0.03	0.65	0.15	2.62	1.46	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.01	0.32	0.07	0.55	0.43	0.36
d, Delay for Lane Group [s/veh]	3.66	6.45	3.73	6.76	28.22	26.15	25.93
Lane Group LOS	A	A	A	A	C	C	C
Critical Lane Group	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.98	0.06	1.06	0.30	1.44	1.19	1.11
50th-Percentile Queue Length [ft/ln]	24.60	1.55	26.53	7.61	35.95	29.74	27.65
95th-Percentile Queue Length [veh/ln]	1.77	0.11	1.91	0.55	2.59	2.14	1.99
95th-Percentile Queue Length [ft/ln]	44.28	2.79	47.76	13.71	64.71	53.54	49.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.66	3.66	6.45	3.73	3.73	6.76	28.22	26.15	26.15	25.93	25.93	25.93
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	3.74			4.08			27.25			25.93		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.16											
Intersection LOS	A											
Intersection V/C	0.352											

Emissions

Vehicle Miles Traveled [mph]	30.26	0.91	189.17	25.31	8.19	7.20	2.23
Stops [stops/h]	59.04	3.73	63.68	18.27	86.27	71.38	66.36
Fuel consumption [US gal/h]	1.90	0.08	8.01	1.18	1.27	1.06	0.77
CO [g/h]	132.54	5.47	560.09	82.52	88.62	74.13	53.95
NOx [g/h]	25.79	1.06	108.97	16.06	17.24	14.42	10.50
VOC [g/h]	30.72	1.27	129.81	19.13	20.54	17.18	12.50

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.307	2.535	2.568	2.360
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	897	897	780	780
d_b, Bicycle Delay [s]	9.13	9.13	11.16	11.16
l_b,int, Bicycle LOS Score for Intersection	2.455	2.571	2.081	1.904
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	28	1	3	287	6	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	105	0	0	118	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	138	1	4	456	7	9
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	0	1	122	2	2
Total Analysis Volume [veh/h]	148	1	4	489	8	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.52	0.00	13.46	9.19
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.17	0.17	2.28	2.28
d_A, Approach Delay [s/veh]	0.00		0.06		11.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.35					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	2	1	4	169	10	118	141	247	51	83	160	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	11	3	91	12	16	74	23	3	3	25	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	12	8	290	24	155	240	314	63	101	214	115
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	2	77	6	41	63	83	17	27	57	30
Total Analysis Volume [veh/h]	5	13	8	307	25	164	254	332	67	107	226	122
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	18	0	13	20	0	11	28	0	11	28	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	4.55	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	32	19	31	31	26	29	19	29	18
g / C, Green / Cycle	0.45	0.27	0.44	0.44	0.37	0.42	0.28	0.42	0.26
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.11	0.16	0.11	0.22	0.24	0.10	0.22
s, saturation flow rate [veh/h]	1126	1577	1377	1151	1431	1135	1635	1085	1585
c, Capacity [veh/h]	428	425	738	666	522	438	451	401	418
d1, Uniform Delay [s]	16.10	18.93	12.18	14.36	15.96	15.93	24.26	14.69	24.30
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.22	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.22	0.63	1.00	1.57	5.52	10.82	0.35	7.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.05	0.21	0.27	0.31	0.58	0.88	0.27	0.83
d, Delay for Lane Group [s/veh]	16.15	19.15	12.81	15.36	17.53	21.44	35.08	15.04	31.31
Lane Group LOS	B	B	B	B	B	C	D	B	C
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	0.28	1.44	1.97	1.94	3.20	7.26	1.00	5.91
50th-Percentile Queue Length [ft/ln]	1.20	7.03	36.02	49.27	48.40	79.98	181.59	24.99	147.79
95th-Percentile Queue Length [veh/ln]	0.09	0.51	2.59	3.55	3.49	5.76	11.68	1.80	9.90
95th-Percentile Queue Length [ft/ln]	2.16	12.66	64.83	88.69	87.13	143.97	292.09	44.99	247.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.15	19.15	19.15	14.09	15.36	17.53	21.44	35.08	35.08	15.04	31.31	31.31
Movement LOS	B	B	B	B	B	B	C	D	D	B	C	C
d_A, Approach Delay [s/veh]	18.57			15.30			29.77			27.48		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	24.55											
Intersection LOS	C											
Intersection V/C	0.496											

Emissions

Vehicle Miles Traveled [mph]	0.12	0.50	11.50	13.59	12.40	21.33	33.50	8.19	26.64
Stops [stops/h]	2.47	14.46	74.09	101.37	99.57	164.54	373.56	51.41	304.03
Fuel consumption [US gal/h]	0.03	0.13	1.39	1.84	1.81	2.90	6.29	0.95	4.99
CO [g/h]	1.84	9.02	97.34	128.78	126.28	202.39	439.75	66.32	349.06
NOx [g/h]	0.36	1.76	18.94	25.06	24.57	39.38	85.56	12.90	67.92
VOC [g/h]	0.43	2.09	22.56	29.85	29.27	46.91	101.92	15.37	80.90

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.194	2.477	2.276	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	740	666	666
d_b, Bicycle Delay [s]	22.40	13.89	15.58	15.58
l_b,int, Bicycle LOS Score for Intersection	1.817	2.592	2.851	2.525
Bicycle LOS	A	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.306

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	319	45	29	671	5	11	75	17	32	30	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	15	0	0	17	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	391	53	34	808	6	13	88	20	38	35	14
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	107	15	9	222	2	4	24	5	10	10	4
Total Analysis Volume [veh/h]	8	429	58	37	887	7	14	97	22	42	38	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	23	0	11	23	0	0	31	0	0	31	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	41	41	48	43	43	7	7	7	7
g / C, Green / Cycle	0.74	0.62	0.62	0.74	0.66	0.66	0.11	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.01	0.12	0.04	0.04	0.24	0.24	0.01	0.07	0.03	0.03
s, saturation flow rate [veh/h]	698	3560	1589	1009	1870	1865	1351	1811	1273	1781
c, Capacity [veh/h]	582	2217	990	831	1233	1230	208	195	164	192
d1, Uniform Delay [s]	3.06	5.26	4.80	2.53	4.95	4.95	28.28	27.70	30.87	26.67
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.19	0.11	0.10	0.83	0.83	0.13	3.07	0.82	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.19	0.06	0.04	0.36	0.36	0.07	0.61	0.26	0.28
d, Delay for Lane Group [s/veh]	3.07	5.45	4.91	2.63	5.78	5.78	28.41	30.77	31.69	27.44
Lane Group LOS	A	A	A	A	A	A	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.01	0.90	0.24	0.08	1.93	1.92	0.21	1.88	0.67	0.78
50th-Percentile Queue Length [ft/ln]	0.32	22.62	5.99	1.90	48.14	48.02	5.18	46.98	16.83	19.39
95th-Percentile Queue Length [veh/ln]	0.02	1.63	0.43	0.14	3.47	3.46	0.37	3.38	1.21	1.40
95th-Percentile Queue Length [ft/ln]	0.57	40.72	10.78	3.41	86.64	86.44	9.32	84.56	30.29	34.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.07	5.45	4.91	2.63	5.78	5.78	28.41	30.77	30.77	31.69	27.44	27.44
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	5.35			5.66			30.52			29.32		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	8.92											
Intersection LOS	A											
Intersection V/C	0.306											

Emissions

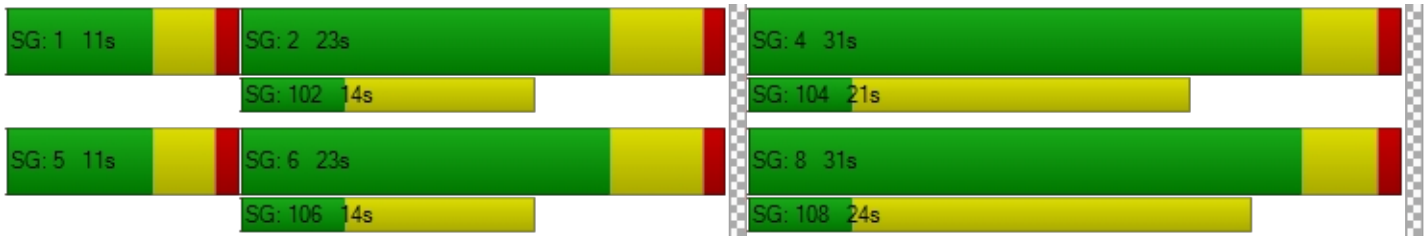
Vehicle Miles Traveled [mph]	0.60	32.03	4.33	1.22	14.78	14.74	0.32	2.74	3.48	4.39
Stops [stops/h]	0.70	100.23	13.27	4.20	106.64	106.39	11.47	104.07	37.28	42.96
Fuel consumption [US gal/h]	0.03	2.61	0.34	0.10	2.10	2.10	0.14	1.27	0.57	0.66
CO [g/h]	2.33	182.31	24.01	7.33	147.06	146.70	9.75	88.60	39.85	46.00
NOx [g/h]	0.45	35.47	4.67	1.43	28.61	28.54	1.90	17.24	7.75	8.95
VOC [g/h]	0.54	42.25	5.56	1.70	34.08	34.00	2.26	20.53	9.24	10.66

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.811	2.666	1.983	2.037
Crosswalk LOS	C	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	542	542	812	812
d_b, Bicycle Delay [s]	17.28	17.28	11.46	11.46
l_b,int, Bicycle LOS Score for Intersection	2.182	2.542	1.993	1.931
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	17.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	2	371	713	4	2	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	15	17	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	452	858	5	2	5
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	121	230	1	1	1
Total Analysis Volume [veh/h]	2	484	920	5	2	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	9.92	0.00	0.00	0.00	17.76	11.73
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.20	0.00	0.00	0.00	1.23	1.23
d_A, Approach Delay [s/veh]	0.04		0.00		13.45	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	282	264	80	622	17	26	92	12	167	39	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	11	91	5	12	0	0	3	8	36	3	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	343	402	99	745	20	31	111	22	233	49	84
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	91	106	26	197	5	8	29	6	62	13	22
Total Analysis Volume [veh/h]	8	363	425	105	788	21	33	117	23	247	52	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	24	0	11	24	0	11	29	0	11	29	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	46	36	36	46	41	41	19	8	19	12	12
g / C, Green / Cycle	0.61	0.48	0.48	0.61	0.54	0.54	0.26	0.11	0.26	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.30	0.13	0.24	0.24	0.03	0.09	0.18	0.03	0.06
s, saturation flow rate [veh/h]	503	1683	1431	795	1683	1668	1261	1636	1349	1683	1431
c, Capacity [veh/h]	437	803	683	482	911	903	434	178	396	262	222
d1, Uniform Delay [s]	6.72	13.06	14.57	8.49	10.40	10.40	21.24	32.56	25.52	27.59	28.52
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.83	4.24	1.04	1.58	1.59	0.07	7.42	1.61	0.37	1.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.45	0.62	0.22	0.45	0.45	0.08	0.79	0.62	0.20	0.40
d, Delay for Lane Group [s/veh]	6.74	14.89	18.81	9.53	11.98	11.99	21.31	39.98	27.12	27.96	29.68
Lane Group LOS	A	B	B	A	B	B	C	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.04	4.00	5.50	0.68	3.72	3.69	0.43	2.77	3.87	0.82	1.47
50th-Percentile Queue Length [ft/ln]	1.04	100.08	137.47	16.91	93.02	92.27	10.86	69.24	96.65	20.41	36.71
95th-Percentile Queue Length [veh/ln]	0.07	7.21	9.34	1.22	6.70	6.64	0.78	4.99	6.96	1.47	2.64
95th-Percentile Queue Length [ft/ln]	1.87	180.14	233.62	30.44	167.44	166.08	19.55	124.63	173.96	36.74	66.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.74	14.89	18.81	9.53	11.98	11.99	21.31	39.98	39.98	27.12	27.96	29.68
Movement LOS	A	B	B	A	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	16.90			11.70			36.42			27.82		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	18.16											
Intersection LOS	B											
Intersection V/C	0.549											

Emissions

Vehicle Miles Traveled [mph]	0.32	14.32	16.76	7.94	30.75	30.47	0.85	3.59	20.74	4.37	7.47
Stops [stops/h]	2.00	192.15	263.95	32.47	178.60	177.16	20.86	132.94	185.56	39.18	70.48
Fuel consumption [US gal/h]	0.04	3.09	4.25	0.81	3.85	3.81	0.29	2.02	3.24	0.69	1.23
CO [g/h]	2.66	216.05	297.12	56.42	268.86	266.62	20.49	141.29	226.64	48.38	86.29
NOx [g/h]	0.52	42.04	57.81	10.98	52.31	51.87	3.99	27.49	44.10	9.41	16.79
VOC [g/h]	0.62	50.07	68.86	13.08	62.31	61.79	4.75	32.74	52.53	11.21	20.00

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.762	2.665	2.021	2.451
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	504	496	648	648
d_b, Bicycle Delay [s]	20.98	21.21	17.14	17.14
l_b,int, Bicycle LOS Score for Intersection	2.431	2.528	2.059	2.414
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	33.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.126

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	7	537	4	14	770	4	14	0	11	2	0	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	8	55	0	0	0	0	0	7	0	109
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	633	13	72	908	5	17	0	13	9	0	140
Peak Hour Factor	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	170	3	19	244	1	5	0	3	2	0	38
Total Analysis Volume [veh/h]	9	681	14	78	977	5	18	0	14	10	0	151
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.09	0.01	0.00	0.13	0.00	0.03	0.05	0.00	0.23
d_M, Delay for Movement [s/veh]	10.22	0.00	0.00	9.40	0.00	0.00	33.18	30.17	14.94	24.02	28.72	12.95
Movement LOS	B	A	A	A	A	A	D	D	B	C	D	B
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.29	0.00	0.00	0.53	0.53	0.53	1.14	1.14	1.14
95th-Percentile Queue Length [ft/ln]	0.98	0.00	0.00	7.13	0.00	0.00	13.17	13.17	13.17	28.40	28.40	28.40
d_A, Approach Delay [s/veh]	0.13			0.69			25.20			13.63		
Approach LOS	A			A			D			B		
d_I, Intersection Delay [s/veh]	1.96											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.394

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	485	25	43	737	6	13	10	20	16	5	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	108	0	0	7	8	3	0	96	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	572	137	51	869	14	23	15	24	115	9	59
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	158	38	14	240	4	6	4	7	32	2	16
Total Analysis Volume [veh/h]	13	631	151	56	958	15	25	17	26	127	10	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	105
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	45	0	11	45	0	11	38	0	11	38	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	79	70	70	79	73	73	16	5	16	8	8
g / C, Green / Cycle	0.75	0.66	0.66	0.75	0.70	0.70	0.15	0.05	0.15	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.02	0.24	0.24	0.08	0.29	0.29	0.02	0.03	0.09	0.01	0.05
s, saturation flow rate [veh/h]	578	1683	1572	717	1683	1674	1336	1521	1437	1683	1431
c, Capacity [veh/h]	465	1115	1041	569	1169	1163	300	74	290	136	115
d1, Uniform Delay [s]	4.16	7.87	7.88	4.04	6.88	6.88	38.22	48.89	40.89	44.63	46.48
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.91	0.98	0.35	1.10	1.10	0.12	7.01	1.04	0.23	4.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.36	0.36	0.10	0.42	0.42	0.08	0.58	0.44	0.07	0.56
d, Delay for Lane Group [s/veh]	4.18	8.79	8.86	4.38	7.98	7.99	38.34	55.90	41.93	44.86	50.72
Lane Group LOS	A	A	A	A	A	A	D	E	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	3.85	3.63	0.29	4.32	4.30	0.57	1.26	3.12	0.25	1.78
50th-Percentile Queue Length [ft/ln]	1.40	96.37	90.75	7.23	108.03	107.49	14.24	31.38	78.12	6.29	44.55
95th-Percentile Queue Length [veh/ln]	0.10	6.94	6.53	0.52	7.73	7.70	1.03	2.26	5.62	0.45	3.21
95th-Percentile Queue Length [ft/ln]	2.52	173.46	163.36	13.02	193.25	192.51	25.64	56.48	140.62	11.33	80.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.18	8.82	8.86	4.38	7.98	7.99	38.34	55.90	55.90	41.93	44.86	50.72
Movement LOS	A	A	A	A	A	A	D	E	E	D	D	D
d_A, Approach Delay [s/veh]	8.75			7.79			49.44			44.91		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	13.09											
Intersection LOS	B											
Intersection V/C	0.394											

Emissions

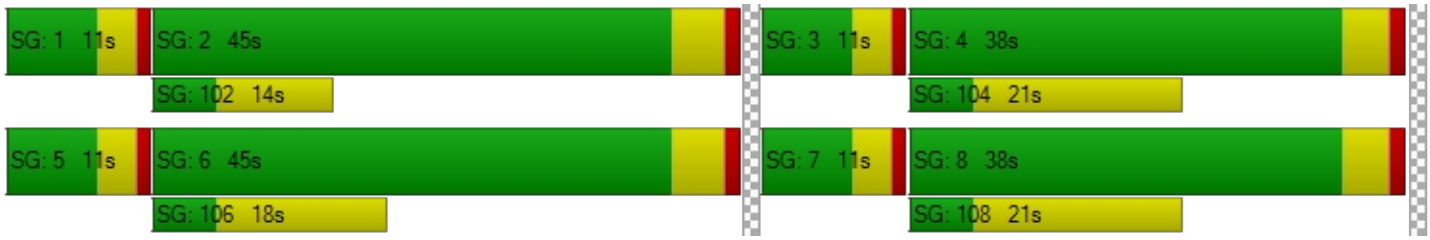
Vehicle Miles Traveled [mph]	0.97	30.11	28.19	4.27	37.17	36.97	0.66	1.13	10.72	0.84	5.49
Stops [stops/h]	1.92	132.16	124.46	9.92	148.15	147.42	19.53	43.03	107.14	8.63	61.09
Fuel consumption [US gal/h]	0.06	2.86	2.69	0.29	3.32	3.31	0.30	0.71	1.98	0.16	1.15
CO [g/h]	4.37	200.20	188.21	20.08	232.30	231.12	20.94	49.28	138.18	11.35	80.52
NOx [g/h]	0.85	38.95	36.62	3.91	45.20	44.97	4.07	9.59	26.89	2.21	15.67
VOC [g/h]	1.01	46.40	43.62	4.65	53.84	53.57	4.85	11.42	32.03	2.63	18.66

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	2.755	2.710	1.991	2.281
Crosswalk LOS	C	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	636	636
d_b, Bicycle Delay [s]	20.18	20.18	24.41	24.41
l_b,int, Bicycle LOS Score for Intersection	2.430	2.623	1.886	2.107
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	504	12	5	742	15	0	0	12	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	108	0	0	96	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	702	14	6	971	18	0	0	14	0	0	17
Peak Hour Factor	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.9500	0.9500	0.8940	0.9500	0.9500	0.8940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	196	4	2	272	5	0	0	4	0	0	5
Total Analysis Volume [veh/h]	15	785	16	7	1086	20	0	0	16	0	0	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	10.88	0.00	0.00	9.44	0.00	0.00	0.00	0.00	12.81	0.00	0.00	11.20
Movement LOS	B	A	A	A	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.10
95th-Percentile Queue Length [ft/ln]	1.84	0.00	0.00	0.65	0.00	0.00	0.00	0.00	2.60	0.00	0.00	2.45
d_A, Approach Delay [s/veh]	0.20			0.06			12.81			11.20		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.33											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	345	33	29	665	59	143	191	138	114	17	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	77	19	0	68	28	32	8	0	17	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	484	58	34	852	98	201	233	163	151	27	48
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	134	16	9	237	27	56	65	45	42	8	13
Total Analysis Volume [veh/h]	74	538	64	38	947	109	223	259	181	168	30	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	16	37	0	11	32	0	20	19	0	13	12	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	6	36	36	4	34	34	26	14	14	27	12
g / C, Green / Cycle	0.07	0.44	0.44	0.05	0.42	0.42	0.33	0.18	0.18	0.33	0.15
(v / s)_i Volume / Saturation Flow Rate	0.05	0.18	0.18	0.02	0.32	0.32	0.16	0.15	0.13	0.22	0.05
s, saturation flow rate [veh/h]	1603	1683	1621	1603	1683	1623	1391	1683	1431	755	1513
c, Capacity [veh/h]	117	746	719	82	709	684	522	298	253	432	222
d1, Uniform Delay [s]	36.03	15.15	15.16	36.89	19.67	19.68	21.13	32.03	31.03	20.65	30.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.27	0.12	0.11	0.31	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.51	1.67	1.74	4.05	7.44	7.71	1.40	8.26	3.75	1.62	1.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.41	0.41	0.46	0.76	0.76	0.43	0.87	0.72	0.39	0.37
d, Delay for Lane Group [s/veh]	41.54	16.81	16.90	40.94	27.11	27.39	22.53	40.29	34.78	22.27	31.85
Lane Group LOS	D	B	B	D	C	C	C	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.54	3.80	3.69	0.79	9.14	8.87	3.27	5.33	3.41	2.47	1.49
50th-Percentile Queue Length [ft/ln]	38.45	95.12	92.34	19.81	228.50	221.78	81.65	133.22	85.21	61.80	37.35
95th-Percentile Queue Length [veh/ln]	2.77	6.85	6.65	1.43	14.10	13.76	5.88	9.11	6.14	4.45	2.69
95th-Percentile Queue Length [ft/ln]	69.22	171.22	166.21	35.65	352.46	343.90	146.97	227.87	153.39	111.24	67.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.54	16.85	16.90	40.94	27.23	27.39	22.53	40.29	34.78	22.27	31.85	31.85
Movement LOS	D	B	B	D	C	C	C	D	C	C	C	C
d_A, Approach Delay [s/veh]	19.56			27.72			32.81			25.44		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	26.71											
Intersection LOS	C											
Intersection V/C	0.603											

Emissions

Vehicle Miles Traveled [mph]	5.84	24.17	23.36	3.02	42.73	41.23	51.10	59.35	41.48	26.92	13.30
Stops [stops/h]	69.22	171.22	166.21	35.65	411.30	399.21	146.97	239.80	153.39	111.24	67.23
Fuel consumption [US gal/h]	1.37	3.26	3.16	0.70	7.69	7.46	4.08	6.19	4.02	2.40	1.39
CO [g/h]	95.68	227.62	220.75	48.92	537.35	521.74	284.88	432.63	280.68	167.66	97.44
NOx [g/h]	18.62	44.29	42.95	9.52	104.55	101.51	55.43	84.17	54.61	32.62	18.96
VOC [g/h]	22.17	52.75	51.16	11.34	124.54	120.92	66.02	100.27	65.05	38.86	22.58

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.786	2.782	2.495	2.102
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	798	673	348	185
d_b, Bicycle Delay [s]	14.46	17.62	27.31	32.94
l_b,int, Bicycle LOS Score for Intersection	2.332	2.677	2.868	2.188
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	341	54	60	774	49	31	249	71	46	235	76
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	79	0	0	70	15	17	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	481	64	71	983	73	54	294	84	54	277	90
Peak Hour Factor	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	143	19	21	292	22	16	87	25	16	82	27
Total Analysis Volume [veh/h]	46	572	76	84	1169	87	64	350	100	64	329	107
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	29	0	21	39	0	11	19	0	11	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	5	38	38	6	39	39	5	13	13	5	13	13
g / C, Green / Cycle	0.06	0.47	0.47	0.08	0.49	0.49	0.07	0.17	0.17	0.07	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.18	0.05	0.05	0.36	0.06	0.04	0.14	0.14	0.04	0.13	0.14
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1557	1603	1683	1545
c, Capacity [veh/h]	91	1503	671	122	1565	699	107	279	258	107	281	258
d1, Uniform Delay [s]	36.66	13.73	11.92	36.03	16.47	11.14	36.29	32.29	32.38	36.29	32.04	32.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.35	0.73	0.34	6.72	3.30	0.37	5.26	6.34	7.44	5.26	5.27	6.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.38	0.11	0.69	0.75	0.12	0.60	0.83	0.85	0.60	0.80	0.82
d, Delay for Lane Group [s/veh]	41.00	14.47	12.26	42.75	19.77	11.51	41.55	38.62	39.81	41.55	37.31	38.41
Lane Group LOS	D	B	B	D	B	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.96	3.17	0.76	1.77	8.31	0.83	1.35	4.70	4.50	1.36	4.53	4.32
50th-Percentile Queue Length [ft/ln]	23.88	79.24	18.98	44.35	207.63	20.87	33.67	117.51	112.61	34.05	113.33	107.96
95th-Percentile Queue Length [veh/ln]	1.72	5.71	1.37	3.19	13.03	1.50	2.42	8.26	7.99	2.45	8.02	7.73
95th-Percentile Queue Length [ft/ln]	42.99	142.64	34.17	79.83	325.79	37.57	60.61	206.41	199.63	61.29	200.62	193.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.00	14.47	12.26	42.75	19.77	11.51	41.55	39.03	39.81	41.55	37.66	38.41
Movement LOS	D	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.99			20.67			39.49			38.32		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	25.67											
Intersection LOS	C											
Intersection V/C	0.574											

Emissions

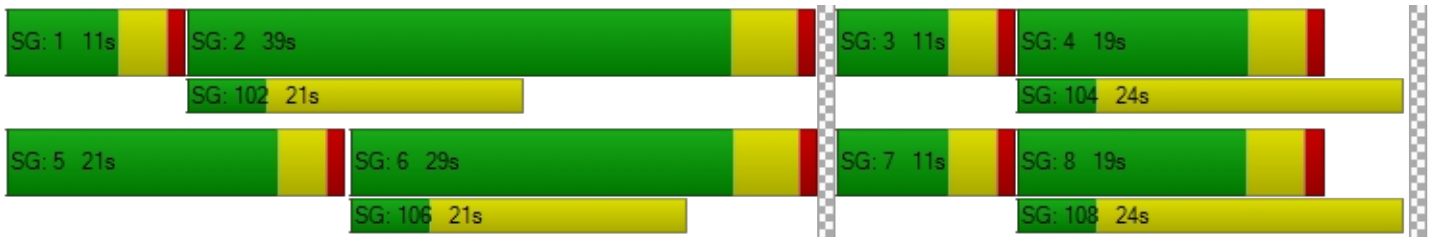
Vehicle Miles Traveled [mph]	3.69	45.90	6.10	6.63	92.29	6.87	14.55	52.73	49.61	10.41	36.63	34.29
Stops [stops/h]	42.99	285.27	34.17	79.83	747.47	37.57	60.61	211.53	202.70	61.29	203.99	194.33
Fuel consumption [US gal/h]	0.85	5.58	0.68	1.58	13.84	0.75	1.48	5.16	4.93	1.24	4.14	3.93
CO [g/h]	59.26	390.00	47.46	110.71	967.62	52.30	103.11	360.79	344.56	86.99	289.39	275.04
NOx [g/h]	11.53	75.88	9.23	21.54	188.26	10.17	20.06	70.20	67.04	16.92	56.30	53.51
VOC [g/h]	13.73	90.39	11.00	25.66	224.25	12.12	23.90	83.62	79.86	20.16	67.07	63.74

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.833	2.843	2.486	2.460
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	598	848	358	360
d_b, Bicycle Delay [s]	19.67	13.28	26.98	26.90
l_b,int, Bicycle LOS Score for Intersection	2.347	2.880	2.198	2.187
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	3.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.362

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	408	38	86	803	6	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	79	0	0	70	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	560	45	101	1017	7	22
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	169	14	31	307	2	7
Total Analysis Volume [veh/h]	677	54	122	1230	8	27
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	20	0	11	31	99	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	104	104	115	115	5	5
g / C, Green / Cycle	0.80	0.80	0.89	0.89	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.20	0.20	0.15	0.35	0.00	0.02
s, saturation flow rate [veh/h]	1870	1822	807	3560	1781	1589
c, Capacity [veh/h]	1499	1461	755	3152	71	64
d1, Uniform Delay [s]	3.18	3.21	1.18	1.30	60.18	60.94
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	0.41	0.46	0.36	0.69	4.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.25	0.16	0.39	0.11	0.42
d, Delay for Lane Group [s/veh]	3.57	3.62	1.64	1.67	60.87	65.39
Lane Group LOS	A	A	A	A	E	E
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.99	2.01	0.23	1.10	0.27	0.96
50th-Percentile Queue Length [ft/ln]	49.85	50.28	5.69	27.55	6.78	23.96
95th-Percentile Queue Length [veh/ln]	3.59	3.62	0.41	1.98	0.49	1.72
95th-Percentile Queue Length [ft/ln]	89.73	90.51	10.25	49.60	12.20	43.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.59	3.62	1.64	1.67	60.87	65.39
Movement LOS	A	A	A	A	E	E
d_A, Approach Delay [s/veh]	3.59		1.67		64.36	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	3.37					
Intersection LOS	A					
Intersection V/C	0.362					

Emissions

Vehicle Miles Traveled [mph]	27.04	27.04	9.79	98.70	1.32	4.45
Stops [stops/h]	55.22	55.70	6.31	61.04	7.51	26.54
Fuel consumption [US gal/h]	1.71	1.72	0.46	4.64	0.19	0.66
CO [g/h]	119.65	120.13	32.25	324.26	13.08	46.22
NOx [g/h]	23.28	23.37	6.27	63.09	2.55	8.99
VOC [g/h]	27.73	27.84	7.47	75.15	3.03	10.71

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.31	0.00	56.31
l_p,int, Pedestrian LOS Score for Intersectio	2.710	0.000	2.158
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	229	398	1452
d_b, Bicycle Delay [s]	50.95	41.68	4.87
l_b,int, Bicycle LOS Score for Intersection	2.377	2.889	1.774
Bicycle LOS	B	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	8.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.326

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	414	31	112	647	34	11	32	12	21	20	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	68	0	0	60	10	11	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	556	37	132	823	50	24	38	14	25	24	25
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	162	11	38	240	15	7	11	4	7	7	7
Total Analysis Volume [veh/h]	20	647	43	154	958	58	28	44	16	29	28	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	35	0	15	39	0	0	30	0	0	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	64	53	53	64	58	58	6	6
g / C, Green / Cycle	0.80	0.67	0.67	0.80	0.72	0.72	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.03	0.19	0.19	0.17	0.27	0.27	0.05	0.05
s, saturation flow rate [veh/h]	642	1870	1829	894	1870	1833	1793	1769
c, Capacity [veh/h]	581	1244	1217	784	1344	1317	197	196
d1, Uniform Delay [s]	2.21	5.50	5.50	2.14	4.36	4.36	35.81	35.80
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.56	0.58	0.56	0.82	0.84	1.57	1.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.28	0.28	0.20	0.38	0.38	0.45	0.44
d, Delay for Lane Group [s/veh]	2.24	6.06	6.08	2.70	5.19	5.21	37.38	37.33
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.03	2.04	2.00	0.34	2.51	2.47	1.72	1.68
50th-Percentile Queue Length [ft/ln]	0.75	50.89	49.98	8.54	62.74	61.71	42.95	41.94
95th-Percentile Queue Length [veh/ln]	0.05	3.66	3.60	0.61	4.52	4.44	3.09	3.02
95th-Percentile Queue Length [ft/ln]	1.36	91.59	89.97	15.37	112.93	111.08	77.31	75.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.24	6.07	6.08	2.70	5.20	5.21	37.38	37.38	37.38	37.33	37.33	37.33
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	5.96			4.87			37.38			37.33		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	8.00											
Intersection LOS	A											
Intersection V/C	0.326											

Emissions

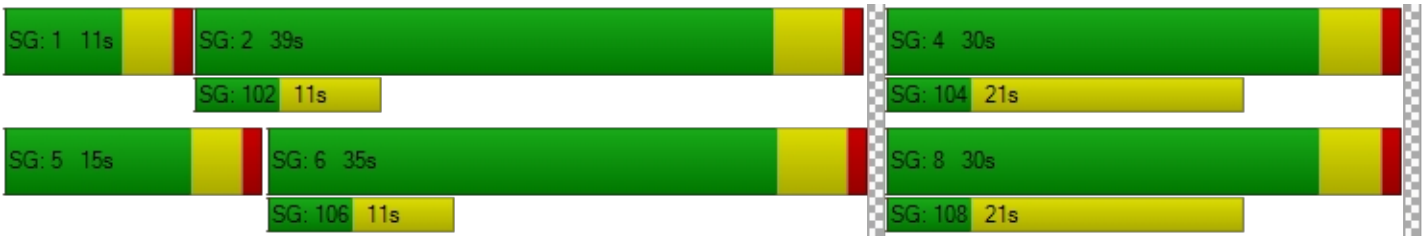
Vehicle Miles Traveled [mph]	1.51	26.29	25.76	11.39	37.95	37.22	2.29	14.36
Stops [stops/h]	1.36	91.59	89.97	15.37	112.93	111.08	77.31	75.49
Fuel consumption [US gal/h]	0.08	2.12	2.08	0.63	2.84	2.79	1.19	1.66
CO [g/h]	5.37	148.27	145.47	44.34	198.32	194.82	83.25	116.14
NOx [g/h]	1.04	28.85	28.30	8.63	38.59	37.91	16.20	22.60
VOC [g/h]	1.24	34.36	33.71	10.28	45.96	45.15	19.29	26.92

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.726	2.762	1.826	2.021
Crosswalk LOS	B	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	748	848	633	633
d_b, Bicycle Delay [s]	15.69	13.28	18.70	18.70
l_b,int, Bicycle LOS Score for Intersection	2.360	2.739	1.919	1.916
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	75.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.134

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	444	38	35	642	20	4	6	12	8	3	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	68	0	0	60	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	591	45	41	817	24	5	7	14	9	4	21
Peak Hour Factor	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290	0.8290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	178	14	12	246	7	2	2	4	3	1	6
Total Analysis Volume [veh/h]	29	713	54	49	986	29	6	8	17	11	5	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.06	0.01	0.00	0.09	0.13	0.03	0.14	0.08	0.04
d_M, Delay for Movement [s/veh]	10.54	0.00	0.00	9.54	0.00	0.00	70.03	75.57	22.24	59.69	72.49	19.05
Movement LOS	B	A	A	A	A	A	F	F	C	F	F	C
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.18	0.00	0.00	0.96	0.96	0.96	1.01	1.01	1.01
95th-Percentile Queue Length [ft/ln]	3.34	0.00	0.00	4.62	0.00	0.00	24.10	24.10	24.10	25.26	25.26	25.26
d_A, Approach Delay [s/veh]	0.38			0.44			45.25			36.47		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	1.90											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	6.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.282

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	39	484	45	93	511	25	10	12	10	10	9	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	56	0	0	50	10	11	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	627	53	110	652	39	23	14	12	12	11	20
Peak Hour Factor	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640	0.8640
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	181	15	32	189	11	7	4	3	3	3	6
Total Analysis Volume [veh/h]	53	726	61	127	755	45	27	16	14	14	13	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	38	0	11	38	0	0	46	0	0	46	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	80	69	69	80	70	70	6	6	6
g / C, Green / Cycle	0.84	0.73	0.73	0.84	0.74	0.74	0.06	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.07	0.21	0.21	0.16	0.22	0.22	0.05	0.02	0.01
s, saturation flow rate [veh/h]	780	1870	1820	808	1870	1833	1128	1786	1589
c, Capacity [veh/h]	707	1355	1318	728	1384	1356	124	165	96
d1, Uniform Delay [s]	1.69	4.59	4.59	1.83	4.10	4.10	44.61	42.56	42.56
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.55	0.57	0.52	0.54	0.55	2.65	0.46	1.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.29	0.29	0.17	0.29	0.29	0.46	0.16	0.24
d, Delay for Lane Group [s/veh]	1.74	5.14	5.16	2.35	4.63	4.65	47.26	43.02	43.84
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	2.31	2.25	0.26	2.13	2.09	1.43	0.63	0.55
50th-Percentile Queue Length [ft/ln]	1.79	57.66	56.28	6.57	53.18	52.24	35.70	15.71	13.78
95th-Percentile Queue Length [veh/ln]	0.13	4.15	4.05	0.47	3.83	3.76	2.57	1.13	0.99
95th-Percentile Queue Length [ft/ln]	3.22	103.78	101.30	11.83	95.72	94.02	64.27	28.27	24.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.74	5.15	5.16	2.35	4.64	4.65	47.26	47.26	47.26	43.02	43.02	43.84
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	4.93			4.33			47.26			43.40		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.95											
Intersection LOS	A											
Intersection V/C	0.282											

Emissions

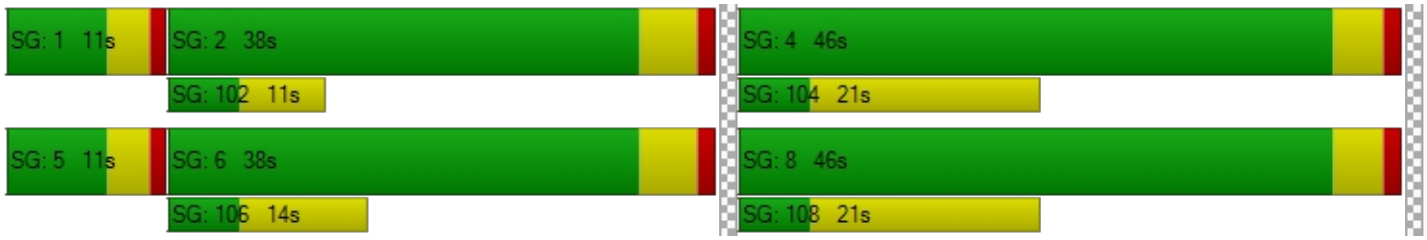
Vehicle Miles Traveled [mph]	3.98	29.93	29.14	9.55	30.36	29.77	1.67	0.81	0.69
Stops [stops/h]	2.72	87.39	85.30	9.97	80.61	79.18	54.12	23.81	20.89
Fuel consumption [US gal/h]	0.19	2.22	2.16	0.50	2.14	2.10	0.83	0.36	0.32
CO [g/h]	13.34	154.86	150.96	34.92	149.91	147.11	58.09	25.44	22.10
NOx [g/h]	2.60	30.13	29.37	6.79	29.17	28.62	11.30	4.95	4.30
VOC [g/h]	3.09	35.89	34.99	8.09	34.74	34.09	13.46	5.90	5.12

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.93	38.93	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	2.693	2.730	1.845	2.148
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	693	693	872	872
d_b, Bicycle Delay [s]	20.30	20.30	15.12	15.12
l_b,int, Bicycle LOS Score for Intersection	2.467	2.539	1.868	1.857
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	55.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.077

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	25	544	26	30	474	18	0	3	8	4	4	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	56	0	0	50	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	697	31	35	609	21	0	4	9	5	5	28
Peak Hour Factor	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440	0.8440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	206	9	10	180	6	0	1	3	1	1	8
Total Analysis Volume [veh/h]	34	826	37	41	722	25	0	5	11	6	6	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.00	0.06	0.02	0.07	0.08	0.06
d_M, Delay for Movement [s/veh]	9.37	0.00	0.00	9.90	0.00	0.00	44.75	53.13	12.42	48.83	55.07	15.29
Movement LOS	A	A	A	A	A	A	E	F	B	E	F	C
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.17	0.00	0.00	0.27	0.27	0.27	0.73	0.73	0.73
95th-Percentile Queue Length [ft/ln]	3.09	0.00	0.00	4.18	0.00	0.00	6.64	6.64	6.64	18.26	18.26	18.26
d_A, Approach Delay [s/veh]	0.36			0.52			25.14			25.06		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	1.29											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	388	149	74	337	60	83	439	33	176	547	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	15	25	10	11	0	0	0	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	485	176	102	422	81	109	518	39	208	645	168
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	133	48	28	116	22	30	142	11	57	177	46
Total Analysis Volume [veh/h]	53	531	193	112	462	89	119	567	43	228	706	184
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	16	32	0	15	18	0	24	27	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	5	29	29	7	31	31	7	18	18	13	23	23
g / C, Green / Cycle	0.06	0.34	0.34	0.08	0.37	0.37	0.08	0.21	0.21	0.15	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.12	0.06	0.13	0.06	0.07	0.17	0.17	0.13	0.25	0.25
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1824	1781	1870	1738
c, Capacity [veh/h]	106	1222	546	145	1313	586	152	384	375	271	509	473
d1, Uniform Delay [s]	38.74	21.54	20.87	38.27	19.46	17.94	38.09	32.14	32.14	35.03	29.87	29.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.12	0.12	0.11	0.29	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.61	1.13	1.79	8.40	0.74	0.55	8.45	4.44	4.60	6.91	14.58	15.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.43	0.35	0.77	0.35	0.15	0.78	0.80	0.80	0.84	0.91	0.91
d, Delay for Lane Group [s/veh]	42.35	22.67	22.66	46.66	20.21	18.49	46.54	36.57	36.74	41.94	44.45	45.53
Lane Group LOS	D	C	C	D	C	B	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.14	3.98	2.94	2.56	3.26	1.20	2.72	6.25	6.12	4.95	10.66	10.07
50th-Percentile Queue Length [ft/ln]	28.44	99.57	73.53	64.02	81.60	30.02	67.89	156.26	153.11	123.64	266.53	251.68
95th-Percentile Queue Length [veh/ln]	2.05	7.17	5.29	4.61	5.88	2.16	4.89	10.35	10.18	8.59	16.02	15.27
95th-Percentile Queue Length [ft/ln]	51.18	179.23	132.36	115.23	146.88	54.03	122.21	258.77	254.57	214.81	400.40	381.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.35	22.67	22.66	46.66	20.21	18.49	46.54	36.65	36.74	41.94	44.83	45.53
Movement LOS	D	C	C	D	C	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	24.01			24.45			38.27			44.35		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.18											
Intersection LOS	C											
Intersection V/C	0.526											

Emissions

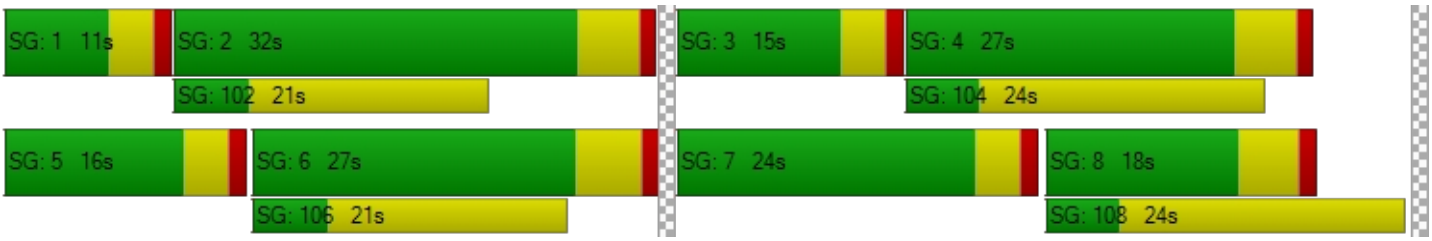
Vehicle Miles Traveled [mph]	2.00	20.06	7.29	8.57	35.36	6.81	4.67	12.12	11.84	8.46	17.10	15.92
Stops [stops/h]	48.17	337.38	124.58	108.46	276.49	50.85	115.02	264.73	259.39	209.45	451.53	426.38
Fuel consumption [US gal/h]	1.00	6.48	2.38	2.21	5.33	0.98	2.17	4.75	4.66	3.84	8.22	7.79
CO [g/h]	70.02	453.16	166.01	154.19	372.36	68.29	151.70	331.96	325.45	268.67	574.34	544.47
NOx [g/h]	13.62	88.17	32.30	30.00	72.45	13.29	29.51	64.59	63.32	52.27	111.74	105.93
VOC [g/h]	16.23	105.02	38.48	35.74	86.30	15.83	35.16	76.94	75.43	62.27	133.11	126.19

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.779	2.735	2.657	2.751
Crosswalk LOS	C	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	508	633	304	515
d_b, Bicycle Delay [s]	23.64	19.86	30.58	23.42
l_b,int, Bicycle LOS Score for Intersection	2.415	2.321	2.375	2.696
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.330

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	74	35	52	5	35	5	8	382	117	52	204	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	39	0	0	35	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	41	61	6	41	6	9	489	138	61	276	8
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	12	18	2	12	2	3	148	42	18	83	2
Total Analysis Volume [veh/h]	105	50	74	7	50	7	11	591	167	74	334	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	13	0	0	13	0	35	41	0	11	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	8	8	8	8	1	38	38	5	42	42
g / C, Green / Cycle	0.12	0.12	0.12	0.13	0.02	0.58	0.58	0.08	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.08	0.03	0.05	0.04	0.01	0.21	0.21	0.04	0.09	0.09
s, saturation flow rate [veh/h]	1346	1870	1589	1606	1781	1870	1730	1781	1870	1851
c, Capacity [veh/h]	157	227	193	191	38	1086	1005	142	1195	1183
d1, Uniform Delay [s]	28.37	25.77	26.31	25.54	31.33	7.24	7.25	28.73	4.67	4.67
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.81	0.48	1.25	1.02	4.19	0.94	1.02	2.97	0.25	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.22	0.38	0.33	0.29	0.36	0.36	0.52	0.14	0.14
d, Delay for Lane Group [s/veh]	33.18	26.26	27.56	26.56	35.52	8.18	8.26	31.70	4.92	4.93
Lane Group LOS	C	C	C	C	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.72	0.69	1.06	0.92	0.21	2.50	2.35	1.16	0.73	0.73
50th-Percentile Queue Length [ft/ln]	43.08	17.14	26.41	23.02	5.13	62.59	58.69	29.00	18.24	18.14
95th-Percentile Queue Length [veh/ln]	3.10	1.23	1.90	1.66	0.37	4.51	4.23	2.09	1.31	1.31
95th-Percentile Queue Length [ft/ln]	77.55	30.85	47.54	41.43	9.24	112.66	105.64	52.19	32.84	32.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.18	26.26	27.56	26.56	26.56	26.56	35.52	8.21	8.26	31.70	4.93	4.93
Movement LOS	C	C	C	C	C	C	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	29.85			26.56			8.61			9.67		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	12.97											
Intersection LOS	B											
Intersection V/C	0.330											

Emissions

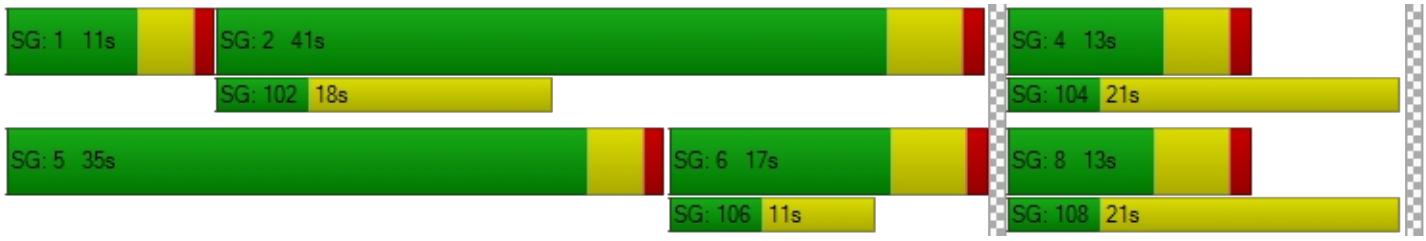
Vehicle Miles Traveled [mph]	8.55	4.07	6.03	1.76	0.35	12.41	11.52	16.96	39.55	39.28
Stops [stops/h]	95.45	37.97	58.51	50.99	11.37	138.66	130.02	64.24	40.41	40.20
Fuel consumption [US gal/h]	1.75	0.71	1.08	0.62	0.18	2.17	2.03	1.61	1.98	1.97
CO [g/h]	122.52	49.49	75.83	43.39	12.46	151.69	141.95	112.32	138.71	137.80
NOx [g/h]	23.84	9.63	14.75	8.44	2.42	29.51	27.62	21.85	26.99	26.81
VOC [g/h]	28.40	11.47	17.57	10.06	2.89	35.16	32.90	26.03	32.15	31.94

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.264	1.755	2.711	2.620
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	243	258	1105	366
d_b, Bicycle Delay [s]	25.08	24.64	6.51	21.69
l_b,int, Bicycle LOS Score for Intersection	2.152	1.880	2.408	2.119
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.400

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	68	148	58	21	197	4	1	222	180	42	126	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	17	0	0	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	174	68	25	232	5	1	279	212	50	164	22
Peak Hour Factor	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350	0.8350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	52	20	7	69	1	0	84	63	15	49	7
Total Analysis Volume [veh/h]	96	208	81	30	278	6	1	334	254	60	196	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	16	0	12	17	0	28	30	0	17	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	23	16	16	23	13	0	33	33	5	38	38
g / C, Green / Cycle	0.30	0.21	0.21	0.30	0.17	0.00	0.43	0.43	0.07	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.07	0.11	0.05	0.02	0.15	0.00	0.17	0.17	0.03	0.06	0.06
s, saturation flow rate [veh/h]	1337	1870	1589	1250	1863	1781	1870	1608	1781	1870	1795
c, Capacity [veh/h]	386	388	330	413	318	8	813	699	120	948	910
d1, Uniform Delay [s]	20.10	26.50	24.82	18.85	30.44	37.19	14.40	14.46	33.75	9.70	9.71
k, delay calibration	0.19	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	1.15	0.38	0.07	8.73	7.10	1.38	1.66	3.19	0.25	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.54	0.25	0.07	0.89	0.13	0.39	0.39	0.50	0.12	0.12
d, Delay for Lane Group [s/veh]	20.67	27.66	25.20	18.92	39.17	44.29	15.78	16.12	36.94	9.95	9.98
Lane Group LOS	C	C	C	B	D	D	B	B	D	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.21	3.26	1.18	0.36	5.52	0.03	3.48	3.12	1.13	0.95	0.93
50th-Percentile Queue Length [ft/ln]	30.37	81.45	29.45	8.88	137.90	0.82	87.07	78.08	28.35	23.65	23.27
95th-Percentile Queue Length [veh/ln]	2.19	5.86	2.12	0.64	9.37	0.06	6.27	5.62	2.04	1.70	1.68
95th-Percentile Queue Length [ft/ln]	54.67	146.60	53.01	15.99	234.20	1.48	156.73	140.54	51.04	42.57	41.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.67	27.66	25.20	18.92	39.17	39.17	44.29	15.80	16.12	36.94	9.97	9.98
Movement LOS	C	C	C	B	D	D	D	B	B	D	A	A
d_A, Approach Delay [s/veh]	25.40			37.24			15.99			15.71		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	22.49											
Intersection LOS	C											
Intersection V/C	0.400											

Emissions

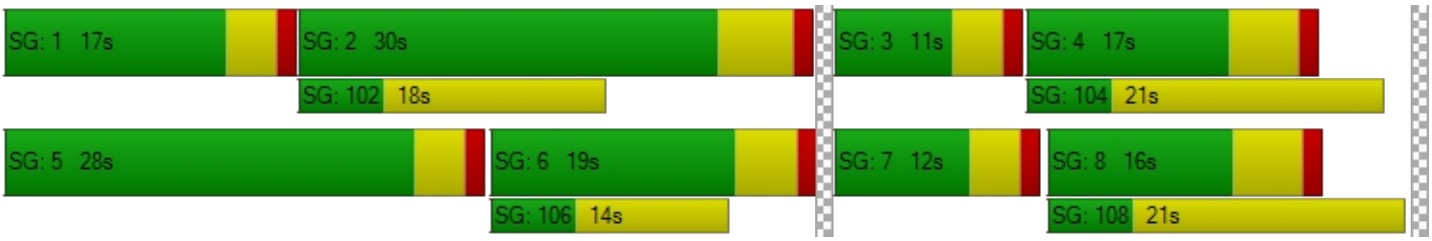
Vehicle Miles Traveled [mph]	3.42	7.40	2.88	2.44	23.14	0.03	8.89	7.82	13.64	25.50	24.98
Stops [stops/h]	58.31	156.37	56.54	17.06	264.77	1.58	167.18	149.91	54.44	45.41	44.68
Fuel consumption [US gal/h]	0.97	2.63	0.95	0.34	5.14	0.03	2.97	2.66	1.31	1.53	1.50
CO [g/h]	67.99	183.76	66.45	23.55	359.08	1.79	207.30	185.61	91.81	106.79	104.75
NOx [g/h]	13.23	35.75	12.93	4.58	69.86	0.35	40.33	36.11	17.86	20.78	20.38
VOC [g/h]	15.76	42.59	15.40	5.46	83.22	0.41	48.04	43.02	21.28	24.75	24.28

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.401	2.141	2.550	2.444
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	291	317	656	381
d_b, Bicycle Delay [s]	27.39	26.54	16.93	24.56
l_b,int, Bicycle LOS Score for Intersection	2.409	2.292	2.260	2.007
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.304

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	0	7	0	0	12	0	345	40	21	290	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	0	5	0	0	0	0	20	97	6	23	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	0	13	0	0	14	0	427	144	31	365	52
Peak Hour Factor	0.9340	0.9500	0.9340	0.9500	0.9500	0.9340	0.9500	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	0	3	0	0	4	0	114	39	8	98	14
Total Analysis Volume [veh/h]	89	0	14	0	0	15	0	457	154	33	391	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	0	0	0	0	27	0	25	0	11	36	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	6	6	2	45	45	53	53
g / C, Green / Cycle	0.08	0.08	0.03	0.61	0.61	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.05	0.01	0.01	0.16	0.18	0.04	0.24
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1717	911	1830
c, Capacity [veh/h]	147	131	43	1131	1039	706	1290
d1, Uniform Delay [s]	33.23	31.85	35.83	7.00	7.12	3.71	4.32
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.97	0.35	4.71	0.59	0.72	0.03	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.11	0.35	0.27	0.29	0.05	0.35
d, Delay for Lane Group [s/veh]	37.20	32.20	40.54	7.59	7.84	3.73	5.06
Lane Group LOS	D	C	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.70	0.25	0.32	2.13	2.19	0.11	2.18
50th-Percentile Queue Length [ft/ln]	42.60	6.13	8.09	53.19	54.63	2.86	54.52
95th-Percentile Queue Length [veh/ln]	3.07	0.44	0.58	3.83	3.93	0.21	3.93
95th-Percentile Queue Length [ft/ln]	76.67	11.04	14.56	95.75	98.34	5.14	98.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.20	0.00	32.20	0.00	0.00	40.54	0.00	7.67	7.84	3.73	5.06	5.06
Movement LOS	D		C			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	36.52			40.54			7.72			4.97		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.49											
Intersection LOS	A											
Intersection V/C	0.304											

Emissions

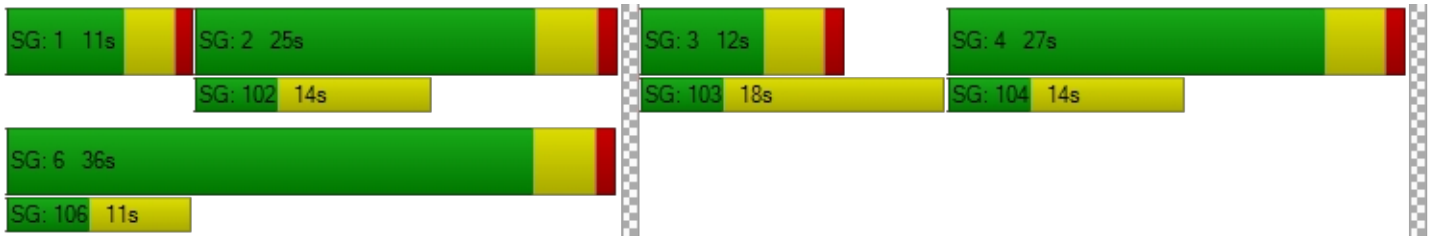
Vehicle Miles Traveled [mph]	6.67	1.05	0.37	23.39	23.39	4.98	67.42
Stops [stops/h]	81.78	11.78	15.53	102.13	104.89	5.48	104.67
Fuel consumption [US gal/h]	1.29	0.18	0.20	2.00	2.03	0.26	3.81
CO [g/h]	90.00	12.87	13.96	139.72	141.90	18.19	266.60
NOx [g/h]	17.51	2.50	2.72	27.19	27.61	3.54	51.87
VOC [g/h]	20.86	2.98	3.24	32.38	32.89	4.22	61.79

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.041	1.736	2.292	2.355
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	197	597	541	835
d_b, Bicycle Delay [s]	30.47	18.45	19.95	12.73
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.278	2.566
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	51	4	4	65	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	0	0	102	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	5	5	179	1	2
Peak Hour Factor	0.8890	0.8890	0.8890	0.8890	0.8890	0.8890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	1	1	50	0	1
Total Analysis Volume [veh/h]	102	6	6	201	1	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.44	0.00	10.37	8.81
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.30	0.00	0.27	0.27
d_A, Approach Delay [s/veh]	0.00		0.22		9.33	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	6	2	10	37	17	40	29	13	2	85	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	143	76	0	0	67	69	2	46	127	0	51	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	83	2	12	111	89	49	80	142	2	151	12
Peak Hour Factor	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	23	1	3	31	25	14	23	40	1	43	3
Total Analysis Volume [veh/h]	181	94	2	14	126	101	55	91	161	2	171	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	520	562	513	582	651	601
Degree of Utilization, x	0.35	0.17	0.03	0.39	0.47	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.55	0.61	0.08	1.84	2.53	1.32
95th-Percentile Queue Length [ft]	38.69	15.29	2.10	46.06	63.28	33.05
Approach Delay [s/veh]	12.29		12.62		13.38	11.68
Approach LOS	B		B		B	B
Intersection Delay [s/veh]	12.59					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	4	15	9	38	5	7	18	8	7	11	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	218	0	0	194	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	223	18	11	239	6	8	21	9	8	13	12
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	63	5	3	67	2	2	6	3	2	4	3
Total Analysis Volume [veh/h]	17	251	20	12	269	7	9	24	10	9	15	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	611	674	650	714	830	615	620
Degree of Utilization, x	0.03	0.40	0.02	0.38	0.01	0.07	0.06

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.09	1.94	0.06	1.76	0.03	0.23	0.19
95th-Percentile Queue Length [ft]	2.14	48.54	1.41	43.95	0.64	5.63	4.75
Approach Delay [s/veh]	11.42		10.57			9.30	9.18
Approach LOS	B		B			A	A
Intersection Delay [s/veh]	10.78						
Intersection LOS	B						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.552

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	11	10	11	24	29	14	241	28	177	338	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	81	89	24	27	0	0	0	0	184
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	20	12	94	117	58	44	284	33	209	399	211
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	5	3	26	32	16	12	78	9	57	109	58
Total Analysis Volume [veh/h]	19	22	13	103	128	63	48	310	36	228	436	230
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	24	0	0	24	0	11	24	0	17	30	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	10	10	10	10	46	35	46	38
g / C, Green / Cycle	0.16	0.16	0.16	0.16	0.70	0.53	0.70	0.58
(v / s)_i Volume / Saturation Flow Rate	0.02	0.02	0.08	0.12	0.06	0.21	0.21	0.42
s, saturation flow rate [veh/h]	1073	1579	1236	1590	816	1653	1065	1586
c, Capacity [veh/h]	137	247	256	248	501	879	767	915
d1, Uniform Delay [s]	31.51	23.66	27.62	26.30	6.89	9.01	4.34	10.03
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.44	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.26	1.02	4.97	0.38	1.32	0.88	5.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.14	0.40	0.77	0.10	0.39	0.30	0.73
d, Delay for Lane Group [s/veh]	31.96	23.93	28.64	31.27	7.27	10.33	5.21	15.08
Lane Group LOS	C	C	C	C	A	B	A	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.31	0.47	1.56	3.07	0.19	2.85	0.91	7.00
50th-Percentile Queue Length [ft/ln]	7.67	11.69	39.09	76.78	4.70	71.28	22.79	174.94
95th-Percentile Queue Length [veh/ln]	0.55	0.84	2.81	5.53	0.34	5.13	1.64	11.34
95th-Percentile Queue Length [ft/ln]	13.80	21.05	70.36	138.20	8.45	128.30	41.03	283.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.96	23.93	23.93	28.64	31.27	31.27	7.27	10.33	10.33	5.21	15.08	15.08
Movement LOS	C	C	C	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	26.75			30.35			9.96			12.56		
Approach LOS	C			C			A			B		
d_I, Intersection Delay [s/veh]	15.60											
Intersection LOS	B											
Intersection V/C	0.552											

Emissions

Vehicle Miles Traveled [mph]	1.54	2.83	8.11	15.04	7.69	55.45	34.12	99.65
Stops [stops/h]	16.98	25.90	86.60	170.10	10.41	157.91	50.49	387.56
Fuel consumption [US gal/h]	0.26	0.40	1.30	2.54	0.46	3.83	1.97	8.01
CO [g/h]	18.02	27.75	90.68	177.83	31.93	267.49	137.69	560.03
NOx [g/h]	3.51	5.40	17.64	34.60	6.21	52.04	26.79	108.96
VOC [g/h]	4.18	6.43	21.02	41.21	7.40	61.99	31.91	129.79

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.389	2.128	2.199	2.531
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	597	597	597	782
d_b, Bicycle Delay [s]	16.00	16.00	16.00	12.06
l_b,int, Bicycle LOS Score for Intersection	1.863	2.259	2.424	3.249
Bicycle LOS	A	B	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.320

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	10	150	38	12	315	37	120	320	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	89	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	7	0	12	266	45	14	371	44	141	377	28
Peak Hour Factor	0.9500	0.9500	0.9500	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	0	4	80	14	4	112	13	42	114	8
Total Analysis Volume [veh/h]	0	7	0	14	320	54	17	447	53	170	454	34
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	30	0	11	19	0	11	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		10	10	41	31	31	41	35	35
g / C, Green / Cycle		0.16	0.16	0.69	0.51	0.51	0.69	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate		0.12	0.12	0.02	0.15	0.15	0.17	0.15	0.15
s, saturation flow rate [veh/h]		1677	1603	889	1683	1621	974	1683	1642
c, Capacity [veh/h]		270	258	717	857	825	764	992	968
d1, Uniform Delay [s]		23.92	23.97	3.20	8.51	8.53	3.66	5.92	5.93
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.75	4.15	0.06	0.88	0.93	0.67	0.60	0.62
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.73	0.74	0.02	0.30	0.30	0.22	0.25	0.25
d, Delay for Lane Group [s/veh]		27.67	28.12	3.26	9.39	9.45	4.34	6.52	6.54
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.81	2.76	0.06	1.86	1.81	0.63	1.37	1.35
50th-Percentile Queue Length [ft/ln]		70.20	68.93	1.41	46.43	45.36	15.81	34.27	33.64
95th-Percentile Queue Length [veh/ln]		5.05	4.96	0.10	3.34	3.27	1.14	2.47	2.42
95th-Percentile Queue Length [ft/ln]		126.37	124.07	2.54	83.58	81.65	28.46	61.69	60.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	27.67	27.87	28.12	3.26	9.42	9.45	4.34	6.53	6.54
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			27.89			9.22			5.97		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	12.49											
Intersection LOS	B											
Intersection V/C	0.320											

Emissions

Vehicle Miles Traveled [mph]		15.91	15.46	2.77	41.26	40.07	25.52	37.03	36.22
Stops [stops/h]		168.49	165.43	3.38	111.43	108.87	37.95	82.26	80.74
Fuel consumption [US gal/h]		2.47	2.42	0.15	2.77	2.69	1.44	2.31	2.26
CO [g/h]		172.68	169.43	10.39	193.48	188.28	100.88	161.35	157.98
NOx [g/h]		33.60	32.96	2.02	37.64	36.63	19.63	31.39	30.74
VOC [g/h]		40.02	39.27	2.41	44.84	43.64	23.38	37.39	36.61

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.229	2.055	2.447	2.462
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	847	480	480
d_b, Bicycle Delay [s]	30.00	9.98	17.33	17.33
l_b,int, Bicycle LOS Score for Intersection	4.132	2.094	2.201	2.317
Bicycle LOS	D	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.218

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	31	97	55	0	126	31	37	69	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	89	0	0	0	0	0	0	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	126	114	65	0	149	37	44	81	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.8850	0.8850	0.8850	0.9500	0.8850	0.8850	0.8850	0.8850	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	36	32	18	0	42	10	12	23	2
Total Analysis Volume [veh/h]	0	0	0	142	129	73	0	168	42	50	92	7
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	24	0	0	26	0	0	26	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		7	7	7	34	34	34
g / C, Green / Cycle		0.14	0.14	0.14	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate		0.09	0.08	0.05	0.13	0.05	0.05
s, saturation flow rate [veh/h]		1603	1683	1431	1626	1054	1683
c, Capacity [veh/h]		229	240	204	1091	742	1130
d1, Uniform Delay [s]		20.16	19.90	19.36	3.10	4.91	2.86
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.74	1.86	1.06	0.39	0.18	0.14
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.62	0.54	0.36	0.19	0.07	0.08
d, Delay for Lane Group [s/veh]		22.90	21.76	20.42	3.49	5.08	3.00
Lane Group LOS		C	C	C	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.62	1.42	0.77	0.52	0.20	0.21
50th-Percentile Queue Length [ft/ln]		40.48	35.50	19.34	12.95	4.96	5.13
95th-Percentile Queue Length [veh/ln]		2.91	2.56	1.39	0.93	0.36	0.37
95th-Percentile Queue Length [ft/ln]		72.86	63.90	34.80	23.31	8.93	9.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	22.90	21.76	20.42	0.00	3.49	3.49	5.08	3.00	0.00
Movement LOS				C	C	C		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			21.95			3.49			3.73		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	12.66											
Intersection LOS	B											
Intersection V/C	0.218											

Emissions

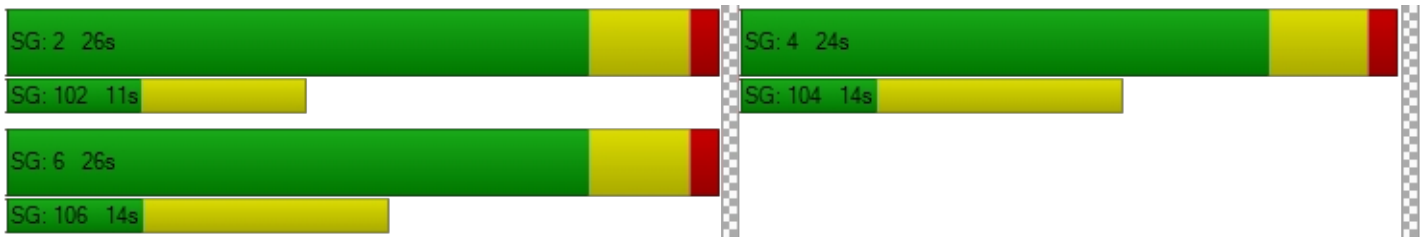
Vehicle Miles Traveled [mph]		10.71	9.73	5.50	35.06	7.31	13.46
Stops [stops/h]		116.58	102.25	55.69	37.29	14.30	14.78
Fuel consumption [US gal/h]		1.59	1.40	0.76	1.80	0.43	0.69
CO [g/h]		111.17	97.92	53.44	125.74	30.19	48.36
NOx [g/h]		21.63	19.05	10.40	24.46	5.87	9.41
VOC [g/h]		25.76	22.69	12.38	29.14	7.00	11.21

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.864	2.004	1.868	2.058
Crosswalk LOS	A	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	776	852	852
d_b, Bicycle Delay [s]	25.00	9.36	8.24	8.24
l_b,int, Bicycle LOS Score for Intersection	4.132	2.058	2.121	2.008
Bicycle LOS	D	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.250

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	93	0	43	0	0	5	0	285	81	50	250	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	25	0	0	28	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	0	51	0	0	6	0	361	95	59	323	0
Peak Hour Factor	0.9530	0.9500	0.9530	0.9500	0.9500	0.9530	0.9500	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	0	13	0	0	2	0	95	25	15	85	0
Total Analysis Volume [veh/h]	115	0	54	0	0	6	0	379	100	62	339	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	14	0	0	0	0	25	0	25	0	11	36	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	7	7	1	45	45	54	54
g / C, Green / Cycle	0.09	0.09	0.01	0.60	0.60	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.06	0.03	0.00	0.13	0.14	0.06	0.18
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1742	1029	1870
c, Capacity [veh/h]	162	144	21	1117	1041	814	1344
d1, Uniform Delay [s]	33.13	32.08	36.67	6.97	7.04	3.31	3.62
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.65	1.60	7.52	0.44	0.52	0.04	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.37	0.29	0.21	0.23	0.08	0.25
d, Delay for Lane Group [s/veh]	38.78	33.68	44.18	7.41	7.56	3.34	4.07
Lane Group LOS	D	C	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.20	0.95	0.15	1.64	1.67	0.20	1.39
50th-Percentile Queue Length [ft/ln]	55.01	23.73	3.78	40.99	41.73	4.96	34.75
95th-Percentile Queue Length [veh/ln]	3.96	1.71	0.27	2.95	3.00	0.36	2.50
95th-Percentile Queue Length [ft/ln]	99.01	42.71	6.80	73.79	75.11	8.93	62.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.78	0.00	33.68	0.00	0.00	44.18	0.00	7.46	7.56	3.34	4.07	4.07
Movement LOS	D		C			D		A	A	A	A	A
d_A, Approach Delay [s/veh]	37.15			44.18			7.48			3.96		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	11.10											
Intersection LOS	B											
Intersection V/C	0.250											

Emissions

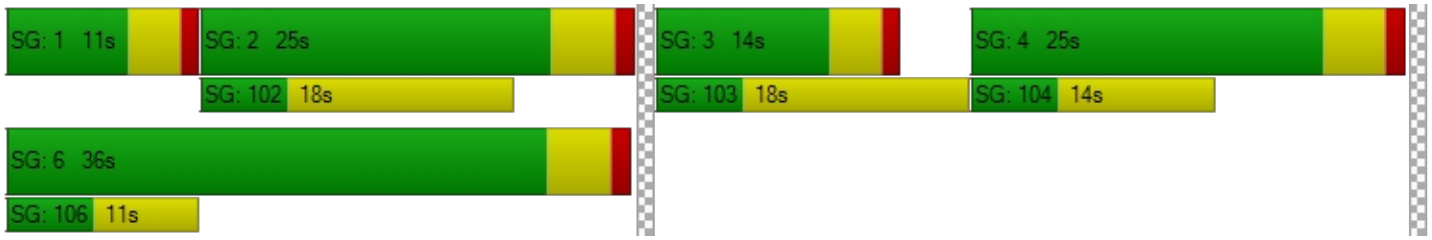
Vehicle Miles Traveled [mph]	8.69	4.08	0.16	36.12	36.12	2.10	11.49
Stops [stops/h]	105.61	45.56	7.25	78.71	80.12	9.52	66.72
Fuel consumption [US gal/h]	2.03	0.87	0.09	2.28	2.30	0.18	1.12
CO [g/h]	142.10	60.69	6.23	159.58	160.64	12.67	78.47
NOx [g/h]	27.65	11.81	1.21	31.05	31.26	2.47	15.27
VOC [g/h]	32.93	14.07	1.44	36.98	37.23	2.94	18.19

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.273	1.710	2.238	2.327
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	267	544	541	835
d_b, Bicycle Delay [s]	28.17	19.87	19.95	12.73
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.169	2.436
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	131	4	1	131	1	0	0	8	3	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	154	5	1	154	1	0	0	9	4	1	2
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	40	1	0	40	0	0	0	2	1	0	1
Total Analysis Volume [veh/h]	9	159	5	1	159	1	0	0	9	4	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	7.55	0.00	0.00	10.45	11.31	8.77	10.51	11.31	8.80
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.01	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.38	0.19	0.00	0.04	0.02	0.00	0.71	0.71	0.71	0.75	0.75	0.75
d_A, Approach Delay [s/veh]	0.39			0.05			8.77			10.13		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.64											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.079

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	139	16	6	131	6	3	5	37	14	1	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	51	0	0	0	0	0	0	0	46	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	118	164	19	7	154	7	4	6	90	17	1	2
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	48	6	2	45	2	1	2	26	5	0	1
Total Analysis Volume [veh/h]	138	192	22	8	180	8	5	7	105	20	1	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.01	0.00	0.00	0.02	0.02	0.12	0.08	0.00	0.00
d_M, Delay for Movement [s/veh]	7.77	0.00	0.00	7.66	0.00	0.00	17.18	17.03	10.12	20.37	17.20	10.50
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.25	0.01	0.01	0.01	0.57	0.57	0.57	0.27	0.27	0.27
95th-Percentile Queue Length [ft/ln]	6.36	6.36	6.36	0.34	0.34	0.34	14.13	14.13	14.13	6.83	6.83	6.83
d_A, Approach Delay [s/veh]	3.05			0.31			10.84			19.37		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	4.14											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	32.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1	108	26	28	192	25	8	207	46	311	507	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	106	28	0	21	25	0	0	69	12	0	78	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	155	31	54	251	29	9	313	66	367	676	182
Peak Hour Factor	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280	0.8280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	47	9	16	76	9	3	95	20	111	204	55
Total Analysis Volume [veh/h]	129	187	37	65	303	35	11	378	80	443	816	220
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	16	0	11	16	0	31	26	0	37	32	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	22	12	12	22	11	11	2	28	28	27	53	53
g / C, Green / Cycle	0.24	0.14	0.14	0.24	0.12	0.12	0.02	0.31	0.31	0.30	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.03	0.05	0.10	0.10	0.01	0.14	0.14	0.28	0.48	0.15
s, saturation flow rate [veh/h]	1211	1683	1431	1237	1683	1623	1603	1683	1583	1603	1683	1431
c, Capacity [veh/h]	316	229	195	304	204	197	33	515	485	478	980	833
d1, Uniform Delay [s]	28.55	37.76	34.46	27.42	38.69	38.75	43.44	25.16	25.23	30.63	15.23	9.27
k, delay calibration	0.34	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.27	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.67	6.90	0.47	0.35	8.86	9.76	5.57	2.87	3.14	17.14	8.23	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.82	0.19	0.21	0.84	0.85	0.33	0.45	0.46	0.93	0.83	0.26
d, Delay for Lane Group [s/veh]	31.22	44.67	34.93	27.77	47.56	48.51	49.01	28.03	28.37	47.77	23.46	10.05
Lane Group LOS	C	D	C	C	D	D	D	C	C	D	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.45	4.33	0.73	1.10	4.09	4.04	0.29	4.41	4.25	11.25	14.16	2.14
50th-Percentile Queue Length [ft/ln]	61.28	108.19	18.18	27.51	102.32	101.08	7.35	110.15	106.29	281.29	354.09	53.40
95th-Percentile Queue Length [veh/ln]	4.41	7.74	1.31	1.98	7.37	7.28	0.53	7.85	7.63	16.75	20.34	3.84
95th-Percentile Queue Length [ft/ln]	110.31	193.48	32.72	49.51	184.17	181.95	13.22	196.21	190.83	418.82	508.39	96.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.22	44.67	34.93	27.77	47.97	48.51	49.01	28.16	28.37	47.77	23.46	10.05
Movement LOS	C	D	C	C	D	D	D	C	C	D	C	B
d_A, Approach Delay [s/veh]	38.73			44.76			28.69			28.74		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.42											
Intersection LOS	C											
Intersection V/C	0.664											

Emissions

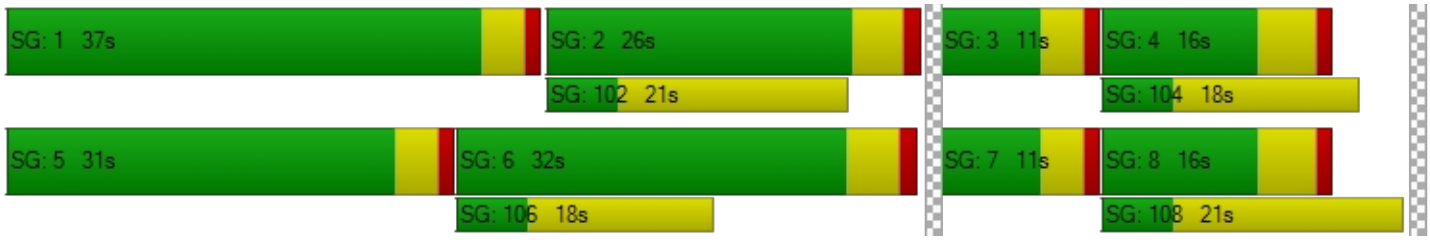
Vehicle Miles Traveled [mph]	10.49	15.20	3.01	5.09	13.39	13.07	1.65	35.04	33.49	21.87	40.28	10.86
Stops [stops/h]	98.06	173.11	29.09	44.01	163.71	161.74	11.75	176.24	170.07	450.06	566.54	85.44
Fuel consumption [US gal/h]	1.96	3.58	0.60	0.89	3.40	3.36	0.23	3.59	3.45	7.69	8.68	1.37
CO [g/h]	136.77	250.31	41.69	62.37	237.42	235.06	15.99	250.77	241.20	537.75	607.00	95.69
NOx [g/h]	26.61	48.70	8.11	12.13	46.19	45.73	3.11	48.79	46.93	104.63	118.10	18.62
VOC [g/h]	31.70	58.01	9.66	14.45	55.03	54.48	3.71	58.12	55.90	124.63	140.68	22.18

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.570	2.366	2.453	2.698
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	242	242	476	607
d_b, Bicycle Delay [s]	34.76	34.76	26.14	21.84
l_b,int, Bicycle LOS Score for Intersection	2.356	2.106	2.161	4.214
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	31.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.522

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	67	97	56	472	26	2	233	113	282	434	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	15	21	0	0	0	0	0	0	130
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	83	114	81	577	31	2	275	133	332	512	224
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	26	35	25	178	10	1	85	41	102	158	69
Total Analysis Volume [veh/h]	21	102	141	100	712	38	2	340	164	410	632	277
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	14	24	0	29	29	0	26	26	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	29	19	19	29	22	22	0	33	33	14	47	47
g / C, Green / Cycle	0.32	0.21	0.21	0.32	0.25	0.25	0.00	0.37	0.37	0.16	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.10	0.08	0.22	0.22	0.00	0.11	0.11	0.13	0.28	0.29
s, saturation flow rate [veh/h]	803	3204	1431	1192	1683	1653	1603	3204	1431	3113	1683	1512
c, Capacity [veh/h]	232	658	294	470	412	405	10	1176	525	496	876	787
d1, Uniform Delay [s]	23.27	29.35	31.52	22.13	33.09	33.09	44.52	20.18	20.37	36.62	14.44	14.51
k, delay calibration	0.11	0.11	0.11	0.11	0.30	0.30	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.11	1.21	0.22	19.27	19.57	10.57	0.62	1.55	3.57	2.42	2.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.15	0.48	0.21	0.92	0.92	0.21	0.29	0.31	0.83	0.54	0.55
d, Delay for Lane Group [s/veh]	23.44	29.46	32.73	22.35	52.36	52.67	55.10	20.80	21.93	40.20	16.86	17.27
Lane Group LOS	C	C	C	C	D	D	E	C	C	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.31	0.89	2.72	1.51	9.90	9.76	0.07	2.61	2.67	4.58	6.77	6.26
50th-Percentile Queue Length [ft/ln]	7.64	22.30	67.97	37.65	247.41	243.94	1.81	65.16	66.64	114.53	169.14	156.40
95th-Percentile Queue Length [veh/ln]	0.55	1.61	4.89	2.71	15.06	14.88	0.13	4.69	4.80	8.09	11.03	10.36
95th-Percentile Queue Length [ft/ln]	13.74	40.14	122.34	67.77	376.39	372.01	3.26	117.28	119.96	202.28	275.78	258.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.44	29.46	32.73	22.35	52.50	52.67	55.10	20.80	21.93	40.20	16.96	17.27
Movement LOS	C	C	C	C	D	D	E	C	C	D	B	B
d_A, Approach Delay [s/veh]	30.73			48.96			21.30			24.25		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	31.47											
Intersection LOS	C											
Intersection V/C	0.522											

Emissions

Vehicle Miles Traveled [mph]	1.63	7.91	10.94	8.13	30.75	30.22	0.30	51.03	24.62	29.60	34.35	31.27
Stops [stops/h]	12.22	71.37	108.75	60.24	395.85	390.30	2.90	208.50	106.63	366.49	270.62	250.24
Fuel consumption [US gal/h]	0.25	1.45	2.17	1.22	8.18	8.07	0.05	4.53	2.25	6.09	4.22	3.89
CO [g/h]	17.76	101.34	151.96	85.13	571.79	564.12	3.29	316.93	157.12	425.72	294.64	271.83
NOx [g/h]	3.46	19.72	29.57	16.56	111.25	109.76	0.64	61.66	30.57	82.83	57.33	52.89
VOC [g/h]	4.12	23.49	35.22	19.73	132.52	130.74	0.76	73.45	36.41	98.67	68.28	63.00

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.748	2.581	2.624	2.848
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	353	420	542	476
d_b, Bicycle Delay [s]	30.50	28.08	23.91	26.14
l_b,int, Bicycle LOS Score for Intersection	1.992	2.475	2.191	2.862
Bicycle LOS	A	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.375

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	211	5	316	301	109	14	87	27	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	4	0	18	4	0	0	83	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	253	6	391	359	129	17	186	39	0	0	0
Peak Hour Factor	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	76	2	117	107	39	5	56	12	0	0	0
Total Analysis Volume [veh/h]	71	303	7	468	429	154	20	222	47	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	20	17	0	29	26	0	0	19	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	5	28	28	13	36	36	10	10	10	
g / C, Green / Cycle	0.08	0.43	0.43	0.19	0.55	0.55	0.16	0.16	0.16	
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.09	0.15	0.18	0.18	0.01	0.13	0.03	
s, saturation flow rate [veh/h]	1603	1683	1670	3113	1683	1533	1603	1683	1431	
c, Capacity [veh/h]	129	729	723	601	918	836	259	272	231	
d1, Uniform Delay [s]	28.76	11.51	11.52	24.91	8.20	8.20	23.13	26.31	23.61	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.63	0.67	0.68	2.23	0.97	1.07	0.13	5.90	0.43	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.55	0.21	0.21	0.78	0.33	0.33	0.08	0.82	0.20	
d, Delay for Lane Group [s/veh]	32.39	12.18	12.19	27.14	9.17	9.27	23.25	32.21	24.04	
Lane Group LOS	C	B	B	C	A	A	C	C	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	1.13	1.35	1.35	3.35	2.14	1.97	0.26	3.58	0.62	
50th-Percentile Queue Length [ft/ln]	28.35	33.83	33.70	83.63	53.39	49.22	6.43	89.50	15.58	
95th-Percentile Queue Length [veh/ln]	2.04	2.44	2.43	6.02	3.84	3.54	0.46	6.44	1.12	
95th-Percentile Queue Length [ft/ln]	51.04	60.89	60.65	150.54	96.11	88.60	11.58	161.10	28.04	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.39	12.19	12.19	27.14	9.20	9.27	23.25	32.21	24.04	0.00	0.00	0.00
Movement LOS	C	B	B	C	A	A	C	C	C			
d_A, Approach Delay [s/veh]	15.95			17.20			30.26			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	19.12											
Intersection LOS	B											
Intersection V/C	0.375											

Emissions

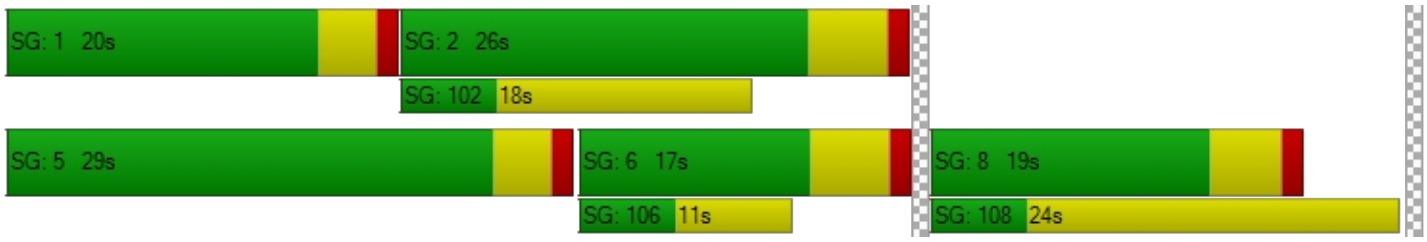
Vehicle Miles Traveled [mph]	2.82	6.16	6.13	34.36	22.40	20.41	2.93	32.48	6.88	
Stops [stops/h]	62.82	74.94	74.65	370.55	118.28	109.05	14.25	198.28	34.51	
Fuel consumption [US gal/h]	1.05	1.18	1.18	6.68	2.31	2.12	0.29	3.89	0.70	
CO [g/h]	73.23	82.74	82.40	467.05	161.65	148.37	20.54	271.74	49.19	
NOx [g/h]	14.25	16.10	16.03	90.87	31.45	28.87	4.00	52.87	9.57	
VOC [g/h]	16.97	19.18	19.10	108.24	37.46	34.39	4.76	62.98	11.40	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.480	2.698	2.241	2.040
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	366	643	440	0
d_b, Bicycle Delay [s]	21.69	14.96	19.77	32.50
l_b,int, Bicycle LOS Score for Intersection	2.088	2.641	2.251	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	124	827	0	260	126	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	85	0	90	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	146	1060	0	397	166	0
Peak Hour Factor	0.8530	0.8530	0.9500	0.8530	0.8530	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	311	0	116	49	0
Total Analysis Volume [veh/h]	171	1243	0	465	195	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	37	0	0	23	23	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	32	32	20	20
g / C, Green / Cycle	0.53	0.53	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.11	0.49	0.15	0.06
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	846	1337	1048	1048
d1, Uniform Delay [s]	7.49	13.14	15.89	14.46
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	3.48	1.36	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.93	0.44	0.19
d, Delay for Lane Group [s/veh]	7.60	16.62	17.25	14.85
Lane Group LOS	A	B	B	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.94	6.48	2.46	0.92
50th-Percentile Queue Length [ft/ln]	23.55	161.96	61.46	23.00
95th-Percentile Queue Length [veh/ln]	1.70	10.65	4.43	1.66
95th-Percentile Queue Length [ft/ln]	42.38	266.31	110.64	41.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.60	16.62	0.00	17.25	14.85	0.00
Movement LOS	A	B		B	B	
d_A, Approach Delay [s/veh]	15.53		17.25		14.85	
Approach LOS	B		B		B	
d_I, Intersection Delay [s/veh]	15.85					
Intersection LOS	B					
Intersection V/C	0.636					

Emissions

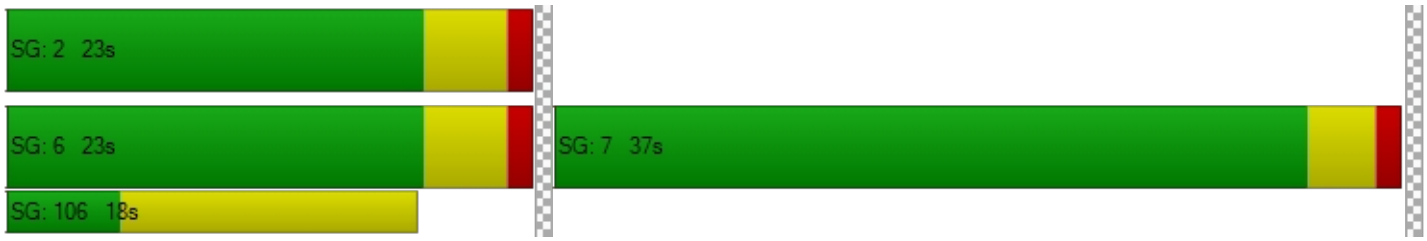
Vehicle Miles Traveled [mph]	14.34	104.20	22.96	9.36
Stops [stops/h]	56.51	777.39	295.03	110.39
Fuel consumption [US gal/h]	1.24	14.02	4.21	1.58
CO [g/h]	86.40	980.15	294.10	110.76
NOx [g/h]	16.81	190.70	57.22	21.55
VOC [g/h]	20.02	227.16	68.16	25.67

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.514	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	610	610
d_b, Bicycle Delay [s]	6.08	14.49	14.49
l_b,int, Bicycle LOS Score for Intersection	1.774	2.158	1.935
Bicycle LOS	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	74	171	43	0	0	0	213	165	0	0	50	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	75	15	0	0	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	202	51	0	0	0	326	210	0	0	76	105
Peak Hour Factor	0.9110	0.9110	0.9110	0.9500	0.9500	0.9500	0.9110	0.9110	0.9500	0.9500	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	55	14	0	0	0	89	58	0	0	21	29
Total Analysis Volume [veh/h]	95	222	56	0	0	0	358	231	0	0	83	115
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	16	0	0	0	0	18	34	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	50	50		50	50	50	50
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	10	10		13	30	13	13
g / C, Green / Cycle	0.20	0.20		0.26	0.60	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.06	0.17		0.22	0.07	0.05	0.08
s, saturation flow rate [veh/h]	1603	1625		1603	3204	1683	1431
c, Capacity [veh/h]	329	334		411	1918	441	375
d1, Uniform Delay [s]	16.78	19.04		17.79	4.34	14.32	14.81
k, delay calibration	0.11	0.19		0.26	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	9.29		12.74	0.13	0.94	2.11
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.83		0.87	0.12	0.19	0.31
d, Delay for Lane Group [s/veh]	17.25	28.33		30.53	4.47	15.27	16.92
Lane Group LOS	B	C		C	A	B	B
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.84	3.52		4.89	0.37	0.76	1.14
50th-Percentile Queue Length [ft/ln]	21.12	88.05		122.26	9.21	18.93	28.47
95th-Percentile Queue Length [veh/ln]	1.52	6.34		8.52	0.66	1.36	2.05
95th-Percentile Queue Length [ft/ln]	38.01	158.50		212.93	16.58	34.07	51.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.25	28.33	28.33	0.00	0.00	0.00	30.53	4.47	0.00	0.00	15.27	16.92
Movement LOS	B	C	C				C	A			B	B
d_A, Approach Delay [s/veh]	25.51			0.00			20.31			16.23		
Approach LOS	C			A			C			B		
d_I, Intersection Delay [s/veh]	21.29											
Intersection LOS	C											
Intersection V/C	0.475											

Emissions

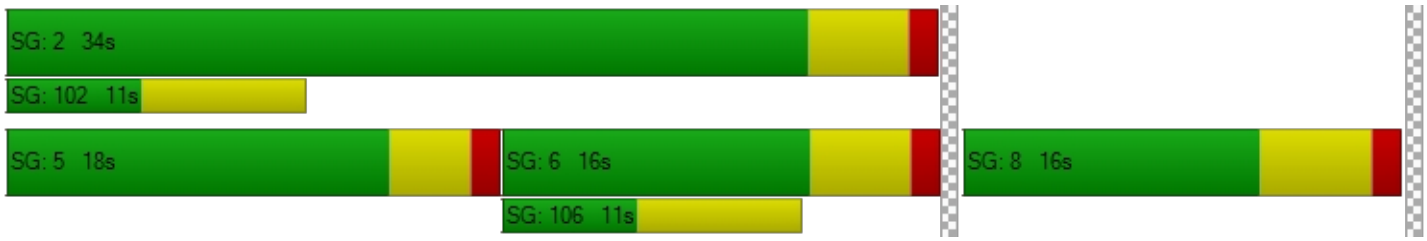
Vehicle Miles Traveled [mph]	8.28	24.22		17.18	11.08	3.04	4.21
Stops [stops/h]	60.82	253.59		352.10	53.05	54.51	81.98
Fuel consumption [US gal/h]	1.11	4.43		4.88	0.96	0.68	1.02
CO [g/h]	77.34	309.88		340.89	67.08	47.82	71.45
NOx [g/h]	15.05	60.29		66.33	13.05	9.30	13.90
VOC [g/h]	17.92	71.82		79.01	15.55	11.08	16.56

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.897	2.024	0.000	0.000
Crosswalk LOS	A	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	436	0	1172	452
d_b, Bicycle Delay [s]	15.29	25.00	4.28	14.98
l_b,int, Bicycle LOS Score for Intersection	2.389	4.132	2.260	1.937
Bicycle LOS	B	D	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.410

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	331	94	231	0	0	0	80	308	0	0	468	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	113	0	0	0	0	0	0	15	0	0	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	503	111	272	0	0	0	94	378	0	0	569	113
Peak Hour Factor	0.8760	0.8760	0.8760	0.9500	0.9500	0.9500	0.8760	0.8760	0.9500	0.9500	0.8760	0.8760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	144	32	78	0	0	0	27	108	0	0	162	32
Total Analysis Volume [veh/h]	574	127	311	0	0	0	107	432	0	0	650	129
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	14	30	0	0	16	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	26	26	26		6	25	14	14
g / C, Green / Cycle	0.43	0.43	0.43		0.10	0.41	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.20	0.19	0.20		0.03	0.12	0.18	0.08
s, saturation flow rate [veh/h]	1781	1812	1589		3459	3560	3560	1589
c, Capacity [veh/h]	763	776	681		343	1460	839	375
d1, Uniform Delay [s]	12.21	12.15	12.19		25.12	11.89	21.44	19.07
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.99	1.89	2.20		0.51	0.11	1.57	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.45	0.46		0.31	0.30	0.77	0.34
d, Delay for Lane Group [s/veh]	14.19	14.05	14.39		25.63	12.00	23.00	19.61
Lane Group LOS	B	B	B		C	B	C	B
Critical Lane Group	Yes	No	No		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.22	3.19	2.89		0.71	1.79	4.01	1.41
50th-Percentile Queue Length [ft/ln]	80.40	79.78	72.32		17.69	44.75	100.20	35.19
95th-Percentile Queue Length [veh/ln]	5.79	5.74	5.21		1.27	3.22	7.21	2.53
95th-Percentile Queue Length [ft/ln]	144.72	143.60	130.17		31.84	80.54	180.36	63.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.14	14.05	14.39	0.00	0.00	0.00	25.63	12.00	0.00	0.00	23.00	19.61
Movement LOS	B	B	B				C	B			C	B
d_A, Approach Delay [s/veh]	14.20			0.00			14.70			22.44		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	17.07											
Intersection LOS	B											
Intersection V/C	0.410											

Emissions

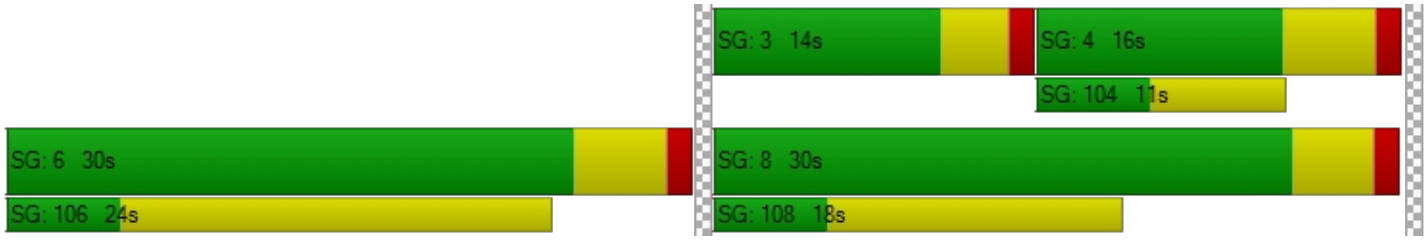
Vehicle Miles Traveled [mph]	13.72	13.72	12.17		7.72	31.19	32.87	6.52
Stops [stops/h]	192.96	191.47	173.56		84.90	214.78	480.97	84.45
Fuel consumption [US gal/h]	2.99	2.97	2.68		1.23	3.28	7.91	1.40
CO [g/h]	208.77	207.26	187.34		86.06	229.36	553.12	97.77
NOx [g/h]	40.62	40.32	36.45		16.74	44.62	107.62	19.02
VOC [g/h]	48.38	48.03	43.42		19.94	53.16	128.19	22.66

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.400	1.872	2.672	0.000
Crosswalk LOS	B	A	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	363
d_b, Bicycle Delay [s]	10.27	30.00	9.98	20.09
l_b,int, Bicycle LOS Score for Intersection	3.444	4.132	2.219	2.417
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Riverside Alive (23-3340)

Vistro File: \...\23-3340 Riverside Alive - future.vistro
Report File: H:\...\5 Cumulative + P PM.pdf

Scenario 10 Cumulative + Project PM
2024-12-18

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Main St @ SR-60 WB / Oakley Ave	Signalized	HCM 7th Edition	NB Left	0.770	36.7	D
2	Main St @ SR-60 EB	Signalized	HCM 7th Edition	SB Left	0.638	22.7	C
3	Main St @ Spruce St	Signalized	HCM 7th Edition	WB Left	0.603	14.3	B
4	Main St @ First St	Signalized	HCM 7th Edition	EB Right	0.505	13.0	B
5	Main St @ Second St	Two-way stop	HCM 7th Edition	WB Left	0.059	23.8	C
6	Main St @ Third St	Signalized	HCM 7th Edition	SB Right	0.704	38.5	D
7	Market St @ First St	Signalized	HCM 7th Edition	WB Left	0.442	13.2	B
8	Market St @ Second St	Two-way stop	HCM 7th Edition	EB Left	0.070	27.7	D
9	Market St @ Third St	Signalized	HCM 7th Edition	EB Thru	0.764	39.6	D
10	Market St @ Fourth St	Two-way stop	HCM 7th Edition	EB Left	0.084	34.4	D
11	Market St @ Fifth St	Signalized	HCM 7th Edition	EB Right	0.440	13.3	B
12	Market St @ Sixth St	Two-way stop	HCM 7th Edition	WB Right	0.129	13.9	B
13	Market St @ Mission Inn Ave	Signalized	HCM 7th Edition	SB Left	0.708	36.6	D
14	Market St @ University Ave	Signalized	HCM 7th Edition	WB Left	0.640	32.1	C
15	Market St @ Ninth St	Signalized	HCM 7th Edition	WB Right	0.360	7.1	A
16	Market St @ Tenth St	Signalized	HCM 7th Edition	EB Thru	0.354	9.5	A
17	Market St @ 11th St	Two-way stop	HCM 7th Edition	WB Left	0.070	57.0	F
18	Market St @ 12th St	Signalized	HCM 7th Edition	EB Right	0.403	11.0	B

19	Market St @ 13th St	Two-way stop	HCM 7th Edition	EB Thru	0.202	79.1	F
20	Market St / Magnolia Ave @ 14th St	Signalized	HCM 7th Edition	EB Left	0.580	33.5	C
21	Brockton Ave @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.433	16.3	B
22	Brockton Ave @ University Ave	Signalized	HCM 7th Edition	EB Left	0.477	25.2	C
23	Orange St @ Third St	Signalized	HCM 7th Edition	SB Right	0.481	12.4	B
24	Orange St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.013	10.9	B
25	Orange St @ Fifth St	All-way stop	HCM 7th Edition	EB Right	0.672	15.0	C
26	Orange St @ Sixth St	All-way stop	HCM 7th Edition	SB Thru	0.464	11.5	B
27	Orange St @ Mission Inn Ave	Signalized	HCM 7th Edition	NB Left	0.497	16.7	B
28	Orange St @ University Ave	Signalized	HCM 7th Edition	SB Right	0.390	11.8	B
29	Orange St @ Tenth St	Signalized	HCM 7th Edition	SB Left	0.322	12.0	B
30	Lime St @ Third St	Signalized	HCM 7th Edition	SB Right	0.492	15.3	B
31	Lime St @ Fourth St	Two-way stop	HCM 7th Edition	WB Left	0.008	12.2	B
32	Lime St @ Fifth St	Two-way stop	HCM 7th Edition	WB Left	0.120	20.1	C
33	Lime St @ Mission Inn Ave	Signalized	HCM 7th Edition	EB Left	0.499	25.7	C
34	Lime St @ University Ave	Signalized	HCM 7th Edition	EB Left	0.731	34.8	C
35	Lime St @ Tenth St / SR-91 WB	Signalized	HCM 7th Edition	NB Right	0.695	28.9	C
36	Mission Inn Ave @ SR-91 WB	Signalized	HCM 7th Edition	SB Right	0.472	11.9	B
37	Mission Inn Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	WB Right	0.780	41.3	D
38	University Ave @ Mulberry St / SR-91 EB	Signalized	HCM 7th Edition	EB Left	0.598	18.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For

all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Main St @ SR-60 WB / Oakley Ave

Control Type:	Signalized	Delay (sec / veh):	36.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.770

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	280	415	0	0	700	164	0	0	0	34	107	286
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	55	11	0	0	7	0	0	0	0	25	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	385	500	0	0	832	193	0	0	0	65	126	337
Peak Hour Factor	0.9350	0.9350	0.9500	0.9500	0.9350	0.9350	0.9500	0.9500	0.9500	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	134	0	0	222	52	0	0	0	17	34	90
Total Analysis Volume [veh/h]	412	535	0	0	890	206	0	0	0	70	135	360
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	22	0	0	11	0	0	0	0	0	10	0
Amber [s]	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	4.1	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	46	60	0	0	14	0	0	0	0	0	45	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Calculated Cycle Length [s]	105	105	105	105		105	105
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	5.10		5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	3.10		3.10	3.10
g_i, Effective Green Time [s]	27	68	38	38		26	26
g / C, Green / Cycle	0.25	0.65	0.36	0.36		0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.23	0.15	0.29	0.31		0.11	0.23
s, saturation flow rate [veh/h]	1781	3560	1870	1754		1839	1589
c, Capacity [veh/h]	451	2319	674	632		462	400
d1, Uniform Delay [s]	38.11	7.51	30.39	31.25		33.11	38.03
k, delay calibration	0.15	0.50	0.50	0.50		0.11	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	10.06	0.23	10.36	14.90		0.67	10.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.23	0.81	0.87		0.44	0.90
d, Delay for Lane Group [s/veh]	48.17	7.74	40.75	46.15		33.78	48.03
Lane Group LOS	D	A	D	D		C	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	11.27	2.29	13.98	15.00		4.41	9.83
50th-Percentile Queue Length [ft/ln]	281.81	57.36	349.57	374.98		110.17	245.65
95th-Percentile Queue Length [veh/ln]	16.78	4.13	20.12	21.35		7.85	14.97
95th-Percentile Queue Length [ft/ln]	419.46	103.25	502.88	533.77		196.24	374.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.17	7.74	0.00	0.00	42.82	46.15	0.00	0.00	0.00	33.78	33.78	48.03
Movement LOS	D	A			D	D				C	C	D
d_A, Approach Delay [s/veh]	25.33			43.45			0.00			42.86		
Approach LOS	C			D			A			D		
d_I, Intersection Delay [s/veh]	36.74											
Intersection LOS	D											
Intersection V/C	0.770											

Emissions

Vehicle Miles Traveled [mph]	24.51	31.83	20.29	20.29		7.52	13.21
Stops [stops/h]	386.48	157.34	479.41	514.26		151.09	336.90
Fuel consumption [US gal/h]	7.88	3.24	8.92	9.79		2.83	6.56
CO [g/h]	550.75	226.42	623.71	684.09		197.96	458.25
NOx [g/h]	107.16	44.05	121.35	133.10		38.52	89.16
VOC [g/h]	127.64	52.47	144.55	158.54		45.88	106.20

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.167	2.163
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1046	170	0	760
d_b, Bicycle Delay [s]	11.95	43.98	52.50	20.18
l_b,int, Bicycle LOS Score for Intersection	2.341	2.464	4.132	2.492
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Main St @ SR-60 EB

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	608	180	391	337	0	87	29	174	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	39	0	32	0	0	0	36	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	783	251	461	429	0	103	34	241	0	0	0
Peak Hour Factor	0.9500	0.9880	0.9880	0.9880	0.9880	0.9500	0.9880	0.9880	0.9880	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	198	64	117	109	0	26	9	61	0	0	0
Total Analysis Volume [veh/h]	0	793	254	467	434	0	104	34	244	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	7	25	0	0	22	0	0	0	0
Amber [s]	0.0	4.1	0.0	3.0	4.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	2.0	3.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	26	44	0	0	16	0	0	0	0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C	C	
C, Calculated Cycle Length [s]	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	5.10	5.10	4.00	5.10	5.10	5.10	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.10	3.10	2.00	3.10	3.10	3.10	
g_i, Effective Green Time [s]	17	17	18	39	11	11	
g / C, Green / Cycle	0.29	0.29	0.29	0.65	0.18	0.18	
(v / s)_i Volume / Saturation Flow Rate	0.22	0.16	0.26	0.12	0.08	0.15	
s, saturation flow rate [veh/h]	3560	1589	1781	3560	1802	1589	
c, Capacity [veh/h]	1021	456	526	2309	327	288	
d1, Uniform Delay [s]	19.64	18.17	20.20	4.22	21.77	23.74	
k, delay calibration	0.50	0.50	0.23	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	5.81	4.86	10.38	0.18	0.87	6.75	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.78	0.56	0.89	0.19	0.42	0.85	
d, Delay for Lane Group [s/veh]	25.45	23.03	30.58	4.40	22.63	30.49	
Lane Group LOS	C	C	C	A	C	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.30	3.27	6.99	0.74	1.65	3.58	
50th-Percentile Queue Length [ft/ln]	132.39	81.63	174.72	18.42	41.31	89.41	
95th-Percentile Queue Length [veh/ln]	9.07	5.88	11.32	1.33	2.97	6.44	
95th-Percentile Queue Length [ft/ln]	226.74	146.94	283.11	33.15	74.36	160.93	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.45	23.03	30.58	4.40	0.00	22.63	22.63	30.49	0.00	0.00	0.00
Movement LOS		C	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	24.86			17.97			27.65			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	22.65											
Intersection LOS	C											
Intersection V/C	0.638											

Emissions

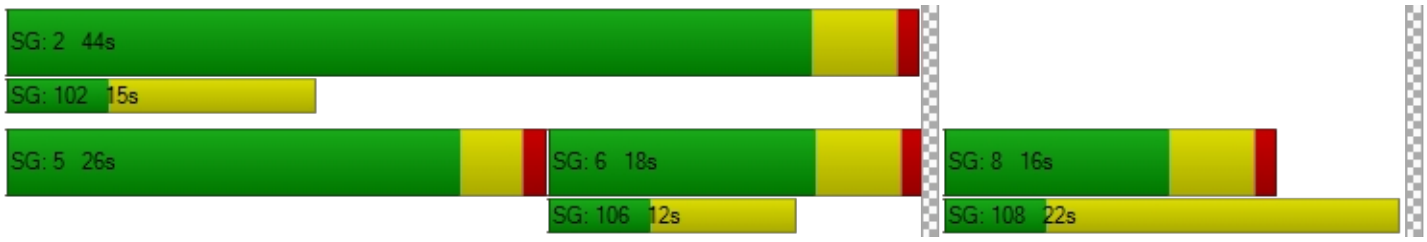
Vehicle Miles Traveled [mph]	108.13	34.64	27.78	25.82	4.21	7.44	
Stops [stops/h]	635.48	195.92	419.33	88.40	99.15	214.58	
Fuel consumption [US gal/h]	13.01	3.98	7.12	2.04	1.54	3.41	
CO [g/h]	909.22	278.47	497.61	142.44	107.76	238.46	
NOx [g/h]	176.90	54.18	96.82	27.71	20.97	46.40	
VOC [g/h]	210.72	64.54	115.33	33.01	24.98	55.27	

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.673	0.000	2.066	2.064
Crosswalk LOS	B	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	430	1297	363	0
d_b, Bicycle Delay [s]	18.49	3.71	20.09	30.00
l_b,int, Bicycle LOS Score for Intersection	2.423	2.303	1.875	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Main St @ Spruce St

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	476	28	136	285	9	65	202	25	54	31	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	105	11	0	69	0	0	0	0	7	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	666	44	160	405	11	77	238	29	71	37	138
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	180	12	43	109	3	21	64	8	19	10	37
Total Analysis Volume [veh/h]	8	720	48	173	438	12	83	257	31	77	40	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	20	0	7	20	0	0	18	0	0	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	21	0	11	21	0	0	23	0	0	23	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Calculated Cycle Length [s]	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.10	5.10	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	14	14	14	14
g / C, Green / Cycle	0.57	0.57	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.42	0.47	0.07	0.16	0.07	0.12
s, saturation flow rate [veh/h]	1852	1324	1194	1835	1091	1642
c, Capacity [veh/h]	1187	922	304	466	245	417
d1, Uniform Delay [s]	8.21	8.70	21.62	18.16	23.75	17.30
k, delay calibration	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.81	3.97	0.48	1.34	0.73	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.68	0.27	0.62	0.31	0.45
d, Delay for Lane Group [s/veh]	11.02	12.67	22.10	19.50	24.48	18.08
Lane Group LOS	B	B	C	B	C	B
Critical Lane Group	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.55	5.12	0.97	3.16	0.96	1.95
50th-Percentile Queue Length [ft/ln]	138.83	127.92	24.20	78.91	24.06	48.86
95th-Percentile Queue Length [veh/ln]	9.42	8.83	1.74	5.68	1.73	3.52
95th-Percentile Queue Length [ft/ln]	235.45	220.67	43.56	142.03	43.31	87.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.02	11.02	11.02	12.67	12.67	12.67	22.10	19.50	19.50	24.48	18.08	18.08
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	11.02			12.67			20.08			19.93		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	14.34											
Intersection LOS	B											
Intersection V/C	0.603											

Emissions

Vehicle Miles Traveled [mph]	344.59	84.95	2.35	8.16	2.16	5.30
Stops [stops/h]	363.49	334.92	63.36	206.59	62.99	127.92
Fuel consumption [US gal/h]	17.61	7.36	0.72	2.30	0.72	1.42
CO [g/h]	1230.84	514.70	50.47	160.94	50.49	99.57
NOx [g/h]	239.48	100.14	9.82	31.31	9.82	19.37
VOC [g/h]	285.26	119.29	11.70	37.30	11.70	23.08

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersectio	2.552	2.631	3.137	3.004
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	978	978	669	669
d_b, Bicycle Delay [s]	7.18	7.18	12.18	12.18
l_b,int, Bicycle LOS Score for Intersection	2.840	2.588	2.172	1.999
Bicycle LOS	C	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Main St @ First St

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.505

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	330	10	6	264	65	84	68	145	31	52	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	116	0	0	76	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	505	12	7	387	77	99	80	171	37	61	13
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	134	3	2	103	21	26	21	46	10	16	3
Total Analysis Volume [veh/h]	5	538	13	7	412	82	105	85	182	39	65	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	18	0	7	14	0	0	20	0	0	20	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	9	0	0	12	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	0	29	0	0	29	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	R	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	0.00	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	27	38	27	12	12	12
g / C, Green / Cycle	0.64	0.45	0.64	0.45	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.32	0.01	0.25	0.05	0.08	0.16	0.14
s, saturation flow rate [veh/h]	1697	1589	1679	1589	1320	1669	821
c, Capacity [veh/h]	1154	721	1134	721	182	336	245
d1, Uniform Delay [s]	6.01	9.03	5.42	9.44	22.65	22.78	20.81
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.38	0.05	0.93	0.32	2.89	4.27	1.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.02	0.37	0.11	0.58	0.79	0.48
d, Delay for Lane Group [s/veh]	7.39	9.08	6.35	9.76	25.54	27.05	22.27
Lane Group LOS	A	A	A	A	C	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.67	0.09	1.87	0.58	1.47	3.79	1.45
50th-Percentile Queue Length [ft/ln]	66.86	2.19	46.69	14.51	36.81	94.79	36.15
95th-Percentile Queue Length [veh/ln]	4.81	0.16	3.36	1.04	2.65	6.82	2.60
95th-Percentile Queue Length [ft/ln]	120.35	3.94	84.03	26.12	66.26	170.62	65.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.39	7.39	9.08	6.35	6.35	9.76	25.54	27.05	27.05	22.27	22.27	22.27
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.43			6.91			26.62			22.27		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	13.01											
Intersection LOS	B											
Intersection V/C	0.505											

Emissions

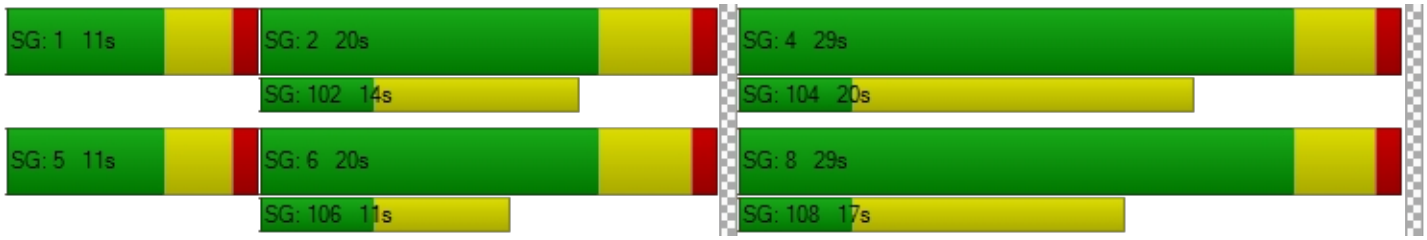
Vehicle Miles Traveled [mph]	40.98	0.98	186.06	36.41	8.69	22.09	3.33
Stops [stops/h]	160.47	5.25	112.05	34.83	88.35	227.49	86.75
Fuel consumption [US gal/h]	3.59	0.10	8.48	1.81	1.28	3.34	1.02
CO [g/h]	250.61	7.05	592.48	126.72	89.14	233.16	71.12
NOx [g/h]	48.76	1.37	115.28	24.66	17.34	45.37	13.84
VOC [g/h]	58.08	1.63	137.31	29.37	20.66	54.04	16.48

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.427	2.590	2.835	2.382
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	863	863	813	813
d_b, Bicycle Delay [s]	9.69	9.69	10.56	10.56
l_b,int, Bicycle LOS Score for Intersection	2.691	2.601	2.388	1.969
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Main St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	23.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.059

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	340	7	5	432	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	116	0	0	76	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	517	8	6	585	11	6
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	139	2	2	157	3	2
Total Analysis Volume [veh/h]	555	9	6	628	12	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.01	0.06	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	8.58	0.00	23.82	12.88
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.23	0.23
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.25	0.25	5.65	5.65
d_A, Approach Delay [s/veh]	0.00		0.08		20.18	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.34					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: Main St @ Third St

Control Type:	Signalized	Delay (sec / veh):	38.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.704

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	15.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	7	6	17	299	4	140	146	687	10	13	283	203
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	12	3	58	8	10	81	23	2	2	18	23
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	19	23	411	13	175	253	833	14	17	352	262
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	5	6	107	3	46	66	217	4	4	92	68
Total Analysis Volume [veh/h]	11	20	24	428	14	182	263	867	15	18	366	273
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	10	0	7	14	0	5	18	0	7	20	0
Amber [s]	3.0	3.0	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	13	0	0	15	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	20	0	11	20	0	25	68	0	11	54	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	5.10	5.10	5.10	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	0.00	3.10	0.00	2.70	0.00	2.70
g_i, Effective Green Time [s]	34	23	33	33	22	67	60	67	52
g / C, Green / Cycle	0.31	0.21	0.30	0.30	0.20	0.61	0.55	0.61	0.47
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.15	0.25	0.13	0.30	0.53	0.03	0.41
s, saturation flow rate [veh/h]	1116	1535	1328	964	1431	883	1678	644	1565
c, Capacity [veh/h]	140	325	464	392	288	373	915	203	741
d1, Uniform Delay [s]	46.78	35.21	31.17	35.48	40.18	20.97	23.94	22.82	25.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.36	0.11	0.28
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.10	0.87	2.91	7.09	10.09	10.66	18.03	0.19	7.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.14	0.43	0.62	0.63	0.70	0.96	0.09	0.86
d, Delay for Lane Group [s/veh]	47.88	36.07	34.07	42.57	50.27	31.63	41.97	23.01	33.52
Lane Group LOS	D	D	C	D	D	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.25	1.07	4.54	4.46	5.25	3.96	25.04	0.18	15.85
50th-Percentile Queue Length [ft/ln]	6.28	26.73	113.52	111.50	131.13	98.88	625.94	4.39	396.26
95th-Percentile Queue Length [veh/ln]	0.45	1.92	8.04	7.92	9.00	7.12	33.24	0.32	22.38
95th-Percentile Queue Length [ft/ln]	11.30	48.12	200.88	198.08	225.03	177.98	831.10	7.89	559.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.88	36.07	36.07	38.59	42.57	50.27	31.63	41.97	41.97	23.01	33.52	33.52
Movement LOS	D	D	D	D	D	D	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	38.43			42.09			39.60			33.23		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	38.51											
Intersection LOS	D											
Intersection V/C	0.704											

Emissions

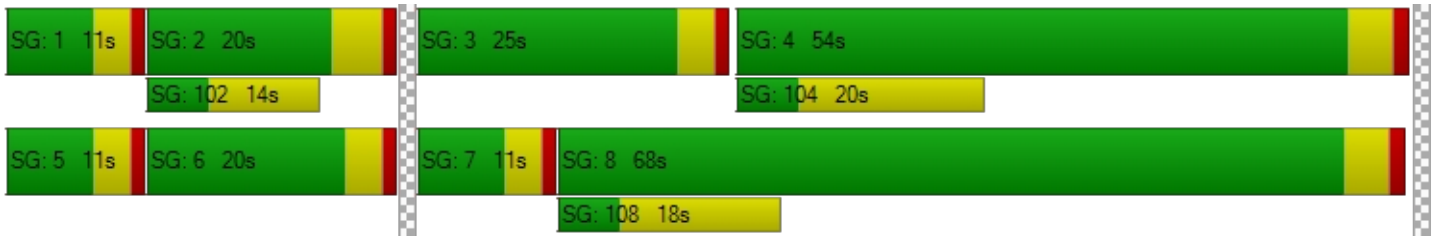
Vehicle Miles Traveled [mph]	0.26	1.04	15.12	18.29	13.76	22.08	74.06	1.38	48.92
Stops [stops/h]	8.22	34.99	148.60	145.96	171.66	129.44	819.42	5.74	518.73
Fuel consumption [US gal/h]	0.13	0.43	3.08	3.89	3.68	3.32	15.11	0.17	9.24
CO [g/h]	9.28	29.94	215.36	271.95	257.02	231.85	1056.12	12.07	645.74
NOx [g/h]	1.81	5.83	41.90	52.91	50.01	45.11	205.48	2.35	125.64
VOC [g/h]	2.15	6.94	49.91	63.03	59.57	53.73	244.77	2.80	149.66

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.169	2.662	2.520	0.000
Crosswalk LOS	B	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	291	471	1151	896
d_b, Bicycle Delay [s]	40.16	32.15	9.91	16.75
l_b,int, Bicycle LOS Score for Intersection	1.865	2.804	3.663	2.858
Bicycle LOS	A	C	D	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Market St @ First St

Control Type:	Signalized	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.442

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	619	71	115	983	24	21	103	15	47	47	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	0	11	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	747	84	136	1170	28	25	121	18	55	55	39
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	205	23	37	321	8	7	33	5	15	15	11
Total Analysis Volume [veh/h]	24	820	92	149	1284	31	27	133	20	60	60	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	14	0	5	14	0	0	24	0	0	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.4	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.4	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	29	0	11	29	0	0	30	0	0	30	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.40	5.40	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.40	3.40	0.00	3.40	3.40	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	47	37	37	47	41	41	13	13	13	13
g / C, Green / Cycle	0.68	0.52	0.52	0.68	0.58	0.58	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.04	0.23	0.06	0.18	0.35	0.35	0.02	0.08	0.05	0.06
s, saturation flow rate [veh/h]	551	3560	1589	825	1870	1855	1291	1828	1234	1742
c, Capacity [veh/h]	433	1862	831	627	1085	1076	229	334	194	318
d1, Uniform Delay [s]	5.56	10.34	8.45	4.89	9.53	9.54	29.12	25.53	31.56	24.86
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.76	0.27	0.89	2.54	2.57	0.23	0.98	0.90	0.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.44	0.11	0.24	0.61	0.61	0.12	0.46	0.31	0.32
d, Delay for Lane Group [s/veh]	5.61	11.10	8.72	5.78	12.07	12.11	29.35	26.51	32.45	25.45
Lane Group LOS	A	B	A	A	B	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.08	3.35	0.64	0.64	5.66	5.64	0.43	2.30	1.02	1.50
50th-Percentile Queue Length [ft/ln]	1.97	83.73	16.00	15.96	141.57	141.05	10.64	57.61	25.44	37.57
95th-Percentile Queue Length [veh/ln]	0.14	6.03	1.15	1.15	9.57	9.54	0.77	4.15	1.83	2.71
95th-Percentile Queue Length [ft/ln]	3.54	150.71	28.81	28.73	239.14	238.44	19.15	103.70	45.78	67.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.61	11.10	8.72	5.78	12.09	12.11	29.35	26.51	26.51	32.45	25.45	25.45
Movement LOS	A	B	A	A	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.73			11.45			26.94			28.03		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.20											
Intersection LOS	B											
Intersection V/C	0.442											

Emissions

Vehicle Miles Traveled [mph]	1.79	61.22	6.87	4.92	21.78	21.65	0.62	3.53	4.96	8.52
Stops [stops/h]	4.04	344.48	32.92	32.83	291.23	290.17	21.89	118.52	52.32	77.29
Fuel consumption [US gal/h]	0.13	7.43	0.73	0.67	5.26	5.24	0.27	1.44	0.82	1.21
CO [g/h]	9.18	519.35	51.22	47.12	367.73	366.39	19.10	100.56	57.33	84.80
NOx [g/h]	1.79	101.05	9.97	9.17	71.55	71.29	3.72	19.57	11.15	16.50
VOC [g/h]	2.13	120.36	11.87	10.92	85.23	84.91	4.43	23.31	13.29	19.65

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	3.025	2.939	2.030	2.192
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	674	674	726	726
d_b, Bicycle Delay [s]	15.38	15.38	14.21	14.21
l_b,int, Bicycle LOS Score for Intersection	2.546	2.982	2.071	2.043
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Market St @ Second St

Control Type:	Two-way stop	Delay (sec / veh):	27.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.070

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	11	700	1035	6	9	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	842	1231	7	11	6
Peak Hour Factor	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	221	324	2	3	2
Total Analysis Volume [veh/h]	14	885	1294	7	12	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.07	0.01
d_M, Delay for Movement [s/veh]	12.00	0.00	0.00	0.00	27.68	15.32
Movement LOS	B	A	A	A	D	C
95th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.00	0.28	0.28
95th-Percentile Queue Length [ft/ln]	2.04	0.00	0.00	0.00	6.89	6.89
d_A, Approach Delay [s/veh]	0.19		0.00		23.56	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.27					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 9: Market St @ Third St

Control Type:	Signalized	Delay (sec / veh):	39.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	557	311	398	606	28	30	133	13	177	104	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	12	101	3	8	0	0	2	5	23	3	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	669	468	472	722	33	35	159	20	232	126	152
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	171	119	120	184	8	9	41	5	59	32	39
Total Analysis Volume [veh/h]	21	683	478	482	737	34	36	162	20	237	129	155
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	46	0	27	62	0	11	16	0	11	16	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.40	5.40	5.40	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.40	3.40	0.00	2.70	0.00	2.70	2.70
g_i, Effective Green Time [s]	68	41	41	68	60	60	22	11	22	14	14
g / C, Green / Cycle	0.68	0.41	0.41	0.68	0.60	0.60	0.22	0.11	0.22	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.04	0.37	0.37	0.56	0.23	0.23	0.03	0.11	0.18	0.08	0.11
s, saturation flow rate [veh/h]	501	1683	1456	867	1683	1657	1166	1651	1292	1683	1431
c, Capacity [veh/h]	400	688	596	539	1016	1001	291	187	274	232	197
d1, Uniform Delay [s]	6.89	27.66	27.76	26.70	10.20	10.20	31.16	44.21	39.04	40.24	41.67
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.32	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	17.24	19.99	19.87	1.09	1.11	0.19	25.25	20.53	2.07	6.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.90	0.91	0.89	0.38	0.38	0.12	0.98	0.87	0.56	0.79
d, Delay for Lane Group [s/veh]	6.95	44.90	47.75	46.57	11.29	11.31	31.35	69.46	59.57	42.31	48.42
Lane Group LOS	A	D	D	D	B	B	C	E	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.13	16.38	14.74	6.88	4.17	4.12	0.70	5.76	6.76	3.07	4.03
50th-Percentile Queue Length [ft/ln]	3.24	409.53	368.42	171.96	104.21	102.90	17.60	143.96	169.02	76.87	100.73
95th-Percentile Queue Length [veh/ln]	0.23	23.02	21.03	11.18	7.50	7.41	1.27	9.69	11.03	5.53	7.25
95th-Percentile Queue Length [ft/ln]	5.83	575.47	525.81	279.49	187.58	185.22	31.67	242.34	275.63	138.36	181.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.95	45.16	47.75	46.57	11.30	11.31	31.35	69.46	69.46	59.57	42.31	48.42
Movement LOS	A	D	D	D	B	B	C	E	E	E	D	D
d_A, Approach Delay [s/veh]	45.53			24.87			63.17			51.98		
Approach LOS	D			C			E			D		
d_I, Intersection Delay [s/veh]	39.64											
Intersection LOS	D											
Intersection V/C	0.764											

Emissions

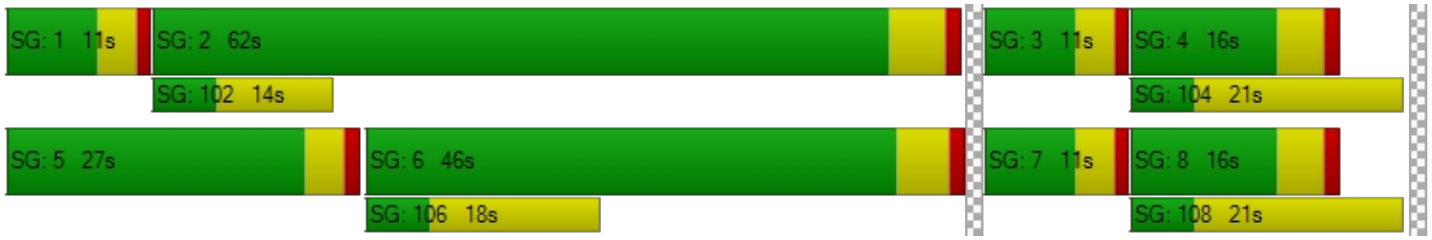
Vehicle Miles Traveled [mph]	0.83	24.48	21.31	36.47	29.38	28.96	0.92	4.67	19.90	10.83	13.01
Stops [stops/h]	4.66	589.73	530.53	247.62	150.07	148.17	25.34	207.30	243.39	110.69	145.04
Fuel consumption [US gal/h]	0.10	11.04	10.05	8.31	3.42	3.37	0.41	3.91	5.04	2.17	2.86
CO [g/h]	6.73	771.67	702.62	580.57	238.97	235.86	28.50	273.29	352.07	151.55	200.20
NOx [g/h]	1.31	150.14	136.70	112.96	46.49	45.89	5.54	53.17	68.50	29.49	38.95
VOC [g/h]	1.56	178.84	162.84	134.55	55.38	54.66	6.60	63.34	81.60	35.12	46.40

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.888	2.868	2.096	2.830
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	818	1132	226	226
d_b, Bicycle Delay [s]	17.46	9.42	39.34	39.34
l_b,int, Bicycle LOS Score for Intersection	2.749	2.808	2.134	2.634
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Market St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	34.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.084

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	22	879	1	5	780	6	9	0	13	0	0	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	5	35	0	0	0	0	0	8	0	120
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	1036	6	41	920	7	11	0	15	8	0	137
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	270	2	11	240	2	3	0	4	2	0	36
Total Analysis Volume [veh/h]	27	1080	6	43	959	7	11	0	16	8	0	143
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.07	0.01	0.00	0.08	0.00	0.03	0.06	0.00	0.30
d_M, Delay for Movement [s/veh]	10.28	0.00	0.00	11.05	0.00	0.00	34.45	34.42	13.75	34.21	35.78	16.88
Movement LOS	B	A	A	B	A	A	D	D	B	D	E	C
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.22	0.00	0.00	0.38	0.38	0.38	1.55	1.55	1.55
95th-Percentile Queue Length [ft/ln]	2.97	0.00	0.00	5.40	0.00	0.00	9.53	9.53	9.53	38.76	38.76	38.76
d_A, Approach Delay [s/veh]	0.25			0.47			22.18			17.80		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.76											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 11: Market St @ Fifth St

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	801	30	82	734	19	14	9	17	19	21	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	69	0	0	8	5	2	0	106	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	944	104	97	865	30	22	13	20	128	28	58
Peak Hour Factor	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840	0.9840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	240	26	25	220	8	6	3	5	33	7	15
Total Analysis Volume [veh/h]	21	959	106	99	879	30	22	13	20	130	28	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	105
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	18	0	5	14	0	5	21	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	19	49	0	11	41	0	11	34	0	11	34	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	80	69	69	80	73	73	15	4	15	8	8
g / C, Green / Cycle	0.76	0.66	0.66	0.76	0.69	0.69	0.15	0.04	0.15	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.03	0.32	0.32	0.17	0.27	0.27	0.02	0.02	0.09	0.02	0.04
s, saturation flow rate [veh/h]	621	1683	1625	598	1683	1663	1325	1520	1451	1683	1431
c, Capacity [veh/h]	503	1110	1072	474	1164	1151	278	64	290	130	110
d1, Uniform Delay [s]	3.89	8.97	8.97	5.10	6.85	6.85	38.75	49.24	41.60	45.47	46.64
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	1.53	1.59	1.00	1.00	1.01	0.12	6.27	1.09	0.82	3.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.49	0.49	0.21	0.39	0.39	0.08	0.52	0.45	0.22	0.53
d, Delay for Lane Group [s/veh]	3.93	10.50	10.56	6.10	7.85	7.86	38.87	55.51	42.69	46.30	50.62
Lane Group LOS	A	B	B	A	A	A	D	E	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.09	5.91	5.72	0.54	4.00	3.96	0.51	0.96	3.23	0.72	1.62
50th-Percentile Queue Length [ft/ln]	2.17	147.68	143.09	13.46	100.04	98.98	12.63	24.12	80.84	18.02	40.39
95th-Percentile Queue Length [veh/ln]	0.16	9.89	9.65	0.97	7.20	7.13	0.91	1.74	5.82	1.30	2.91
95th-Percentile Queue Length [ft/ln]	3.90	247.33	241.18	24.23	180.08	178.16	22.74	43.41	145.51	32.43	72.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.93	10.53	10.56	6.10	7.86	7.86	38.87	55.51	55.51	42.69	46.30	50.62
Movement LOS	A	B	B	A	A	A	D	E	E	D	D	D
d_A, Approach Delay [s/veh]	10.40			7.68			48.85			45.31		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	13.34											
Intersection LOS	B											
Intersection V/C	0.440											

Emissions

Vehicle Miles Traveled [mph]	1.57	40.39	39.01	7.54	34.83	34.43	0.58	0.87	10.98	2.36	4.98
Stops [stops/h]	2.97	202.54	196.24	18.46	137.20	135.74	17.32	33.08	110.87	24.71	55.39
Fuel consumption [US gal/h]	0.10	4.22	4.09	0.55	3.09	3.06	0.27	0.54	2.05	0.46	1.04
CO [g/h]	6.91	295.02	285.72	38.39	215.98	213.63	18.63	37.65	143.16	32.50	72.99
NOx [g/h]	1.34	57.40	55.59	7.47	42.02	41.56	3.62	7.33	27.85	6.32	14.20
VOC [g/h]	1.60	68.37	66.22	8.90	50.06	49.51	4.32	8.73	33.18	7.53	16.92

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	2.801	2.778	2.007	2.324
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	836	684	560	560
d_b, Bicycle Delay [s]	17.78	22.74	27.22	27.22
l_b,int, Bicycle LOS Score for Intersection	2.670	2.606	1.865	2.132
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Market St @ Sixth St

Control Type:	Two-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.129

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	823	36	19	683	42	0	0	49	0	0	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	69	0	0	106	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	1039	42	22	911	50	0	0	58	0	0	57
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9500	0.9500	0.9460	0.9500	0.9500	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	275	11	6	241	13	0	0	15	0	0	15
Total Analysis Volume [veh/h]	41	1098	44	23	963	53	0	0	61	0	0	60
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.00	0.04	0.01	0.00	0.00	0.00	0.12	0.00	0.00	0.13
d_M, Delay for Movement [s/veh]	10.65	0.00	0.00	11.16	0.00	0.00	0.00	0.00	13.01	0.00	0.00	13.91
Movement LOS	B	A	A	B	A	A			B			B
95th-Percentile Queue Length [veh/ln]	0.19	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.44
95th-Percentile Queue Length [ft/ln]	4.81	0.00	0.00	2.95	0.00	0.00	0.00	0.00	10.12	0.00	0.00	11.04
d_A, Approach Delay [s/veh]	0.37			0.25			13.01			13.91		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.99											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 13: Market St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	36.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	101	622	89	72	587	73	219	298	184	66	223	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	49	12	0	75	31	20	5	0	19	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	782	117	85	767	117	278	356	217	97	271	62
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	207	31	22	203	31	73	94	57	26	72	16
Total Analysis Volume [veh/h]	126	827	124	90	811	124	294	376	229	103	286	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	9	21	0	7	21	0	7	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	16	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	16	25	0	22	31	0	11	26	0	12	27	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	0.00	3.10	3.10	0.00	2.60
g_i, Effective Green Time [s]	8	32	32	6	30	30	33	22	22	31	22
g / C, Green / Cycle	0.10	0.37	0.37	0.07	0.35	0.35	0.39	0.26	0.26	0.36	0.26
(v / s)_i Volume / Saturation Flow Rate	0.08	0.29	0.29	0.06	0.28	0.28	0.26	0.22	0.16	0.06	0.22
s, saturation flow rate [veh/h]	1603	1683	1607	1603	1683	1606	1112	1683	1431	1603	1629
c, Capacity [veh/h]	155	628	599	120	591	564	361	442	376	618	426
d1, Uniform Delay [s]	37.64	23.50	23.51	38.55	25.01	25.02	25.46	29.74	27.50	16.84	29.55
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.30	0.13	0.11	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.77	9.05	9.47	9.10	11.45	11.95	18.03	11.73	1.97	0.13	10.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.77	0.78	0.75	0.81	0.81	0.81	0.85	0.61	0.17	0.83
d, Delay for Lane Group [s/veh]	47.40	32.55	32.97	47.65	36.47	36.97	43.48	41.48	29.47	16.96	39.86
Lane Group LOS	D	C	C	D	D	D	D	D	C	B	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.91	9.57	9.21	2.09	10.05	9.67	5.91	8.35	4.10	1.31	7.85
50th-Percentile Queue Length [ft/ln]	72.81	239.29	230.37	52.29	251.29	241.77	147.67	208.82	102.43	32.74	196.16
95th-Percentile Queue Length [veh/ln]	5.24	14.65	14.19	3.76	15.25	14.77	9.89	13.09	7.38	2.36	12.44
95th-Percentile Queue Length [ft/ln]	131.06	366.13	354.83	94.12	381.27	369.27	247.31	327.31	184.38	58.92	311.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.40	32.73	32.97	47.65	36.67	36.97	43.48	41.48	29.47	16.96	39.86	39.86
Movement LOS	D	C	C	D	D	D	D	D	C	B	D	D
d_A, Approach Delay [s/veh]	34.47			37.67			39.07			34.67		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	36.64											
Intersection LOS	D											
Intersection V/C	0.708											

Emissions

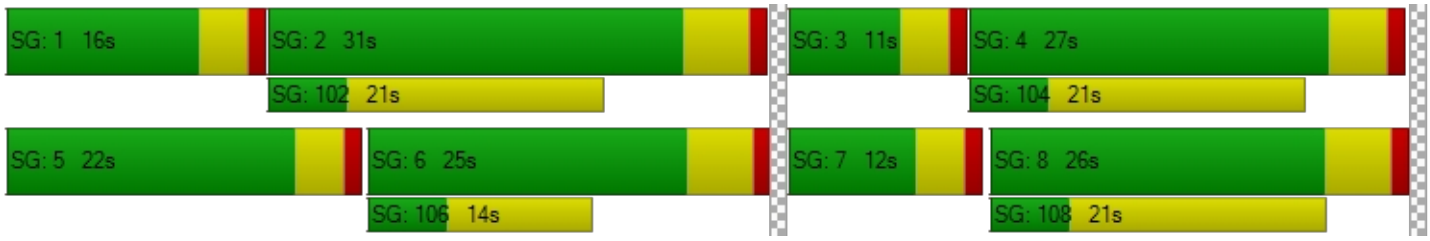
Vehicle Miles Traveled [mph]	9.95	38.40	36.69	7.16	38.04	36.30	67.37	86.16	52.48	16.51	56.41
Stops [stops/h]	123.35	405.38	390.28	88.58	425.71	409.58	250.16	353.76	173.53	55.46	332.32
Fuel consumption [US gal/h]	2.52	7.73	7.45	1.81	8.20	7.90	7.05	9.12	4.68	1.31	6.67
CO [g/h]	176.30	540.60	520.85	126.63	573.31	552.12	492.85	637.36	327.02	91.61	465.97
NOx [g/h]	34.30	105.18	101.34	24.64	111.55	107.42	95.89	124.01	63.63	17.82	90.66
VOC [g/h]	40.86	125.29	120.71	29.35	132.87	127.96	114.22	147.71	75.79	21.23	107.99

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.804	2.925	2.625	2.222
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	468	609	492	527
d_b, Bicycle Delay [s]	24.93	20.55	24.17	23.05
l_b,int, Bicycle LOS Score for Intersection	2.663	2.620	3.257	2.525
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Market St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.640

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	67	609	132	173	632	56	48	400	79	67	278	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	51	0	0	77	17	11	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	769	156	204	822	83	68	472	93	79	328	137
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	209	42	55	223	23	18	128	25	21	89	37
Total Analysis Volume [veh/h]	86	834	169	221	892	90	74	512	101	86	356	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.7	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.7	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	21	27	0	23	29	0	12	17	0	18	23	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.00	4.70	4.70	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.00	2.70	2.70	2.00	2.60	2.60
g_i, Effective Green Time [s]	6	30	30	14	37	37	6	18	18	6	18	18
g / C, Green / Cycle	0.07	0.35	0.35	0.16	0.44	0.44	0.07	0.21	0.21	0.07	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.05	0.26	0.12	0.14	0.28	0.06	0.05	0.19	0.19	0.05	0.16	0.16
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	1683	1588	1603	1683	1518
c, Capacity [veh/h]	116	1114	497	256	1394	622	109	355	335	116	364	328
d1, Uniform Delay [s]	38.63	24.46	20.52	34.79	18.80	14.48	38.69	32.56	32.59	38.65	30.97	31.06
k, delay calibration	0.11	0.50	0.50	0.15	0.50	0.50	0.11	0.18	0.18	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.83	4.63	1.85	11.37	2.26	0.49	7.11	11.79	12.89	8.98	2.77	3.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.75	0.34	0.86	0.64	0.14	0.68	0.89	0.89	0.74	0.72	0.74
d, Delay for Lane Group [s/veh]	47.46	29.09	22.37	46.16	21.07	14.97	45.79	44.35	45.48	47.63	33.74	34.47
Lane Group LOS	D	C	C	D	C	B	D	D	D	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.99	7.65	2.61	5.10	6.76	1.07	1.70	7.25	6.98	2.04	5.23	4.86
50th-Percentile Queue Length [ft/ln]	49.84	191.23	65.32	127.43	168.94	26.66	42.48	181.28	174.48	50.97	130.80	121.45
95th-Percentile Queue Length [veh/ln]	3.59	12.19	4.70	8.80	11.02	1.92	3.06	11.67	11.31	3.67	8.98	8.47
95th-Percentile Queue Length [ft/ln]	89.72	304.63	117.58	220.00	275.52	47.99	76.46	291.69	282.80	91.75	224.58	211.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.46	29.09	22.37	46.16	21.07	14.97	45.79	44.78	45.48	47.63	33.93	34.47
Movement LOS	D	C	C	D	C	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	29.50			25.22			45.00			36.06		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.13											
Intersection LOS	C											
Intersection V/C	0.640											

Emissions

Vehicle Miles Traveled [mph]	6.90	66.92	13.56	17.45	70.42	7.11	16.83	71.55	67.85	13.99	42.88	39.27
Stops [stops/h]	84.44	647.95	110.66	215.89	572.40	45.17	71.96	307.12	295.60	86.35	221.59	205.75
Fuel consumption [US gal/h]	1.73	12.36	2.12	4.36	10.81	0.88	1.78	7.48	7.19	1.79	4.59	4.25
CO [g/h]	120.83	864.05	148.09	305.07	755.87	61.84	124.41	522.97	502.41	125.39	320.73	296.94
NOx [g/h]	23.51	168.11	28.81	59.36	147.07	12.03	24.21	101.75	97.75	24.40	62.40	57.77
VOC [g/h]	28.00	200.25	34.32	70.70	175.18	14.33	28.83	121.20	116.44	29.06	74.33	68.82

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.863	2.880	2.536	2.541
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	515	562	289	433
d_b, Bicycle Delay [s]	23.42	21.96	31.09	26.09
l_b,int, Bicycle LOS Score for Intersection	2.672	2.766	2.341	2.262
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Market St @ Ninth St

Control Type:	Signalized	Delay (sec / veh):	7.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.360

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	751	42	38	717	43	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	51	0	0	77	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	936	50	45	922	51	91
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	252	13	12	249	14	25
Total Analysis Volume [veh/h]	1010	54	49	995	55	98
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	6	24	18	0
Amber [s]	4.1	0.0	3.0	4.1	3.6	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	9	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.1	0.0	2.0	3.1	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30	0	11	41	34	0
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	7	7	7	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	R
C, Calculated Cycle Length [s]	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	0.00	3.10	2.60	2.60
g_i, Effective Green Time [s]	50	50	59	59	7	7
g / C, Green / Cycle	0.67	0.67	0.78	0.78	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.28	0.29	0.07	0.28	0.03	0.06
s, saturation flow rate [veh/h]	1870	1837	669	3560	1781	1589
c, Capacity [veh/h]	1245	1223	584	2773	164	146
d1, Uniform Delay [s]	5.86	5.91	2.85	2.55	31.91	32.96
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.08	1.13	0.28	0.36	1.20	5.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.44	0.08	0.36	0.34	0.67
d, Delay for Lane Group [s/veh]	6.94	7.03	3.14	2.91	33.11	38.21
Lane Group LOS	A	A	A	A	C	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.22	3.25	0.12	1.16	0.98	1.91
50th-Percentile Queue Length [ft/ln]	80.49	81.29	3.00	28.91	24.47	47.85
95th-Percentile Queue Length [veh/ln]	5.80	5.85	0.22	2.08	1.76	3.45
95th-Percentile Queue Length [ft/ln]	144.89	146.33	5.40	52.04	44.05	86.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.98	7.03	3.14	2.91	33.11	38.21
Movement LOS	A	A	A	A	C	D
d_A, Approach Delay [s/veh]	6.99		2.92		36.38	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	7.10					
Intersection LOS	A					
Intersection V/C	0.360					

Emissions

Vehicle Miles Traveled [mph]	39.36	39.36	3.93	79.84	9.07	16.15
Stops [stops/h]	154.54	156.09	5.76	111.02	46.98	91.87
Fuel consumption [US gal/h]	3.41	3.44	0.22	4.47	0.96	1.84
CO [g/h]	238.63	240.16	15.69	312.27	67.00	128.68
NOx [g/h]	46.43	46.73	3.05	60.76	13.04	25.04
VOC [g/h]	55.30	55.66	3.64	72.37	15.53	29.82

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	0.00	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.725	0.000	2.050
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	664	957	784
d_b, Bicycle Delay [s]	16.73	10.19	13.86
l_b,int, Bicycle LOS Score for Intersection	2.652	2.635	1.774
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Market St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.354

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	723	26	60	660	26	34	50	16	24	27	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	43	0	0	66	11	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	895	31	71	844	42	47	59	19	28	32	58
Peak Hour Factor	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	235	8	19	222	11	12	15	5	7	8	15
Total Analysis Volume [veh/h]	18	940	33	75	887	44	49	62	20	29	34	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	6	11	0	6	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	19	0	11	19	0	0	35	0	0	35	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.70	2.70
g_i, Effective Green Time [s]	49	40	40	49	43	43	6	6
g / C, Green / Cycle	0.75	0.61	0.61	0.75	0.66	0.66	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.03	0.26	0.26	0.10	0.25	0.25	0.08	0.07
s, saturation flow rate [veh/h]	698	1870	1848	756	1870	1839	1702	1769
c, Capacity [veh/h]	607	1135	1122	641	1228	1208	247	246
d1, Uniform Delay [s]	2.68	6.79	6.79	3.06	5.11	5.11	28.43	28.29
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.20	1.21	0.37	0.90	0.92	1.76	1.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.43	0.43	0.12	0.38	0.38	0.53	0.50
d, Delay for Lane Group [s/veh]	2.70	7.99	8.00	3.43	6.02	6.03	30.19	29.89
Lane Group LOS	A	A	A	A	A	A	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.03	3.00	2.97	0.18	2.23	2.19	2.02	1.89
50th-Percentile Queue Length [ft/ln]	0.72	75.03	74.25	4.40	55.64	54.84	50.43	47.32
95th-Percentile Queue Length [veh/ln]	0.05	5.40	5.35	0.32	4.01	3.95	3.63	3.41
95th-Percentile Queue Length [ft/ln]	1.30	135.06	133.65	7.92	100.14	98.72	90.77	85.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.70	8.00	8.00	3.43	6.02	6.03	30.19	30.19	30.19	29.89	29.89	29.89
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.90			5.83			30.19			29.89		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.48											
Intersection LOS	A											
Intersection V/C	0.354											

Emissions

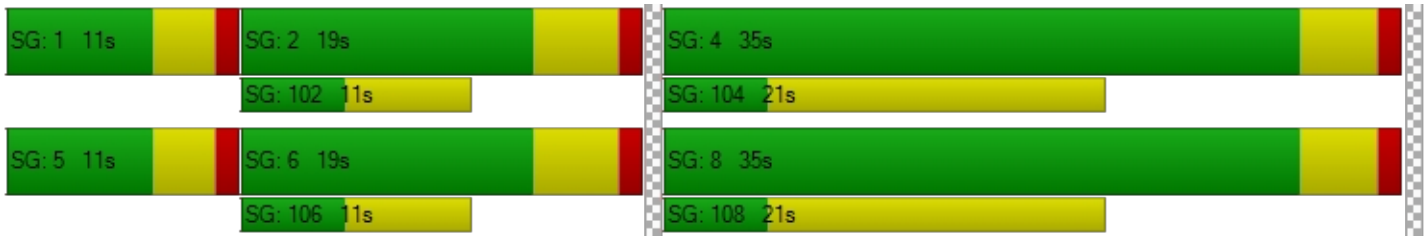
Vehicle Miles Traveled [mph]	1.36	36.92	36.48	5.55	34.73	34.15	3.41	20.70
Stops [stops/h]	1.60	166.22	164.49	9.75	123.26	121.50	111.72	104.84
Fuel consumption [US gal/h]	0.07	3.45	3.42	0.34	2.83	2.78	1.56	2.19
CO [g/h]	5.15	241.38	238.74	23.57	197.49	194.48	109.23	152.78
NOx [g/h]	1.00	46.96	46.45	4.59	38.42	37.84	21.25	29.73
VOC [g/h]	1.19	55.94	55.33	5.46	45.77	45.07	25.32	35.41

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.764	2.822	1.828	1.911
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	428	428	932	932
d_b, Bicycle Delay [s]	20.09	20.09	9.26	9.26
l_b,int, Bicycle LOS Score for Intersection	2.592	2.604	1.990	1.979
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Market St @ 11th St

Control Type:	Two-way stop	Delay (sec / veh):	57.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.070

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	733	4	3	699	7	7	0	40	4	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	43	0	0	66	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	907	5	4	890	8	8	0	47	5	0	24
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	248	1	1	243	2	2	0	13	1	0	7
Total Analysis Volume [veh/h]	14	992	5	4	974	9	9	0	51	5	0	26
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.12	0.00	0.10	0.07	0.00	0.05
d_M, Delay for Movement [s/veh]	10.26	0.00	0.00	10.25	0.00	0.00	55.52	71.97	15.39	56.97	70.54	13.84
Movement LOS	B	A	A	B	A	A	F	F	C	F	F	B
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.02	0.00	0.00	0.80	0.80	0.80	0.40	0.40	0.40
95th-Percentile Queue Length [ft/ln]	1.53	0.00	0.00	0.44	0.00	0.00	19.97	19.97	19.97	10.07	10.07	10.07
d_A, Approach Delay [s/veh]	0.14			0.04			21.41			20.80		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.01											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 18: Market St @ 12th St

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.403

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	625	12	32	705	14	34	38	65	19	14	71
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	0	0	55	11	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	773	14	38	886	28	47	45	77	22	17	84
Peak Hour Factor	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120	0.9120
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	212	4	10	243	8	13	12	21	6	5	23
Total Analysis Volume [veh/h]	20	848	15	42	971	31	52	49	84	24	19	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	14	0	8	11	0	0	21	0	0	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	6	0	0	16	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	11	27	0	0	22	0	0	22	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	33	33	41	35	35	9	9	9
g / C, Green / Cycle	0.68	0.56	0.56	0.68	0.58	0.58	0.16	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.03	0.23	0.23	0.05	0.27	0.27	0.13	0.03	0.06
s, saturation flow rate [veh/h]	682	1870	1859	795	1870	1850	1429	1384	1589
c, Capacity [veh/h]	557	1039	1033	636	1087	1075	301	311	250
d1, Uniform Delay [s]	3.82	7.71	7.71	3.69	7.20	7.20	24.60	21.82	22.63
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	1.23	1.24	0.20	1.42	1.44	2.03	0.20	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.42	0.42	0.07	0.46	0.46	0.61	0.14	0.37
d, Delay for Lane Group [s/veh]	3.85	8.94	8.95	3.89	8.62	8.64	26.63	22.02	23.53
Lane Group LOS	A	A	A	A	A	A	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.05	2.78	2.76	0.13	3.10	3.07	2.60	0.52	1.17
50th-Percentile Queue Length [ft/ln]	1.22	69.43	69.07	3.26	77.50	76.79	65.09	12.96	29.36
95th-Percentile Queue Length [veh/ln]	0.09	5.00	4.97	0.23	5.58	5.53	4.69	0.93	2.11
95th-Percentile Queue Length [ft/ln]	2.19	124.98	124.32	5.87	139.51	138.21	117.17	23.33	52.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.85	8.94	8.95	3.89	8.63	8.64	26.63	26.63	26.63	22.02	22.02	23.53
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.83			8.44			26.63			23.05		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.97											
Intersection LOS	B											
Intersection V/C	0.403											

Emissions

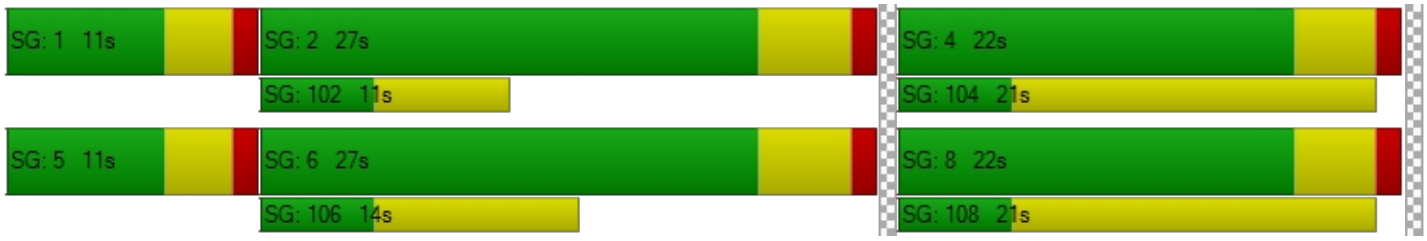
Vehicle Miles Traveled [mph]	1.50	32.49	32.29	3.16	37.86	37.45	5.43	1.28	2.75
Stops [stops/h]	2.92	166.64	165.76	7.82	186.01	184.29	156.22	31.10	70.47
Fuel consumption [US gal/h]	0.09	3.28	3.26	0.21	3.73	3.69	1.85	0.37	0.83
CO [g/h]	6.63	229.20	227.93	14.85	260.46	257.91	129.03	25.84	58.33
NOx [g/h]	1.29	44.59	44.35	2.89	50.68	50.18	25.11	5.03	11.35
VOC [g/h]	1.54	53.12	52.83	3.44	60.37	59.77	29.90	5.99	13.52

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.761	2.818	1.817	2.021
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	730	730	580	580
d_b, Bicycle Delay [s]	12.10	12.10	15.12	15.12
l_b,int, Bicycle LOS Score for Intersection	2.502	2.635	2.079	1.997
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Market St @ 13th St

Control Type:	Two-way stop	Delay (sec / veh):	79.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.202

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	603	15	28	742	8	4	9	53	2	4	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	0	0	55	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	747	18	33	930	9	5	11	62	2	5	60
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	205	5	9	256	2	1	3	17	1	1	17
Total Analysis Volume [veh/h]	8	822	20	36	1023	10	6	12	68	2	6	66
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.05	0.01	0.00	0.10	0.20	0.14	0.03	0.10	0.11
d_M, Delay for Movement [s/veh]	10.45	0.00	0.00	9.78	0.00	0.00	77.93	79.12	25.59	67.17	69.12	15.07
Movement LOS	B	A	A	A	A	A	F	F	D	F	F	C
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.14	0.00	0.00	2.03	2.03	2.03	0.95	0.95	0.95
95th-Percentile Queue Length [ft/ln]	0.91	0.00	0.00	3.58	0.00	0.00	50.68	50.68	50.68	23.72	23.72	23.72
d_A, Approach Delay [s/veh]	0.10			0.33			36.71			20.86		
Approach LOS	A			A			E			C		
d_I, Intersection Delay [s/veh]	2.47											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 20: Market St / Magnolia Ave @ 14th St

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	465	151	150	593	37	66	408	49	176	446	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	18	0	17	28	11	7	0	0	0	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	566	178	194	727	55	85	481	58	208	526	111
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	154	49	53	198	15	23	131	16	57	143	30
Total Analysis Volume [veh/h]	68	617	194	212	793	60	93	525	63	227	574	121
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	7	21	0	7	21	0	7	24	0	7	24	0
Amber [s]	3.0	4.4	0.0	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	19	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.4	0.0	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	27	0	22	38	0	28	18	0	23	13	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	5.40	5.40	4.00	5.10	5.10	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.40	3.40	2.00	3.10	3.10	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	6	29	29	13	36	36	6	16	16	13	23	23
g / C, Green / Cycle	0.06	0.32	0.32	0.14	0.40	0.40	0.07	0.18	0.18	0.15	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.04	0.17	0.12	0.12	0.22	0.04	0.05	0.16	0.16	0.13	0.19	0.19
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1781	1870	1801	1781	1870	1759
c, Capacity [veh/h]	113	1148	512	250	1433	640	128	342	329	265	486	457
d1, Uniform Delay [s]	41.02	24.99	23.54	37.75	20.68	16.70	40.91	35.78	35.81	37.35	30.48	30.48
k, delay calibration	0.11	0.50	0.50	0.14	0.50	0.50	0.11	0.13	0.13	0.14	0.19	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.00	1.81	2.12	9.59	1.55	0.29	7.68	8.51	9.07	10.02	3.85	4.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.54	0.38	0.85	0.55	0.09	0.73	0.88	0.88	0.86	0.74	0.74
d, Delay for Lane Group [s/veh]	46.01	26.80	25.66	47.34	22.22	16.99	48.59	44.30	44.88	47.37	34.32	34.56
Lane Group LOS	D	C	C	D	C	B	D	D	D	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.58	5.37	3.31	5.09	6.34	0.79	2.25	6.97	6.79	5.46	7.33	6.92
50th-Percentile Queue Length [ft/ln]	39.41	134.14	82.72	127.24	158.61	19.74	56.16	174.29	169.70	136.62	183.14	173.01
95th-Percentile Queue Length [veh/ln]	2.84	9.16	5.96	8.79	10.48	1.42	4.04	11.30	11.06	9.30	11.76	11.23
95th-Percentile Queue Length [ft/ln]	70.94	229.11	148.90	219.74	261.88	35.53	101.08	282.54	276.52	232.47	294.11	280.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.01	26.80	25.66	47.34	22.22	16.99	48.59	44.55	44.88	47.37	34.41	34.56
Movement LOS	D	C	C	D	C	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	28.04			26.93			45.13			37.62		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.48											
Intersection LOS	C											
Intersection V/C	0.580											

Emissions

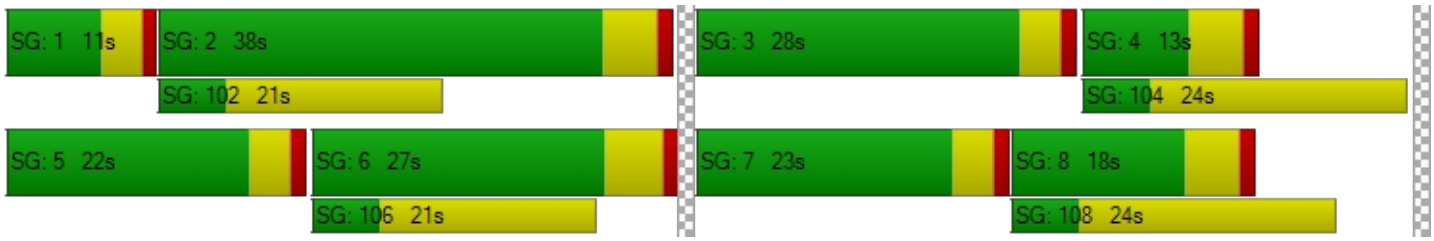
Vehicle Miles Traveled [mph]	2.57	23.31	7.33	16.23	60.69	4.59	3.65	11.74	11.35	8.42	13.29	12.50
Stops [stops/h]	63.06	429.24	132.36	203.59	507.54	31.58	89.85	278.86	271.52	218.59	293.02	276.82
Fuel consumption [US gal/h]	1.35	8.42	2.58	4.19	9.72	0.62	1.73	5.24	5.11	4.15	5.21	4.93
CO [g/h]	94.24	588.35	180.05	293.00	679.20	43.34	121.24	366.31	357.40	290.29	364.30	344.44
NOx [g/h]	18.34	114.47	35.03	57.01	132.15	8.43	23.59	71.27	69.54	56.48	70.88	67.02
VOC [g/h]	21.84	136.36	41.73	67.91	157.41	10.05	28.10	84.90	82.83	67.28	84.43	79.83

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.879	2.814	2.616	2.723
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	731	287	176
d_b, Bicycle Delay [s]	25.99	18.11	33.02	37.45
l_b,int, Bicycle LOS Score for Intersection	2.499	2.653	2.336	2.535
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Brockton Ave @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	148	101	74	2	94	19	19	570	121	65	297	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	25	0	0	39	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	174	119	87	2	111	22	22	697	143	77	389	22
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	31	23	1	29	6	6	182	37	20	102	6
Total Analysis Volume [veh/h]	182	124	91	2	116	23	23	729	150	81	407	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	21	0	0	21	0	10	18	0	9	17	0
Amber [s]	0.0	4.1	0.0	0.0	3.6	0.0	3.0	4.1	0.0	3.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	2.6	0.0	2.0	3.1	0.0	2.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	18	0	0	18	0	30	36	0	11	17	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	4.60	4.00	5.10	5.10	4.00	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10	0.00	2.00	3.10	3.10	2.00	3.10	3.10
g_i, Effective Green Time [s]	13	13	13	13	2	33	33	5	35	35
g / C, Green / Cycle	0.20	0.20	0.20	0.21	0.04	0.50	0.50	0.08	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.15	0.07	0.06	0.08	0.01	0.24	0.24	0.05	0.12	0.12
s, saturation flow rate [veh/h]	1250	1870	1589	1814	1781	1870	1761	1781	1870	1835
c, Capacity [veh/h]	237	371	315	374	70	935	881	148	1017	998
d1, Uniform Delay [s]	26.54	22.36	22.15	22.20	30.38	10.71	10.72	28.63	7.66	7.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.18	0.52	0.50	0.63	2.67	1.79	1.90	3.15	0.48	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.33	0.29	0.38	0.33	0.48	0.48	0.55	0.21	0.21
d, Delay for Lane Group [s/veh]	31.72	22.89	22.65	22.83	33.05	12.51	12.62	31.78	8.13	8.15
Lane Group LOS	C	C	C	C	C	B	B	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.92	1.56	1.14	1.85	0.38	4.00	3.79	1.27	1.39	1.37
50th-Percentile Queue Length [ft/ln]	73.05	39.07	28.51	46.25	9.61	99.92	94.79	31.76	34.63	34.21
95th-Percentile Queue Length [veh/ln]	5.26	2.81	2.05	3.33	0.69	7.19	6.83	2.29	2.49	2.46
95th-Percentile Queue Length [ft/ln]	131.49	70.33	51.32	83.24	17.30	179.85	170.63	57.17	62.33	61.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.72	22.89	22.65	22.83	22.83	22.83	33.05	12.55	12.62	31.78	8.14	8.15
Movement LOS	C	C	C	C	C	C	C	B	B	C	A	A
d_A, Approach Delay [s/veh]	26.88			22.83			13.08			11.89		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.28											
Intersection LOS	B											
Intersection V/C	0.433											

Emissions

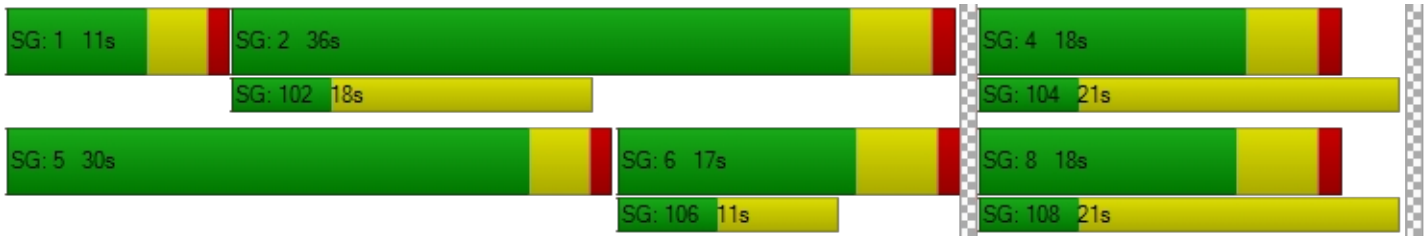
Vehicle Miles Traveled [mph]	14.83	10.10	7.41	3.88	0.73	14.29	13.46	18.56	49.63	48.91
Stops [stops/h]	161.83	86.57	63.16	102.45	21.29	221.36	210.00	70.36	76.72	75.79
Fuel consumption [US gal/h]	2.96	1.61	1.18	1.22	0.34	3.36	3.19	1.76	2.83	2.79
CO [g/h]	206.69	112.80	82.27	85.45	23.94	234.99	222.80	123.07	197.62	194.90
NOx [g/h]	40.21	21.95	16.01	16.63	4.66	45.72	43.35	23.94	38.45	37.92
VOC [g/h]	47.90	26.14	19.07	19.80	5.55	54.46	51.64	28.52	45.80	45.17

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.12	24.12	24.12	24.12
l_p,int, Pedestrian LOS Score for Intersectio	2.328	1.826	2.888	2.781
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	397	412	951	366
d_b, Bicycle Delay [s]	20.88	20.48	8.94	21.69
l_b,int, Bicycle LOS Score for Intersection	2.429	2.007	2.518	2.196
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Brockton Ave @ University Ave

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	184	299	68	37	237	5	6	329	184	44	284	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	11	0	0	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	217	353	80	44	279	6	7	399	217	52	352	27
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	93	21	12	73	2	2	105	57	14	92	7
Total Analysis Volume [veh/h]	228	370	84	46	293	6	7	419	228	55	369	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	8	18	0	5	15	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	4.4	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	3.4	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	19	0	11	19	0	26	32	0	13	19	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	4.00	5.40	5.40	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	2.00	3.40	3.40	2.00	2.70	2.70
g_i, Effective Green Time [s]	25	16	16	25	14	1	31	31	5	35	35
g / C, Green / Cycle	0.33	0.22	0.22	0.33	0.18	0.01	0.41	0.41	0.06	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.17	0.20	0.05	0.04	0.16	0.00	0.18	0.18	0.03	0.11	0.11
s, saturation flow rate [veh/h]	1335	1870	1589	1153	1863	1781	1870	1652	1781	1870	1824
c, Capacity [veh/h]	416	410	348	342	342	26	771	681	114	880	859
d1, Uniform Delay [s]	20.45	28.50	24.14	18.75	29.77	36.54	15.85	15.89	33.89	11.76	11.77
k, delay calibration	0.50	0.20	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.14	12.58	0.35	0.18	7.00	5.20	1.84	2.13	3.13	0.60	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.90	0.24	0.13	0.87	0.26	0.44	0.45	0.48	0.23	0.23
d, Delay for Lane Group [s/veh]	25.58	41.09	24.49	18.93	36.76	41.74	17.69	18.03	37.02	12.36	12.39
Lane Group LOS	C	D	C	B	D	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.43	7.50	1.20	0.53	5.61	0.16	4.11	3.74	1.04	1.97	1.94
50th-Percentile Queue Length [ft/ln]	85.67	187.47	30.02	13.21	140.33	3.98	102.86	93.53	26.06	49.20	48.47
95th-Percentile Queue Length [veh/ln]	6.17	11.99	2.16	0.95	9.50	0.29	7.41	6.73	1.88	3.54	3.49
95th-Percentile Queue Length [ft/ln]	154.21	299.75	54.03	23.78	237.47	7.16	185.16	168.36	46.90	88.57	87.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.58	41.09	24.49	18.93	36.76	36.76	41.74	17.75	18.03	37.02	12.38	12.39
Movement LOS	C	D	C	B	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	33.86			34.38			18.11			15.38		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	25.20											
Intersection LOS	C											
Intersection V/C	0.477											

Emissions

Vehicle Miles Traveled [mph]	8.12	13.17	2.99	3.75	24.36	0.20	9.70	8.68	12.51	45.54	44.74
Stops [stops/h]	164.49	359.95	57.63	25.37	269.44	7.64	197.50	179.59	50.03	94.47	93.07
Fuel consumption [US gal/h]	2.73	6.30	0.97	0.51	5.19	0.14	3.52	3.20	1.21	2.90	2.85
CO [g/h]	191.07	440.55	67.53	35.71	362.90	9.90	245.85	223.41	84.27	202.75	199.37
NOx [g/h]	37.17	85.71	13.14	6.95	70.61	1.93	47.83	43.47	16.40	39.45	38.79
VOC [g/h]	44.28	102.10	15.65	8.28	84.10	2.29	56.98	51.78	19.53	46.99	46.21

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.481	2.217	2.687	2.504
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	371	371	709	381
d_b, Bicycle Delay [s]	24.89	24.89	15.62	24.56
l_b,int, Bicycle LOS Score for Intersection	2.899	2.343	2.314	2.147
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Orange St @ Third St

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	57	0	48	0	0	16	0	953	40	18	480	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	29	0	6	0	0	0	0	22	62	4	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	0	63	0	0	19	0	1146	109	25	580	110
Peak Hour Factor	0.9270	0.9500	0.9270	0.9500	0.9500	0.9270	0.9500	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	0	17	0	0	5	0	309	29	7	156	30
Total Analysis Volume [veh/h]	104	0	68	0	0	20	0	1236	118	27	626	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	14	0	8	26	0
Amber [s]	3.6	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	16	0	0	0	0	26	0	37	0	11	48	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	7	7	3	59	59	66	66
g / C, Green / Cycle	0.08	0.08	0.03	0.65	0.65	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.06	0.04	0.01	0.36	0.37	0.05	0.41
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1814	517	1819
c, Capacity [veh/h]	143	127	51	1216	1180	408	1334
d1, Uniform Delay [s]	40.45	39.79	42.68	8.62	8.78	5.69	5.42
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.97	3.46	4.78	1.84	2.03	0.07	1.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.53	0.39	0.56	0.57	0.07	0.56
d, Delay for Lane Group [s/veh]	47.42	43.24	47.47	10.46	10.81	5.76	7.11
Lane Group LOS	D	D	D	B	B	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.52	1.57	0.50	6.81	6.96	0.11	5.37
50th-Percentile Queue Length [ft/ln]	63.07	39.18	12.62	170.19	174.04	2.77	134.29
95th-Percentile Queue Length [veh/ln]	4.54	2.82	0.91	11.09	11.29	0.20	9.17
95th-Percentile Queue Length [ft/ln]	113.53	70.53	22.71	277.17	282.22	4.98	229.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.42	0.00	43.24	0.00	0.00	47.47	0.00	10.62	10.81	5.76	7.11	7.11
Movement LOS	D		D			D		B	B	A	A	A
d_A, Approach Delay [s/veh]	45.77			47.47			10.64			7.07		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	12.37											
Intersection LOS	B											
Intersection V/C	0.481											

Emissions

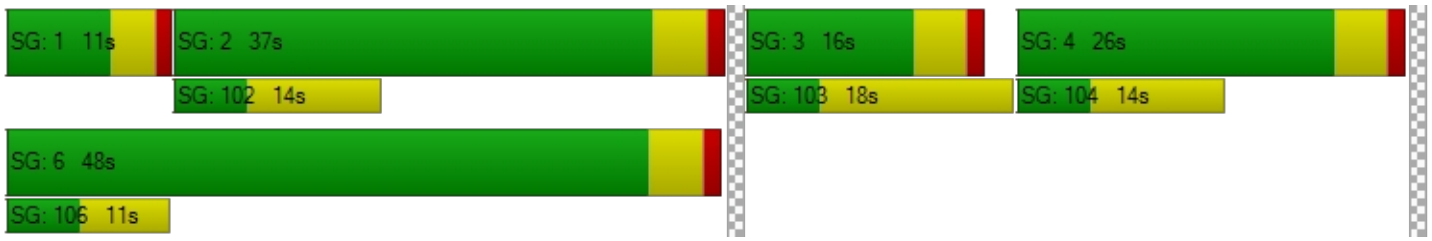
Vehicle Miles Traveled [mph]	7.80	5.10	0.49	51.83	51.83	4.07	112.37
Stops [stops/h]	100.92	62.69	20.19	272.31	278.46	4.43	214.87
Fuel consumption [US gal/h]	1.74	1.07	0.29	5.08	5.16	0.22	6.89
CO [g/h]	121.72	74.67	20.45	355.09	360.78	15.64	481.73
NOx [g/h]	23.68	14.53	3.98	69.09	70.19	3.04	93.73
VOC [g/h]	28.21	17.30	4.74	82.29	83.61	3.62	111.65

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.053	1.773	2.626	2.639
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	253	476	718	962
d_b, Bicycle Delay [s]	34.32	26.14	18.50	12.12
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.891	3.048
Bicycle LOS	A	A	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 24: Orange St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	97	6	7	52	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	65	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	148	7	8	126	6	9
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	2	3	39	2	3
Total Analysis Volume [veh/h]	185	9	10	158	8	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.63	0.00	10.86	9.35
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.55	0.00	1.97	1.97
d_A, Approach Delay [s/veh]	0.00		0.45		9.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.70					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 25: Orange St @ Fifth St

Control Type:	All-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	38	3	5	46	7	46	66	35	2	56	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	91	48	0	0	74	45	1	50	140	0	33	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	93	4	6	128	53	55	128	181	2	99	24
Peak Hour Factor	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	28	1	2	39	16	17	39	55	1	30	7
Total Analysis Volume [veh/h]	129	114	5	7	157	65	67	157	222	2	121	29
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	497	537	495	548	664	586
Degree of Utilization, x	0.26	0.22	0.01	0.40	0.67	0.26

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.03	0.84	0.04	1.95	5.16	1.03
95th-Percentile Queue Length [ft]	25.76	21.04	1.08	48.68	128.99	25.79
Approach Delay [s/veh]	11.92		13.55		18.78	11.28
Approach LOS	B		B		C	B
Intersection Delay [s/veh]	15.02					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 26: Orange St @ Sixth St

Control Type:	All-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	40	39	20	9	58	11	15	38	21	7	28	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	214	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	186	24	11	282	13	18	45	25	8	33	7
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	51	7	3	78	4	5	12	7	2	9	2
Total Analysis Volume [veh/h]	52	206	27	12	312	14	20	50	28	9	37	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	570	628	614	672	773	598	581
Degree of Utilization, x	0.09	0.37	0.02	0.46	0.02	0.16	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.30	1.71	0.06	2.47	0.06	0.58	0.31
95th-Percentile Queue Length [ft]	7.50	42.80	1.49	61.64	1.38	14.58	7.64
Approach Delay [s/veh]	11.40		12.26			10.21	9.82
Approach LOS	B		B			B	A
Intersection Delay [s/veh]	11.51						
Intersection LOS	B						

Intersection Level Of Service Report
Intersection 27: Orange St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	26	22	18	55	29	42	393	49	52	315	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	0	89	98	27	17	0	0	0	0	118
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	36	26	110	163	61	67	463	58	61	371	147
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	9	7	28	42	16	17	119	15	16	96	38
Total Analysis Volume [veh/h]	15	37	27	113	168	63	69	477	60	63	382	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	18	0	0	18	0	11	18	0	7	14	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	13	0	0	9	0	0	13	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	22	0	0	22	0	11	27	0	11	27	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	0.00	2.60
g_i, Effective Green Time [s]	11	11	11	11	40	31	40	31
g / C, Green / Cycle	0.18	0.18	0.18	0.18	0.66	0.52	0.66	0.51
(v / s)_i Volume / Saturation Flow Rate	0.01	0.04	0.09	0.14	0.07	0.33	0.07	0.33
s, saturation flow rate [veh/h]	1034	1566	1204	1606	926	1650	919	1602
c, Capacity [veh/h]	154	288	277	295	572	855	574	824
d1, Uniform Delay [s]	28.49	20.84	25.02	23.35	6.05	10.33	5.88	10.61
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	0.39	0.96	4.55	0.43	3.49	0.08	3.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.22	0.41	0.78	0.12	0.63	0.11	0.65
d, Delay for Lane Group [s/veh]	28.77	21.23	25.98	27.90	6.48	13.82	5.96	14.54
Lane Group LOS	C	C	C	C	A	B	A	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.22	0.76	1.55	3.32	0.28	5.10	0.21	5.24
50th-Percentile Queue Length [ft/ln]	5.41	19.02	38.71	83.11	7.06	127.41	5.20	131.08
95th-Percentile Queue Length [veh/ln]	0.39	1.37	2.79	5.98	0.51	8.80	0.37	9.00
95th-Percentile Queue Length [ft/ln]	9.74	34.24	69.68	149.60	12.71	219.97	9.35	224.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.77	21.23	21.23	25.98	27.90	27.90	6.48	13.82	13.82	5.96	14.54	14.54
Movement LOS	C	C	C	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	22.66			27.27			12.98			13.63		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.71											
Intersection LOS	B											
Intersection V/C	0.497											

Emissions

Vehicle Miles Traveled [mph]	1.21	5.17	8.90	18.19	11.06	86.05	9.43	79.90
Stops [stops/h]	12.99	45.65	92.90	199.47	16.95	305.78	12.47	314.60
Fuel consumption [US gal/h]	0.19	0.68	1.35	2.89	0.65	6.55	0.55	6.38
CO [g/h]	13.43	47.83	94.64	202.34	45.66	458.07	38.32	445.96
NOx [g/h]	2.61	9.31	18.41	39.37	8.88	89.12	7.46	86.77
VOC [g/h]	3.11	11.09	21.93	46.89	10.58	106.16	8.88	103.36

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.236	2.138	2.231	2.519
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	580	747	747
d_b, Bicycle Delay [s]	15.12	15.12	11.78	11.78
l_b,int, Bicycle LOS Score for Intersection	1.904	2.342	2.774	2.759
Bicycle LOS	A	B	C	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Orange St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.390

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	34	99	38	21	633	53	46	432	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	0	0	98	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	0	40	215	45	25	746	62	54	509	32
Peak Hour Factor	0.9500	0.9500	0.9500	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	11	60	13	7	208	17	15	142	9
Total Analysis Volume [veh/h]	0	5	0	45	240	50	28	833	69	60	568	36
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	0	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	21	0	8	14	0	8	14	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	16	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	28	0	11	21	0	11	21	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	7	7	0	7	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall					No		No	No		No	No	
Maximum Recall					No		No	No		No	No	
Pedestrian Recall					No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]		60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]		9	9	42	34	34	42	36	36
g / C, Green / Cycle		0.14	0.14	0.70	0.56	0.56	0.70	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate		0.10	0.10	0.03	0.27	0.27	0.08	0.18	0.18
s, saturation flow rate [veh/h]		1661	1598	831	1683	1638	717	1683	1648
c, Capacity [veh/h]		241	232	676	943	918	574	993	973
d1, Uniform Delay [s]		24.42	24.46	3.09	7.95	7.95	3.92	6.15	6.15
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.72	4.07	0.12	1.78	1.83	0.08	0.80	0.82
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.70	0.71	0.04	0.48	0.48	0.10	0.31	0.31
d, Delay for Lane Group [s/veh]		28.14	28.54	3.21	9.73	9.78	4.00	6.95	6.97
Lane Group LOS		C	C	A	A	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.44	2.41	0.09	3.38	3.30	0.16	1.76	1.74
50th-Percentile Queue Length [ft/ln]		60.96	60.18	2.18	84.50	82.56	3.90	44.08	43.39
95th-Percentile Queue Length [veh/ln]		4.39	4.33	0.16	6.08	5.94	0.28	3.17	3.12
95th-Percentile Queue Length [ft/ln]		109.72	108.32	3.92	152.10	148.61	7.02	79.35	78.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.14	28.33	28.54	3.21	9.76	9.78	4.00	6.96	6.97
Movement LOS				C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			28.33			9.56			6.69		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	11.83											
Intersection LOS	B											
Intersection V/C	0.390											

Emissions

Vehicle Miles Traveled [mph]		13.69	13.39	4.55	74.35	72.38	9.01	45.76	44.90
Stops [stops/h]		146.30	144.43	5.23	202.80	198.15	9.36	105.80	104.14
Fuel consumption [US gal/h]		2.15	2.12	0.24	5.03	4.90	0.49	2.89	2.84
CO [g/h]		150.07	148.06	17.00	351.39	342.56	34.23	202.35	198.74
NOx [g/h]		29.20	28.81	3.31	68.37	66.65	6.66	39.37	38.67
VOC [g/h]		34.78	34.31	3.94	81.44	79.39	7.93	46.90	46.06

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.092	2.054	2.532	2.531
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	780	547	547
d_b, Bicycle Delay [s]	30.00	11.16	15.84	15.84
l_b,int, Bicycle LOS Score for Intersection	4.132	2.050	2.541	2.322
Bicycle LOS	D	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Orange St @ Tenth St

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.322

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	45	61	37	0	201	16	7	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	98	0	0	0	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	151	72	44	0	237	19	8	62	5
Peak Hour Factor	0.9500	0.9500	0.9500	0.7720	0.7720	0.7720	0.9500	0.7720	0.7720	0.7720	0.7720	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	49	23	14	0	77	6	3	20	1
Total Analysis Volume [veh/h]	0	0	0	196	93	57	0	307	25	10	80	5
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	0	0	0	14	0	0	18	0	0	18	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	6	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	0	0	0	31	0	0	19	0	0	19	0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	C	R	C	L	C
C, Calculated Cycle Length [s]		50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.70	2.70	2.70
g_i, Effective Green Time [s]		9	9	9	32	32	32
g / C, Green / Cycle		0.17	0.17	0.17	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.12	0.06	0.04	0.20	0.01	0.05
s, saturation flow rate [veh/h]		1603	1683	1431	1661	943	1683
c, Capacity [veh/h]		276	289	246	1066	608	1081
d1, Uniform Delay [s]		19.53	18.15	17.86	4.00	6.53	3.36
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.39	0.64	0.48	0.76	0.05	0.13
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.71	0.32	0.23	0.31	0.02	0.07
d, Delay for Lane Group [s/veh]		22.92	18.78	18.33	4.76	6.58	3.49
Lane Group LOS		C	B	B	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.24	0.92	0.56	1.08	0.05	0.21
50th-Percentile Queue Length [ft/ln]		55.97	23.09	13.97	27.08	1.26	5.34
95th-Percentile Queue Length [veh/ln]		4.03	1.66	1.01	1.95	0.09	0.38
95th-Percentile Queue Length [ft/ln]		100.74	41.56	25.14	48.74	2.27	9.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	22.92	18.78	18.33	0.00	4.76	4.76	6.58	3.49	0.00
Movement LOS				C	B	B		A	A	A	A	
d_A, Approach Delay [s/veh]	0.00			21.05			4.76			3.84		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	11.99											
Intersection LOS	B											
Intersection V/C	0.322											

Emissions

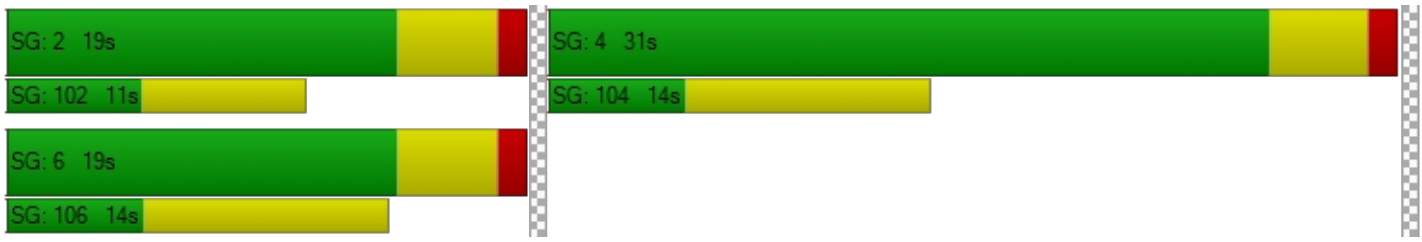
Vehicle Miles Traveled [mph]		14.78	7.01	4.30	55.43	1.46	11.70
Stops [stops/h]		161.18	66.49	40.23	77.99	3.63	15.38
Fuel consumption [US gal/h]		2.20	0.93	0.56	3.03	0.09	0.62
CO [g/h]		153.59	64.72	39.16	212.13	6.55	43.59
NOx [g/h]		29.88	12.59	7.62	41.27	1.27	8.48
VOC [g/h]		35.60	15.00	9.08	49.16	1.52	10.10

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	16.81	16.81	16.81
l_p,int, Pedestrian LOS Score for Intersectio	1.762	2.004	1.914	2.103
Crosswalk LOS	A	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1056	572	572
d_b, Bicycle Delay [s]	25.00	5.57	12.74	12.74
l_b,int, Bicycle LOS Score for Intersection	4.132	2.059	2.322	1.923
Bicycle LOS	D	B	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Lime St @ Third St

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.492

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	144	0	68	0	0	7	0	960	81	108	389	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	28	0	0	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	0	80	0	0	8	0	1160	95	127	477	0
Peak Hour Factor	0.9580	0.9500	0.9580	0.9500	0.9500	0.9580	0.9500	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	0	21	0	0	2	0	303	25	33	124	0
Total Analysis Volume [veh/h]	177	0	84	0	0	8	0	1211	99	133	498	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	0	0	0	0	4	0	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	18	0	0	0	0	14	0	18	0	9	31	0
Amber [s]	3.0	0.0	0.0	0.0	0.0	3.6	0.0	3.7	0.0	3.0	3.7	0.0
All red [s]	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	0	0	5	0	5	0	0	5	0
Pedestrian Clearance [s]	13	0	0	0	0	9	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No					No		No			No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	0.0	2.6	0.0	2.7	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15	0	0	0	0	15	0	48	0	12	60	0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	0	0	0	0	7	0	7	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No					No		No		No	No	
Maximum Recall	No					No		No		No	No	
Pedestrian Recall	No					No		No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	R	C	C	L	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.60	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.60	2.70	2.70	0.00	2.70
g_i, Effective Green Time [s]	11	11	1	54	54	65	65
g / C, Green / Cycle	0.12	0.12	0.01	0.60	0.60	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.10	0.05	0.01	0.35	0.36	0.22	0.27
s, saturation flow rate [veh/h]	1781	1589	1589	1870	1821	605	1870
c, Capacity [veh/h]	213	190	25	1117	1088	453	1341
d1, Uniform Delay [s]	38.74	36.84	43.82	11.22	11.39	7.61	4.91
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.17	1.61	7.20	2.26	2.47	1.64	0.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.44	0.32	0.59	0.60	0.29	0.37
d, Delay for Lane Group [s/veh]	46.91	38.45	51.02	13.48	13.85	9.25	5.70
Lane Group LOS	D	D	D	B	B	A	A
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.20	1.76	0.23	7.92	8.07	0.81	3.12
50th-Percentile Queue Length [ft/ln]	104.95	44.04	5.66	197.88	201.65	20.14	78.10
95th-Percentile Queue Length [veh/ln]	7.56	3.17	0.41	12.53	12.72	1.45	5.62
95th-Percentile Queue Length [ft/ln]	188.91	79.27	10.19	313.22	318.09	36.25	140.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.91	0.00	38.45	0.00	0.00	51.02	0.00	13.65	13.85	9.25	5.70	5.70
Movement LOS	D		D			D		B	B	A	A	A
d_A, Approach Delay [s/veh]	44.19			51.02			13.67			6.45		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15.35											
Intersection LOS	B											
Intersection V/C	0.492											

Emissions

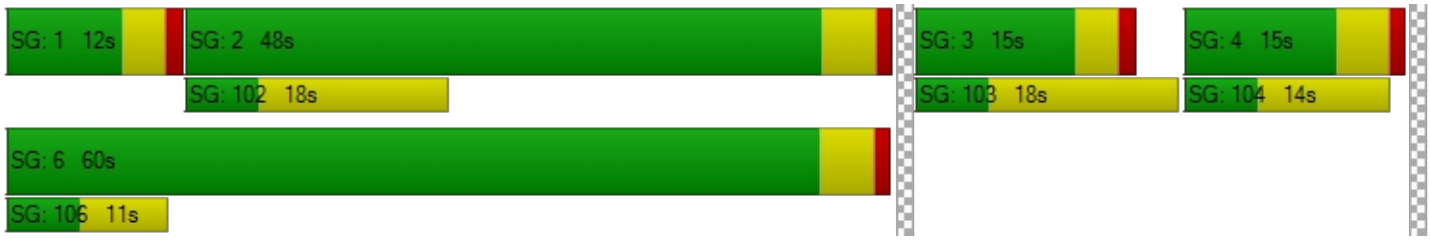
Vehicle Miles Traveled [mph]	13.37	6.35	0.22	98.79	98.79	4.51	16.87
Stops [stops/h]	167.92	70.47	9.06	316.60	322.64	32.22	124.96
Fuel consumption [US gal/h]	3.46	1.43	0.13	7.61	7.70	0.61	1.96
CO [g/h]	242.01	99.90	8.91	532.15	537.97	42.90	137.20
NOx [g/h]	47.09	19.44	1.73	103.54	104.67	8.35	26.69
VOC [g/h]	56.09	23.15	2.07	123.33	124.68	9.94	31.80

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.390	1.720	2.589	2.602
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	244	231	962	1229
d_b, Bicycle Delay [s]	34.67	35.20	12.12	6.69
l_b,int, Bicycle LOS Score for Intersection	1.774	1.774	2.855	2.815
Bicycle LOS	A	A	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Lime St @ Fourth St

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	222	1	2	173	2	3	0	13	3	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	262	1	2	204	2	4	0	15	4	0	2
Peak Hour Factor	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	73	0	1	57	1	1	0	4	1	0	1
Total Analysis Volume [veh/h]	4	292	1	2	227	2	4	0	17	4	0	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.70	0.00	0.00	7.85	0.00	0.00	11.75	13.14	9.05	12.16	13.09	9.18
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.17	0.08	0.00	0.08	0.04	0.00	1.99	1.99	1.99	0.77	0.77	0.77
d_A, Approach Delay [s/veh]	0.10			0.07			9.56			11.17		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	0.57											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 32: Lime St @ Fifth St

Control Type:	Two-way stop	Delay (sec / veh):	20.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.120

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	189	11	2	184	4	10	2	58	26	6	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	33	0	0	0	0	0	0	0	50	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	223	13	2	217	5	12	2	118	31	7	18
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	60	3	1	58	1	3	1	32	8	2	5
Total Analysis Volume [veh/h]	76	240	14	2	233	5	13	2	127	33	8	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.16	0.12	0.02	0.02
d_M, Delay for Movement [s/veh]	7.80	0.00	0.00	7.75	0.00	0.00	16.73	16.18	10.76	20.07	16.81	11.52
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.00	0.00	0.00	0.75	0.75	0.75	0.59	0.59	0.59
95th-Percentile Queue Length [ft/ln]	3.34	3.34	3.34	0.08	0.08	0.08	18.70	18.70	18.70	14.69	14.69	14.69
d_A, Approach Delay [s/veh]	1.80			0.06			11.38			16.92		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	4.20											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 33: Lime St @ Mission Inn Ave

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	183	112	55	276	27	11	355	86	140	355	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	68	18	0	23	27	0	0	76	13	0	50	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	234	132	88	352	32	13	495	114	165	469	198
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	62	35	23	93	8	3	131	30	44	124	52
Total Analysis Volume [veh/h]	119	247	139	93	371	34	14	522	120	174	495	209
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10	21	0	7	18	0	8	21	0	5	18	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.7	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	13	0	0	16	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	12	22	0	11	21	0	11	27	0	20	36	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.70	2.70
g_i, Effective Green Time [s]	24	14	14	24	14	14	2	32	32	10	40	40
g / C, Green / Cycle	0.30	0.17	0.17	0.30	0.17	0.17	0.02	0.40	0.40	0.13	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.10	0.15	0.10	0.08	0.12	0.12	0.01	0.20	0.20	0.11	0.29	0.15
s, saturation flow rate [veh/h]	1137	1683	1431	1136	1683	1634	1603	1683	1576	1603	1683	1431
c, Capacity [veh/h]	371	294	250	346	285	277	39	668	625	210	845	718
d1, Uniform Delay [s]	21.71	31.95	30.19	21.62	31.41	31.44	38.41	18.10	18.13	33.90	14.05	11.62
k, delay calibration	0.26	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.20	6.43	1.94	0.41	3.38	3.56	5.44	2.61	2.82	8.19	2.97	1.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.84	0.56	0.27	0.72	0.72	0.36	0.49	0.50	0.83	0.59	0.29
d, Delay for Lane Group [s/veh]	22.91	38.38	32.13	22.03	34.79	35.00	43.85	20.71	20.96	42.09	17.02	12.64
Lane Group LOS	C	D	C	C	C	D	D	C	C	D	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.72	4.94	2.48	1.27	3.85	3.78	0.33	4.90	4.66	3.69	6.42	2.20
50th-Percentile Queue Length [ft/ln]	43.02	123.38	62.00	31.66	96.14	94.38	8.20	122.45	116.45	92.14	160.59	55.09
95th-Percentile Queue Length [veh/ln]	3.10	8.58	4.46	2.28	6.92	6.80	0.59	8.53	8.20	6.63	10.58	3.97
95th-Percentile Queue Length [ft/ln]	77.43	214.46	111.61	56.98	173.05	169.89	14.76	213.18	204.94	165.85	264.50	99.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.91	38.38	32.13	22.03	34.88	35.00	43.85	20.80	20.96	42.09	17.02	12.64
Movement LOS	C	D	C	C	C	D	D	C	C	D	B	B
d_A, Approach Delay [s/veh]	33.01			32.49			21.32			20.95		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.71											
Intersection LOS	C											
Intersection V/C	0.499											

Emissions

Vehicle Miles Traveled [mph]	9.67	20.08	11.30	7.28	16.03	15.68	2.09	49.45	46.61	8.59	24.44	10.32
Stops [stops/h]	77.43	222.08	111.61	56.98	173.05	169.89	14.76	220.40	209.61	165.85	289.05	99.16
Fuel consumption [US gal/h]	1.51	4.36	2.18	1.12	3.36	3.30	0.28	4.46	4.23	2.76	4.32	1.51
CO [g/h]	105.26	305.08	152.31	78.50	235.03	230.76	19.27	311.90	295.60	192.95	301.80	105.57
NOx [g/h]	20.48	59.36	29.63	15.27	45.73	44.90	3.75	60.68	57.51	37.54	58.72	20.54
VOC [g/h]	24.40	70.71	35.30	18.19	54.47	53.48	4.47	72.29	68.51	44.72	69.94	24.47

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.562	2.402	2.425	2.640
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	398	560	783
d_b, Bicycle Delay [s]	24.89	25.68	20.74	14.82
l_b,int, Bicycle LOS Score for Intersection	2.607	2.185	2.315	3.223
Bicycle LOS	B	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Lime St @ University Ave

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	2	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	26	247	374	102	370	40	8	675	93	202	420	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	0	17	23	0	0	0	0	0	0	83
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	294	441	137	459	47	9	796	110	238	495	171
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	78	117	36	122	13	2	212	29	63	132	45
Total Analysis Volume [veh/h]	33	313	469	146	488	50	10	847	117	253	527	182
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	95
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11	27	0	8	24	0	8	24	0	5	21	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	22	0	0	19	0	0	19	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	2.0	2.6	0.0	2.0	2.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	41	0	11	41	0	17	30	0	13	26	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10	5.10	5.10	5.10	4.00	4.60	4.60	4.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.10	3.10	0.00	3.10	3.10	2.00	2.60	2.60	2.00	2.60	2.60
g_i, Effective Green Time [s]	44	33	33	44	36	36	2	28	28	9	35	35
g / C, Green / Cycle	0.46	0.35	0.35	0.46	0.38	0.38	0.02	0.30	0.30	0.09	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.04	0.10	0.33	0.18	0.16	0.16	0.01	0.26	0.08	0.08	0.22	0.22
s, saturation flow rate [veh/h]	894	3204	1431	821	1683	1629	1603	3204	1431	3113	1683	1537
c, Capacity [veh/h]	430	1118	499	447	637	617	30	951	425	295	627	573
d1, Uniform Delay [s]	14.66	22.31	29.95	15.30	21.88	21.89	46.00	31.92	25.58	42.37	23.97	23.97
k, delay calibration	0.11	0.11	0.34	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	0.14	21.39	0.42	0.46	0.47	6.15	12.30	1.60	7.16	4.06	4.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.28	0.94	0.33	0.43	0.43	0.33	0.89	0.28	0.86	0.59	0.59
d, Delay for Lane Group [s/veh]	14.73	22.45	51.34	15.72	22.34	22.37	52.15	44.22	27.18	49.53	28.03	28.40
Lane Group LOS	B	C	D	B	C	C	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.38	2.46	12.78	1.82	4.41	4.28	0.29	10.78	2.21	3.22	7.30	6.73
50th-Percentile Queue Length [ft/ln]	9.51	61.53	319.59	45.60	110.19	107.07	7.15	269.41	55.37	80.42	182.46	168.14
95th-Percentile Queue Length [veh/ln]	0.69	4.43	18.65	3.28	7.85	7.68	0.51	16.16	3.99	5.79	11.73	10.98
95th-Percentile Queue Length [ft/ln]	17.13	110.76	466.19	82.07	196.27	191.92	12.87	404.00	99.67	144.75	293.22	274.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.73	22.45	51.34	15.72	22.35	22.37	52.15	44.22	27.18	49.53	28.14	28.40
Movement LOS	B	C	D	B	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	38.76			20.94			42.26			33.82		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	34.82											
Intersection LOS	C											
Intersection V/C	0.731											

Emissions

Vehicle Miles Traveled [mph]	2.56	24.28	36.38	11.87	22.19	21.54	1.50	127.14	17.56	18.26	26.75	24.43
Stops [stops/h]	14.42	186.54	484.44	69.11	167.02	162.30	10.84	816.73	83.93	243.79	276.57	254.87
Fuel consumption [US gal/h]	0.30	3.76	9.93	1.44	3.34	3.25	0.22	16.47	1.76	4.31	4.38	4.03
CO [g/h]	21.32	262.70	694.11	100.61	233.69	227.02	15.04	1151.40	122.94	301.02	305.98	281.88
NOx [g/h]	4.15	51.11	135.05	19.58	45.47	44.17	2.93	224.02	23.92	58.57	59.53	54.84
VOC [g/h]	4.94	60.88	160.87	23.32	54.16	52.61	3.49	266.85	28.49	69.77	70.91	65.33

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.93	38.93	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	2.774	2.574	2.690	2.956
Crosswalk LOS	C	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	756	756	535	451
d_b, Bicycle Delay [s]	18.38	18.38	25.50	28.51
l_b,int, Bicycle LOS Score for Intersection	2.446	2.338	2.578	2.568
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Lime St @ Tenth St / SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.695

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	385	54	496	314	23	76	217	58	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	3	0	19	4	0	0	91	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	457	64	604	374	27	90	347	75	0	0	0
Peak Hour Factor	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.8040	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	142	20	188	116	8	28	108	23	0	0	0
Total Analysis Volume [veh/h]	41	568	80	751	465	34	112	432	93	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	6	18	0	6	18	0	0	24	0	0	0	0
Amber [s]	3.0	4.1	0.0	3.0	4.1	0.0	0.0	3.7	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	6	0	0	13	0	0	19	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	3.1	0.0	2.0	3.1	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11	19	0	22	30	0	0	29	0	0	0	0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No			No				
Maximum Recall	No	No		No	No			No				
Pedestrian Recall	No	No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	4.00	5.10	5.10	4.00	5.10	5.10	4.70	4.70	4.70	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	3.10	3.10	2.00	3.10	3.10	2.70	2.70	2.70	
g_i, Effective Green Time [s]	4	18	18	18	32	32	20	20	20	
g / C, Green / Cycle	0.06	0.26	0.26	0.26	0.46	0.46	0.29	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.24	0.15	0.15	0.07	0.26	0.07	
s, saturation flow rate [veh/h]	1603	1683	1611	3113	1683	1643	1603	1683	1431	
c, Capacity [veh/h]	90	435	416	800	773	754	461	484	411	
d1, Uniform Delay [s]	31.98	23.96	23.98	25.46	12.04	12.05	19.11	23.91	19.01	
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.24	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.53	11.82	12.45	6.06	1.12	1.16	0.27	11.87	0.28	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.45	0.76	0.76	0.94	0.33	0.33	0.24	0.89	0.23	
d, Delay for Lane Group [s/veh]	35.51	35.78	36.43	31.52	13.17	13.20	19.38	35.78	19.29	
Lane Group LOS	D	D	D	C	B	B	B	D	B	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.73	6.08	5.91	6.28	2.43	2.39	1.36	7.97	1.12	
50th-Percentile Queue Length [ft/ln]	18.26	151.92	147.79	157.08	60.85	59.68	33.91	199.35	28.08	
95th-Percentile Queue Length [veh/ln]	1.31	10.12	9.90	10.39	4.38	4.30	2.44	12.61	2.02	
95th-Percentile Queue Length [ft/ln]	32.86	252.99	247.48	259.85	109.53	107.43	61.04	315.13	50.55	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.51	36.05	36.43	31.52	13.18	13.20	19.38	35.78	19.29	0.00	0.00	0.00
Movement LOS	D	D	D	C	B	B	B	D	B			
d_A, Approach Delay [s/veh]	36.06			24.20			30.49			0.00		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	28.93											
Intersection LOS	C											
Intersection V/C	0.695											

Emissions

Vehicle Miles Traveled [mph]	1.63	13.10	12.59	55.15	18.52	18.12	16.39	63.20	13.61
Stops [stops/h]	37.56	312.52	304.03	646.25	125.17	122.78	69.76	410.09	57.77
Fuel consumption [US gal/h]	0.64	5.26	5.12	11.78	2.32	2.28	1.50	8.01	1.24
CO [g/h]	44.79	367.37	357.93	823.36	162.41	159.17	104.97	560.12	86.98
NOx [g/h]	8.71	71.48	69.64	160.20	31.60	30.97	20.42	108.98	16.92
VOC [g/h]	10.38	85.14	82.95	190.82	37.64	36.89	24.33	129.81	20.16

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.572	2.808	2.293	2.319
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	397	711	694	0
d_b, Bicycle Delay [s]	22.48	14.53	14.92	35.00
l_b,int, Bicycle LOS Score for Intersection	2.342	2.805	2.825	4.132
Bicycle LOS	B	C	C	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Mission Inn Ave @ SR-91 WB

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	500.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	155	446	0	522	205	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	100	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	580	0	715	253	0
Peak Hour Factor	0.9570	0.9570	0.9500	0.9570	0.9570	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	152	0	187	66	0
Total Analysis Volume [veh/h]	191	606	0	747	264	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	50
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	7	0	0	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	14	0	0	18	18	0
Amber [s]	3.0	0.0	0.0	3.7	3.7	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	2.7	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	27	0	0	23	23	0
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Calculated Cycle Length [s]	50	50	50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.70	2.70
g_i, Effective Green Time [s]	15	15	26	26
g / C, Green / Cycle	0.30	0.30	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.12	0.24	0.23	0.08
s, saturation flow rate [veh/h]	1603	2532	3204	3204
c, Capacity [veh/h]	481	760	1685	1685
d1, Uniform Delay [s]	13.90	16.10	7.33	6.12
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	1.97	0.85	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.80	0.44	0.16
d, Delay for Lane Group [s/veh]	14.44	18.08	8.17	6.32
Lane Group LOS	B	B	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.51	2.85	1.99	0.58
50th-Percentile Queue Length [ft/ln]	37.74	71.27	49.73	14.38
95th-Percentile Queue Length [veh/ln]	2.72	5.13	3.58	1.04
95th-Percentile Queue Length [ft/ln]	67.93	128.28	89.51	25.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.44	18.08	0.00	8.17	6.32	0.00
Movement LOS	B	B		A	A	
d_A, Approach Delay [s/veh]	17.20		8.17		6.32	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	11.88					
Intersection LOS	B					
Intersection V/C	0.472					

Emissions

Vehicle Miles Traveled [mph]	16.01	50.80	36.88	12.67
Stops [stops/h]	108.68	410.51	286.45	82.85
Fuel consumption [US gal/h]	1.99	7.25	4.34	1.32
CO [g/h]	139.02	506.99	303.61	92.19
NOx [g/h]	27.05	98.64	59.07	17.94
VOC [g/h]	32.22	117.50	70.36	21.37

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.81	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.328	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	920	732	732
d_b, Bicycle Delay [s]	7.29	10.05	10.05
l_b,int, Bicycle LOS Score for Intersection	1.774	2.390	1.992
Bicycle LOS	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 37: Mission Inn Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	41.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.780

Intersection Setup

Name	Mulberry St											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Mulberry St											
Base Volume Input [veh/h]	87	291	45	0	0	0	359	317	0	0	118	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	83	17	0	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	343	53	0	0	0	506	391	0	0	150	169
Peak Hour Factor	0.8650	0.8650	0.8650	0.9500	0.9500	0.9500	0.8650	0.8650	0.9500	0.9500	0.8650	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	99	15	0	0	0	146	113	0	0	43	49
Total Analysis Volume [veh/h]	119	397	61	0	0	0	585	452	0	0	173	195
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	85
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	10	0	0	0	0	7	22	0	0	11	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	6	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.7	0.0	0.0	2.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	36	55	0	0	19	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C		L	C	C	C
C, Calculated Cycle Length [s]	85	85		85	85	85	85
L, Total Lost Time per Cycle [s]	5.10	5.10		4.00	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10		2.00	2.70	2.70	2.70
g_i, Effective Green Time [s]	25	25		32	50	14	14
g / C, Green / Cycle	0.29	0.29		0.38	0.59	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.07	0.28		0.36	0.14	0.10	0.14
s, saturation flow rate [veh/h]	1603	1644		1603	3204	1683	1431
c, Capacity [veh/h]	470	482		603	1896	283	241
d1, Uniform Delay [s]	22.95	29.45		26.02	8.25	32.77	34.04
k, delay calibration	0.11	0.38		0.43	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	25.46		27.33	0.30	9.47	24.76
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.95		0.97	0.24	0.61	0.81
d, Delay for Lane Group [s/veh]	23.23	54.91		53.36	8.54	42.24	58.80
Lane Group LOS	C	D		D	A	D	E
Critical Lane Group	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.78	12.03		15.49	1.86	3.98	5.44
50th-Percentile Queue Length [ft/ln]	44.57	300.74		387.18	46.39	99.39	135.95
95th-Percentile Queue Length [veh/ln]	3.21	17.72		21.94	3.34	7.16	9.26
95th-Percentile Queue Length [ft/ln]	80.22	442.95		548.53	83.49	178.91	231.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.23	54.91	54.91	0.00	0.00	0.00	53.36	8.54	0.00	0.00	42.24	58.80
Movement LOS	C	D	D				D	A			D	E
d_A, Approach Delay [s/veh]	48.38			0.00			33.82			51.02		
Approach LOS	D			A			C			D		
d_I, Intersection Delay [s/veh]	41.25											
Intersection LOS	D											
Intersection V/C	0.780											

Emissions

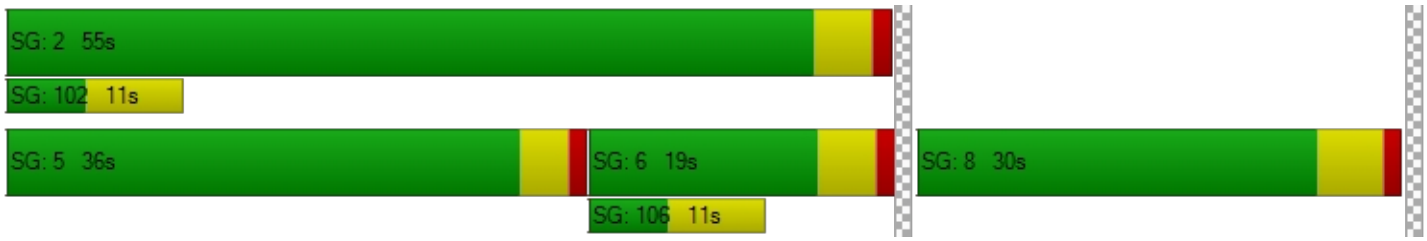
Vehicle Miles Traveled [mph]	10.37	39.90		28.07	21.69	6.33	7.14
Stops [stops/h]	75.50	509.49		655.93	157.17	168.38	230.31
Fuel consumption [US gal/h]	1.53	10.47		11.13	2.55	2.68	3.90
CO [g/h]	106.64	731.85		778.04	178.04	187.20	272.58
NOx [g/h]	20.75	142.39		151.38	34.64	36.42	53.03
VOC [g/h]	24.71	169.61		180.32	41.26	43.39	63.17

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.042	2.287	0.000	0.000
Crosswalk LOS	B	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	586	0	1184	336
d_b, Bicycle Delay [s]	21.25	42.50	7.08	29.40
l_b,int, Bicycle LOS Score for Intersection	2.726	4.132	2.630	2.078
Bicycle LOS	B	D	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: University Ave @ Mulberry St / SR-91 EB

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name				Mulberry St								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name				Mulberry St								
Base Volume Input [veh/h]	264	113	379	0	0	0	230	814	0	0	489	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790	1.1790
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	72	0	0	0	0	0	0	17	0	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	383	133	447	0	0	0	271	977	0	0	588	124
Peak Hour Factor	0.9290	0.9290	0.9290	0.9500	0.9500	0.9500	0.9290	0.9290	0.9500	0.9500	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	36	120	0	0	0	73	263	0	0	158	33
Total Analysis Volume [veh/h]	412	143	481	0	0	0	292	1052	0	0	633	133
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	0	0	6	23	0	0	13	0
Amber [s]	0.0	4.1	0.0	0.0	0.0	0.0	3.0	3.6	0.0	0.0	4.1	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	0	0	0	13	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	0.0	0.0	2.0	2.6	0.0	0.0	3.1	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0	30	0	0	0	0	15	30	0	0	15	0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Calculated Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	5.10	5.10	5.10		4.00	4.60	5.10	5.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.10	3.10		2.00	2.60	3.10	3.10
g_i, Effective Green Time [s]	24	24	24		8	26	14	14
g / C, Green / Cycle	0.40	0.40	0.40		0.13	0.43	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.16	0.15	0.30		0.08	0.30	0.18	0.08
s, saturation flow rate [veh/h]	1781	1826	1589		3459	3560	3560	1589
c, Capacity [veh/h]	721	739	643		448	1543	816	364
d1, Uniform Delay [s]	12.59	12.53	15.24		24.83	13.67	21.69	19.46
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.55	1.46	7.75		1.61	0.54	1.63	0.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.38	0.75		0.65	0.68	0.78	0.37
d, Delay for Lane Group [s/veh]	14.14	13.99	22.99		26.45	14.20	23.31	20.07
Lane Group LOS	B	B	C		C	B	C	C
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.55	2.53	6.08		1.99	5.18	3.92	1.47
50th-Percentile Queue Length [ft/ln]	63.72	63.17	152.03		49.84	129.51	98.12	36.81
95th-Percentile Queue Length [veh/ln]	4.59	4.55	10.13		3.59	8.91	7.06	2.65
95th-Percentile Queue Length [ft/ln]	114.70	113.70	253.13		89.71	222.83	176.62	66.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.09	13.99	22.99	0.00	0.00	0.00	26.45	14.20	0.00	0.00	23.31	20.07
Movement LOS	B	B	C				C	B			C	C
d_A, Approach Delay [s/veh]	18.21			0.00			16.86			22.75		
Approach LOS	B			A			B			C		
d_I, Intersection Delay [s/veh]	18.74											
Intersection LOS	B											
Intersection V/C	0.598											

Emissions

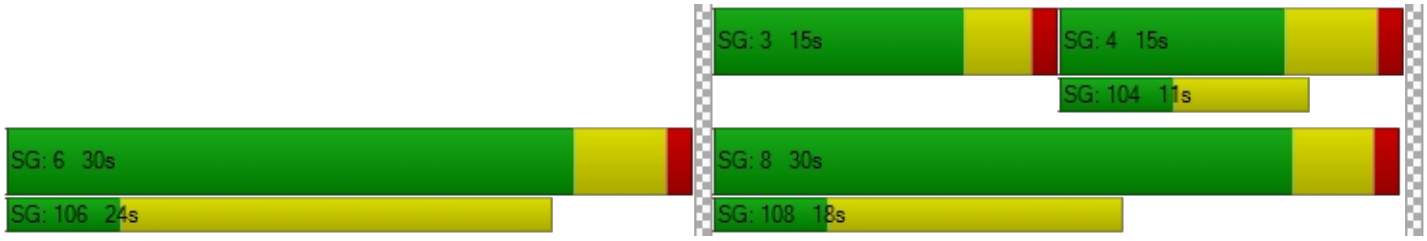
Vehicle Miles Traveled [mph]	10.86	10.86	18.83		21.08	75.94	32.01	6.73
Stops [stops/h]	152.94	151.61	364.87		239.23	621.66	470.99	88.35
Fuel consumption [US gal/h]	2.36	2.34	5.71		3.44	8.84	7.77	1.46
CO [g/h]	165.17	163.86	399.28		240.25	617.97	542.82	102.34
NOx [g/h]	32.14	31.88	77.69		46.74	120.23	105.61	19.91
VOC [g/h]	38.28	37.98	92.54		55.68	143.22	125.80	23.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.406	1.972	2.757	0.000
Crosswalk LOS	B	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	0	847	330
d_b, Bicycle Delay [s]	10.27	30.00	9.98	20.92
l_b,int, Bicycle LOS Score for Intersection	3.483	4.132	2.883	2.406
Bicycle LOS	C	D	C	B

Sequence

Ring 1	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix I-7
Cumulative Conditions + Project with Improvements

Option 1: RTO Restriction on 11th St

Number	17											
Intersection	Market St @ 11th St											
Control Type	Two-way stop											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	20	444	38	35	642	20	4	6	12	8	3	18
Total Analysis Volume [veh/h]	29	713	54	49	986	29	6	8	17	11	5	25

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane												
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No			No		
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	2	1	1	2	1	1	0	0	2	0	0	2
v_c, Conflicting Flow Rate	1015	0	0	767	0	0	0	0	508	0	0	384
v_c, Stage 1	1015	0	0	767	0	0	0	0	508	0	0	384
v_c, Stage 2	0	0	0	0	0	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	679	0	0	842	0	0	0	0	510	0	0	615
c_p,x, Stage 1 [veh/h]	2157	0	0	2018	0	0	0	0	1350	0	0	1282
c_p,x, Stage 2 [veh/h]	1622	0	0	1622	0	0	0	0	1084	0	0	1084
c_m,x, Movement Capacity [veh/h]	679	100000	100000	842	100000	100000	0	0	510	0	0	615
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	679	100000	100000	842	100000	100000	0	0	510	0	0	615

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.06	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	10.54	0.00	0.00	9.54	0.00	0.00	0.00	0.00	12.30	0.00	0.00	11.11
Movement LOS	B	A	A	A	A	A			B			B
Critical Movement	No	No	No	No	No	No			Yes			No
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.13
95th-Percentile Queue Length [ft/ln]	3.34	0.00	0.00	4.62	0.00	0.00	0.00	0.00	2.58	0.00	0.00	3.17
d_A, Approach Delay [s/veh]	0.38			0.44			12.30			11.11		
Approach LOS	A			A			B			B		
V/C_I, Worst Movement V/C Ratio	0.03											
d_I, Worst Movement Control Delay [s/veh]	12.30											
d_I, Intersection Delay [s/veh]	0.66											
Intersection LOS	B											

Option 1: RTO Restriction on 11th St

Number	17											
Intersection	Market St @ 11th St											
Control Type	Two-way stop											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	11	733	4	3	699	7	7	0	40	4	0	20
Total Analysis Volume [veh/h]	14	992	5	4	974	9	9	0	51	5	0	26

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane												
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No			No		
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	2	1	1	2	1	1	0	0	2	0	0	2
v_c, Conflicting Flow Rate	983	0	0	997	0	0	0	0	492	0	0	499
v_c, Stage 1	983	0	0	997	0	0	0	0	492	0	0	499
v_c, Stage 2	0	0	0	0	0	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	698	0	0	690	0	0	0	0	523	0	0	517
c_p,x, Stage 1 [veh/h]	2139	0	0	2147	0	0	0	0	1341	0	0	1345
c_p,x, Stage 2 [veh/h]	1622	0	0	1622	0	0	0	0	1084	0	0	1084
c_m,x, Movement Capacity [veh/h]	698	100000	100000	690	100000	100000	0	0	523	0	0	517
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	698	100000	100000	690	100000	100000	0	0	523	0	0	517

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.10	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	10.26	0.00	0.00	10.25	0.00	0.00	0.00	0.00	12.63	0.00	0.00	12.33
Movement LOS	B	A	A	B	A	A			B			B
Critical Movement	No	No	No	No	No	No			Yes			No
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.16
95th-Percentile Queue Length [ft/ln]	1.53	0.00	0.00	0.44	0.00	0.00	0.00	0.00	8.06	0.00	0.00	3.96
d_A, Approach Delay [s/veh]	0.14			0.04			12.63			12.33		
Approach LOS	A			A			B			B		
V/C_I, Worst Movement V/C Ratio	0.10											
d_I, Worst Movement Control Delay [s/veh]	12.63											
d_I, Intersection Delay [s/veh]	0.55											
Intersection LOS	B											

Option 1: RTO Restriction on 13th St

Number	19											
Intersection	Market St @ 13th St											
Control Type	Two-way stop											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	25	544	26	30	474	18	0	3	8	4	4	24
Total Analysis Volume [veh/h]	34	826	37	41	722	25	0	5	11	6	6	33

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane												
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No			No		
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	2	1	1	2	1	1	0	0	2	0	0	2
v_c, Conflicting Flow Rate	747	0	0	863	0	0	0	0	374	0	0	432
v_c, Stage 1	747	0	0	863	0	0	0	0	374	0	0	432
v_c, Stage 2	0	0	0	0	0	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	857	0	0	775	0	0	0	0	624	0	0	572
c_p,x, Stage 1 [veh/h]	2007	0	0	2071	0	0	0	0	1276	0	0	1308
c_p,x, Stage 2 [veh/h]	1622	0	0	1622	0	0	0	0	1084	0	0	1084
c_m,x, Movement Capacity [veh/h]	857	100000	100000	775	100000	100000	0	0	624	0	0	572
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	857	100000	100000	775	100000	100000	0	0	624	0	0	572

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.05	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.06
d_M, Delay for Movement [s/veh]	9.37	0.00	0.00	9.90	0.00	0.00	0.00	0.00	10.87	0.00	0.00	11.68
Movement LOS	A	A	A	A	A	A			B			B
Critical Movement	No	No	No	No	No	No			No			Yes
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.18
95th-Percentile Queue Length [ft/ln]	3.09	0.00	0.00	4.18	0.00	0.00	0.00	0.00	1.35	0.00	0.00	4.58
d_A, Approach Delay [s/veh]	0.36			0.52			10.87			11.68		
Approach LOS	A			A			B			B		
V/C_I, Worst Movement V/C Ratio	0.06											
d_I, Worst Movement Control Delay [s/veh]	11.68											
d_I, Intersection Delay [s/veh]	0.71											
Intersection LOS	B											

Option 1: RTO Restriction on 13th St

Number	19											
Intersection	Market St @ 13th St											
Control Type	Two-way stop											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	6	603	15	28	742	8	4	9	53	2	4	51
Total Analysis Volume [veh/h]	8	822	20	36	1023	10	6	12	68	2	6	66

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane												
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							No			No		
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	2	1	1	2	1	1	0	0	2	0	0	2
v_c, Conflicting Flow Rate	1033	0	0	842	0	0	0	0	517	0	0	421
v_c, Stage 1	1033	0	0	842	0	0	0	0	517	0	0	421
v_c, Stage 2	0	0	0	0	0	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	668	0	0	789	0	0	0	0	504	0	0	581
c_p,x, Stage 1 [veh/h]	2168	0	0	2060	0	0	0	0	1355	0	0	1302
c_p,x, Stage 2 [veh/h]	1622	0	0	1622	0	0	0	0	1084	0	0	1084
c_m,x, Movement Capacity [veh/h]	668	100000	100000	789	100000	100000	0	0	504	0	0	581
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	668	100000	100000	789	100000	100000	0	0	504	0	0	581

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.05	0.01	0.00	0.00	0.00	0.14	0.00	0.00	0.11
d_M, Delay for Movement [s/veh]	10.45	0.00	0.00	9.78	0.00	0.00	0.00	0.00	13.26	0.00	0.00	11.99
Movement LOS	B	A	A	A	A	A			B			B
Critical Movement	No	No	No	No	No	No			Yes			No
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.38
95th-Percentile Queue Length [ft/ln]	0.91	0.00	0.00	3.58	0.00	0.00	0.00	0.00	11.61	0.00	0.00	9.55
d_A, Approach Delay [s/veh]	0.10			0.33			13.26			11.99		
Approach LOS	A			A			B			B		
V/C_I, Worst Movement V/C Ratio	0.14											
d_I, Worst Movement Control Delay [s/veh]	13.26											
d_I, Intersection Delay [s/veh]	1.04											
Intersection LOS	B											

Appendix J

Cumulative Project Information

ObjectID	Case #	Location	Project Description	City	State	ZIP	Acres	Buildings Total SF	DU	Approval Date	APN	Status	Mapping Address	Ward	x	y
14	P12-0351	3550 Vine St	Conditional Use Permit to allow the establishment of a vocational/technical school for a maximum of 252 students at any one time within an existing 40,060 square foot 3-story office building in the Marketplace Specific Plan	Riverside	CA	92507	2.6	10,000 of 2nd floor of ex	-	CC 10/9/12	213212015	Completed	3550 Vine St	1	-13065181	4026328.6
22	P12-0717 P14-0045 P14-0046 P14-0047 P14-0048	1710 Main Street	Family Dollar store	Riverside	CA	92501	1.01	8039	-	ZA 3/11/13	209033051	Completed	1710 Main St	1	-13064873	4028841.8
57	P14-0049 P14-0188	3050 Mission Inn	SPR, DR, RZ, GPA, SPA; Mission Lofts apartment complex.	Riverside	CA	92507	4.67	-	212	CC AP 06/07/2016	211121032	Completed	3050 Mission Inn Ave	1	-13065165	4025998.9
60	P14-0403	3390 Orange St	MCUP, COA; Use residential building as offices	Riverside	CA	92501	0.21	No Data	No Data	ZA AP 07/21/2014	213112006	Completed	3390 Orange St	1	-13065595	4026828.5
76	P14-1021 P15-0247 P15-0248 P15-0250	4260 Tequesquite	CUP; CONDITIONAL USE PERMIT FOR A 19,254 SQ. FT. CHARTER SCHOOL. NO EXTERIOR MODIFICATIONS PROPOSED.	Riverside	CA	92501	No Data	19254	No Data	CPC AP 07/28/2015	217050010	Completed	4260 Tequesquite Ave	1	-13067510	4025678.6
81	P15-0251 P15-0252 P15-0363	3750 Main Street	CUP, TM, VR; construction of a mixed-use project, consisting of 91 residential units, approximately 8,841 square feet of commercial space and a 115-stall parking garage, on three parcels totaling 0.62 acres, partially developed with an existing commercial building (Imperial Hardware) and a surface parking lot	Riverside	CA	92501	1.49	8841	91	CPC AP 05/21/2015	213271013	Completed	3750 Main St	1	-13065999	4026419.6
97	P16-0168 P16-0170 P16-0388 P16-0389	3280 Vine	The following entitlements are requested to permit a 797 unit, three-story commercial storage facility: 1) Rezone the subject site to apply the CS—Commercial Storage Overlay Zone to the underlying BMP—Business and Manufacturing Park Zone; 2) Design Review of plot plan and building elevations for the commercial storage facility; 3) Variances requested to allow for a lesser front yard setback than required by Code and for a greater building height than permitted by the CS Overlay Zone.	Riverside	CA	92507	1.7	117478	No Data	CC AP 09/13/2016	213060027	Completed	3280 Vine St	2	-13065011	4026684.9
98	P14-0183 P14-0315	3105 Market St	DR; Centerpointe Apartments	Riverside	CA	92501	2.51	No Data	146	ZA AP 01/26/2015	213021001	Completed	3105 Market St	1	-13065711	4027349.3
105	P14-0437	4334 Vine St	Revised CUP, DR; Security operations building for the adjacent Downtown Metrolink station	Riverside	CA	92507	No Data	3,150 sqft	No Data	CPC 7/17/14	215350019	Completed	4334 Vine St	1	-13065796	4025369.5
106	P16-0329	1695 Spruce Street	CUP; NON-PROFIT CHARTER SCHOOL WITHIN AN EXISTING MULTI-TENANT COMPLEX IN THE BUSINESS MANUFACTURING PARK ZONE.	Riverside	CA	92507	1.88	6647	No Data	CPC AP 10/20/2016	249120016	Completed	1695 Spruce St	2	-13063100	4027558.1
115	P16-0504	1420 University Ave	DR; remodel of an existing Taco Bell, removal of playground equipment, trellis, and an upgrade to façade per chain guidelines	Riverside	CA	92507	No Data	No Data	No Data	DRC AP 10/25/2016	253030018	Completed	1420 University Ave	2	-13062517	4025486.1
117	P15-0155 P16-0532	4135 Chicago Avenue	CUP; Open a charter high school in a 10,000 square foot square site	Riverside	CA	92507	No Data	No Data	No Data	CC AP 06/16/15	221070011	Completed	1744 University Ave	1	-13063251	4025534.1
118	P16-0533 P16-0534 P16-0535	4508 Olivewood Ave	Design Review to facilitate construction of a two-story, 27,000 square foot medical office building and Variances to permit fewer parking spaces than required by Code and to allow reduced landscape setbacks along Mulberry Street and Olivewood Avenue, on a vacant, eleven-parcel site	Riverside	CA	92501	1.89	27000	No Data	DRC AP 10/12/2016	219043018	Completed	4508 Olivewood Ave	1	-13066185	4025128.7
119	P16-0544	4253 Fairgrounds Street	Design Review to facilitate construction of a 15,000 square foot warehouse building and related site improvements on a vacant site	Riverside	CA	92501	0.91	15000	No Data	DRC AP 01/06/2017	207130017	Completed	4253 Fairgrounds St	1	-13065970	4028938.1
124	P16-0716 P16-0717	3605 Market	1) a Certificate of Appropriateness to a City Structure of Merit for façade improvements; and 2) a Minor Conditional Use Permit for entertainment within the Fox Entertainment Plaza proposed to include 15,500 square feet of restaurant and storage space for 14 independent eateries and exclusive use of the 2,500 square foot outdoor patio area	Riverside	CA	92501	0.78	15,500 in existing buildir	No Data	DRC AP 10/19/2017	213221009	Completed	3605 Market St	1	-13066106	4026721.7
125	P16-0727 P16-0728 P16-0729 P16-0730	3870 Main St	Develop a 42,974-square-foot, five-story mixed-use building containing 35 dwelling units, 5,684 square feet of commercial space and 44 parking stalls on a 0.36-acre parcel developed with a public parking lot. Entitlements for consideration include: 1) a Conditional Use Permit to permit the construction of a mixed-use project with a density greater than 60 dwelling units per acre; 2) Parking Variances to allow fewer parking stalls than required by Code, reduced internal drive aisle widths, and the use of tandem parking stalls; and 3) Building Setback Variances to allow encroachment of the structure into the required 15-foot rear-yard setback, and encroachment of the residential portion of the structure into the required 15-foot interior side yard setback.	Riverside	CA	92501	0.36	8197	36	CPC AP 02/09/2017	213301009	Completed	3870 Main St	1	-13066119	4026247.4
136	P15-0907 P15-0908	2234 Main	CUP: ALLOW A GAS STATION IN CONJUNCTION WITH A 3,978 S.F. CONVENIENCE STORE WHICH REQUIRES A TYPE 20 ABC LICENSE4 AND A 968 SF INCIDENTAL CAR WASH.	Riverside	CA	92501	1.75	3,978 retail, 968 car was	No Data	CPC AP 10/19/2017	209092033	Completed	2234 Main St	1	-13065054	4028191.9
138	P17-0419 P17-0420 P17-0421 P17-0567	1301 University Avenue	Proposal by Katie Rounds of the Kaidence Group, on behalf of Starbucks, to consider the following entitlements: 1) a Specific Plan Amendment, to amend the University Avenue Specific Plan to allow drive-thru restaurants within Subdistrict 3; 2) a Conditional Use Permit to permit the drive-thru restaurant; and 3) a Design Review of project plans for the construction of a 2,819 square-foot drive-thru restaurant. The subject 0.88 acre site is currently developed with a 3,020 square-foot restaurant building, located at 1301 University Avenue, on the northwest corner of University and Iowa Avenues, in the CR-SP – Commercial Retail and Specific Plan (University Avenue) Overlay Zones, in Ward 2.	Riverside	CA	92507	0.88	2819	No Data	CPC AP 03/08/2018	250190040	Completed	1303 University Ave	2	-13062259	4025581.3
143	P17-0568	2909 Lime Street	Parcel Map to subdivide a single parcel into two lots with a Variance to allow 50 feet of street frontage per lot where 60 feet is required.	Riverside	CA	92501	0.39	No Data	2	DRC AP 01/08/2018	No Data	Completed	2909 Lime St	1	-13065054	4027284
145	P16-0011	4135 Chicago Avenue	CUP: Planet Fitness to go in an existing 18,000 SF tenant space within University Specific Plan shopping center.	Riverside	CA	92507	15.4	18000	No Data	2016-05-19 00:00	221070011	Completed	1744 University Ave	1	-13063251	4025534.1
147	P17-0667	3775 Fairmount Boulevard	City-initiated closure and vacation of entire segment of Fairmount Boulevard between Mission Inn and University Avenues, in conjunction with new Main Library	Riverside	CA	92501	0.46	42,000 (library)	No Data	CC AP 05/22/2018	No Data	Completed	3775 Fairmount Blvd	1	-13066324	4026609
150	P17-0761 P17-0762 P17-0763 P17-0764	4019 Mission Inn Avenue	Proposal by Russ Haley of CityMark Communities, LLC to consider the following entitlements: 1) a Specific Plan Amendment to amend the Neighborhood Commercial District of the Downtown Specific Plan to allow residential uses subject to a Conditional Use Permit; 2) a Conditional Use Permit to permit the construction of 13 attached single family dwellings; and 3) a Condominium Map to subdivide a 0.66-acre parcel into 13 condominium lots. This property is located at 4019 Mission Inn Avenue, situated on the northwest corner of Mission Inn Avenue and Chestnut Street, in the DSP-CR - Downtown Specific Plan-Neighborhood Commercial District, in Ward 1	Riverside	CA	92501	0.66	No Data	13	CC AP 07/24/2018	214211007	Completed	4019 Mission Inn Ave	1	-13066385	4026815.8
152	P17-0853 P17-0854	1705-1761 Seventh Street	General Plan Amendment from MDR to HDR and Rezone from R-1-7000 to R-3-1500 for consistency with Chicago-Linden Strategic Plan, in conjunction with Housing Authority redevelopment project	Riverside	CA	92507	2.04	No Data	No Data	CC AP 09/20/2018	211181026	Completed	1733 7th St	1	-13063270	4025741.2

	P17-0960																			
159	P17-0961	2002 Iowa Avenue	CONDITIONAL USE PERMIT FOR A 9,701 SQUARE FOOT ASSEMBLY OF PEOPLE USE WITH A 2,700 SQUARE FOOT SANCTUARY WITHIN AN EXISTING OFFICE COMPLEX IN THE BMP-SP (HUNTER BUSINESS PARK) AND A PARKING VARIANCE.	Riverside	CA	92507	9.25		9700	No Data	CPC AP 08/23/2018	249140042	Completed	2002 Iowa Ave	2	-13062137	4027929.1
	P16-0321																			
	P16-0323																			
	P16-0324		CUP, COA, VR, PM; Stalder Plaza - 165 residential units, 22,000sf retail and subterranean parking. 0-foot rear-yard setback																	
166	P16-0325	3650 Market Street	along alley frontage where 15 feet is required. Commercial Airspace Condominium Map	Riverside	CA	92501	0.53		22000	165	CPC AP 04/20/2017	213222023	Completed	3650 Market St	1	-13066090	4026654.8
	P18-0279		Proposal to construct a 51,998 square foot two-story senior housing complex consisting of 59 dwelling units: 1) a Zoning Code																	
	P18-0280		Amendment to rezone a portion of the site from O-Office Zone to R-1-7000 Single Family Residential Zone, 2) A Conditional Use																	
	P18-0281		Permit to permit the construction of a senior housing complex, 3) Design Review of project plans, and 4) a Grading Exception for																	
171	P18-0282	4800 Palm Avenue	retaining walls up to 21 feet high.	Riverside	CA	92506	1.96	No Data		59	CC AP 08/28/2018	217140036	Completed	4800 Palm Ave	1	-13067952	4025465
	P19-0089																			
	P18-0922																			
	P18-0923																			
190	P18-0924	2841 Mulberry Street	General Plan Amendment, Zoning Code Amendment, Design Review, and Variance for 10 small cottage affordable housing units	Riverside	CA	92501	0.48	No Data		10	CC AP 01/14/20	209222027	Completed	2841 Mulberry St	1	-13064852	4027290.4
	P19-0941	1673 Columbia																		
211	P19-0942	Avenue	Construction of new unmanned fueling facility on vacant lot.	Riverside	CA	92507	0.32	No Data		No Data	CPC AP 06/24/2021	249033013	Completed	1673 Columbia Ave	2	-13063073	4028993.5
	P17-0030	3393 Mission Inn	Conditional Use Permit to permit the construction of a mixed-use project containing: 72 affordable housing units, 5,400 square																	
215	P17-0031	Avenue	feet of office and meeting space, 3,700 square feet of museum/exhibition space, and 77 parking spaces	Riverside	CA	92501	1.38		9100	72	CHB AP 10/18/2017	213331008	Completed	3393 Mission Inn Ave	1	-13065589	4026294.8
			CONDITIONAL USE PERMIT TO COVERT 4 EXISTING OFFICE BUILDINGS TO 8 MULTI-FAMILY RESIDENTIAL UNITS AND A																	
	P20-0239	4061 Mission Inn	CERTIFICATE OF APPROPRIATENESS APPLICATION FOR THE DEMOLITION OF AN EXISTING STORAGE BUILDING AND WINDOW																	
230	P20-0243	Avenue	REPLACEMENTS. EACH UNIT WILL CONSIST OF 1 BEDROOM AND 1 BATHROOM.	Riverside	CA	92501	0.62	No Data		8	CPC AP 10/15/2020	214211006	Completed	4061 Mission Inn Ave	1	-13066453	4026796.9
			Proposal by Gregory Bloomfield to consider the following entitlement to increase the number of residential units at a senior																	
			housing development: 1) a Minor Conditional Use Permit to revise a previously approved Conditional Use Permit (P13-0087) to																	
			increase the number of senior residential units from 67 to 75. The 1.72 acre site is located at 2450 Market Street, situated on																	
			the east side of Market Street, between Fairmount Boulevard and Northbend Street, in the DSP - MSG – Downtown Specific Plan -																	
232	P20-0371	2450 Market Street	Market Street Gateway District, Ward 1	Riverside	CA	92501	1.72	No Data		8	No Data	209101001	Completed	2450 Market St	1	-13065590	4028214.5
			Proposal by Allan Henderson to consider the following entitlements: 1) Minor Conditional Use Permit to permit construction of a																	
			parking lot and truck loading ramp to serve the existing L & A Food Service; 2) Design Review of project plans; and 3) Variance to																	
	PR-2020-		allow an over height fence in the front yard setback. The project site is located at 2711 Chicago Avenue, situated on the																	
240	000096	2711 Chicago Avenue	northwest corner of Chicago and Massachusetts Avenues, in the I – General Industrial Zone, in Ward 1.	Riverside	CA	92507	No Data	No Data		No Data	DRC AP 06/30/2021	210150025	Completed	2711 Chicago Ave	2	-13063221	4027173.7
			Proposal by Jennifer Dorgan of Gresham Savage Nolan & Tilden, PC to consider a Design Review of plans to construct a 48,000-																	
			square-foot addition to the existing Press Enterprise building to expand existing operations. The 6.6-acre project site consists of																	
			three contiguous parcels and is currently developed with a 140,000-square-foot building that is utilized for newspaper and																	
	PR-2020-	3512 Fourteenth	commercial printing operations. The property is located at 3512 Fourteenth Street, situated on the south side of Fourteenth																	
241	000105	Street	Street between Orange Grove Avenue and Olivewood Avenue, in the DSP-PP0-SP – Downtown Specific Plan – Prospect Place Office District Zone, in Ward 1.	Riverside	CA	92501	6.6		48000	No Data	DRC AP 04/07/2021	219330037	Completed	3512 Fourteenth St	1	-13066335	4025294.7
	P18-0122		CUP and DR to consider the construction of a 58-unit senior housing complex consisting of a 57,799 square foot two-story																	
283	P18-0123	3723 Strong Street	building on 2.01 acres	Riverside	CA	92501	2.01	No Data		58	CPC AP 8/23/2018	No Data	Completed	3723 Strong St	1	-13064794	4028829.5
			Proposal by Wakeland Housing and Development Corporation to consider a Design Review of project plans to construct a 65-																	
	PR-2021-		unit multi family residential development on seven contiguous parcels. The 2.03-acre project site is located at 1705-1761																	
298	000942	1705 Seventh Street	Seventh Street, situated on the northwest corner of Chicago Avenue and Seventh Street, in the R-3-1500 – Multiple-Family Residential Zone, in Ward 2.	Riverside	CA	92507	2.03	No Data		65	DRC AP 03/11/2022	211181026	Completed	1705 Seventh St	1	-13063211	4025742.7
	P19-0665																			
	P19-0666																			
	P19-0667																			
309	P19-0668	4015 13th Street	Design Review and Variances to construct a 128,000 SF 4-story conference center	Riverside	CA	92501	0.93		130578	No Data	DRC AP 07/01/2020	215231013	Completed	4015 13th St	1	-13066848	4025973.1
			Proposal by Frank Coda of GreenbergFarrow for a Design Review of project plans for the renovation of an existing 30,446 square																	
			foot building to be subdivided into two tenant spaces: 1) 21,454 square foot Grocery Outlet Bargain Market; and 2) 8,992 square																	
			foot retail space. The 15.39 acre project site is developed with an existing shopping center, located at 3977 Chicago Avenue,																	
	PR-2021-		situated on the southwest corner of Chicago Avenue and University Avenue, in the MU-U-SP – Mixed Use - Urban and Specific																	
358	001085	3977 Chicago Avenue	Plan (University Avenue) Overlay Zones, in Ward 2.	Riverside	CA	92507	15.39		30446	No Data	DRC AP 04/06/2022	221070011	Completed	3977 Chicago Ave	1	-13063280	4025447.1
			Proposal by Gabriel Maldonado of TruEvolution, Inc. to consider the following entitlements on six contiguous parcels to convert																	
			five existing single-family residences into transitional housing for 49 individuals and one commercial building into community																	
			healthcare services: 1) a Specific Plan Amendment to remove the property from the Almond Street district and place it within																	
			the Neighborhood Commercial District; 2) a Conditional Use Permit to permit multi-family residential; 3) a Design Review of																	
	PR-2020-		project plans; 4) a Certificate of Appropriateness for modifications to designated historic structures; and 5) a Variance to allow																	
416	000244	3807 Brockton Avenue	a reduced number of parking for community healthcare services.	Riverside	CA	92501	0.96	No Data		49 beds	N/A - Project HomeKey	214292022	Completed	3807 Brockton Ave	1	-13066606	4026654.7
		3530/3540/3558											Completed							
		Fairmount &	CUP; A NEW HOTEL DEVELOPMENT WITH TWO PHASES. PHASE 1 = A 104 ROOM, 62,852 S.F., 75'-0" HIGH, 5-STORY HOTEL.										(Phase 1)							
		3555/3547/3545/3505	PHASE 2 = A 135 ROOM, 74,275 S.F., 91'-4" HIGH, 6-STORY HOTEL AND A 60' HIGH 6-STORY PARKING GARAGE WITH 195										Entitled (Phase							
83	P15-0535	Market	PARKING SPACES.	Riverside	CA	92501	1.62	No Data		239 guest r	CPC 04/19/2016	213181002	2)	3555 Market St	1	-13066063	4026801.3
	P12-0799	NWC Palm Avenue and	Tract Map 36516 and Design Review; subdivide 1.26 ac vacant parcel into 7 single family residential lots ranging in size from																	
27	P12-0800	Beechwood Place	7,002 to 8,011 sq.ft.	Riverside	CA	92506	1.26	-		7	CPC 4/3/14	217224015	Construction	5255 Palm Ave	3	-13068394	4024961.7
	P13-0087		CUP, DR; establish a 67-unit senior housing facility within an existing three-story, approximately 51,321-square-foot building,																	
31	P13-0262	2450 Market Street	on an approximately 1.7-acre site, located at 2450 Market Street situated on the easterly side of Market Street between Ogden Way and Northbend Street, across from Fairmount Park	Riverside	CA	92501	1.7	No Data		67	CC AP 05/05/2015	209101001	Construction	2450 Market St	1	-13065590	4028214.5

	P13-0207 P13-0208 P13-0209 P13-0210																	
36	P13-0211	4445 Magnolia Ave	EIR, GPA, RZ, DR, SP; Riverside Community Hospital proposed expansion	Riverside	CA	92501	10.16		251500	No Data	CC AP 05/20/2014	217070027	Construction	4445 Magnolia Ave	1	-13066840	4025630.2
88	P15-0877 P16-0066 P16-0067	1277 University	Specific Plan Amendment, Conditional Use Permit, and Design Review to allow the construction of a seven-story, 143,983 square foot hotel consisting of 126- rooms/suites, administrative offices, gymnasium, recreation room, roof top garden, swimming pool, and a 12,000 square foot restaurant	Riverside	CA	92507	0.82	12,000 restaurant		144 guest r	CC AP 06/05/2018	250240034	Construction	1277 University Ave	2	-13062125	4025829.6
122	P16-0620 P16-0621	1168 Stacy Court	Minor Conditional Use Permit and Design Review of a plot plan and building elevations to facilitate construction of a 3,008 square foot vehicle repair facility on a vacant, two-parcel site	Riverside	CA	92507	0.21		3008	No Data	DRC AP 09/05/2018	249033011	Construction	1168 Stacy Ct	2	-13063073	4029038.2
141	P17-0533	1606 Orange Street	Proposal by BJ Ghuman of Go-Man Constructions and Investments Inc. to consider Tentative Tract Map 37146 to subdivide a partially developed 1.96 acre parcel into seven single-family residential parcels, ranging in size from 7,975 square feet to 12,197 square feet, located at 1606 Orange Street, situated on the southwest corner of the intersection of Orange Street and Tyco Drive, in the R-1-7000 – Single Family Residential Zone, Ward 1.	Riverside	CA	92501	1.96	No Data		7	CPC AP 11/01/2019	206152015	Construction	1606 Orange St	1	-13064463	4028842.7
169	P18-0199 P18-0200	2375 Third Street	DESIGN REVIEW OF PLOT PLANS AND ELEVATIONS FOR THE CONSTRUCTION OF A 26,076 SQ. FT. SINGLE TENANT CONCRETE BLOCK TYPE III -B INDUSTRIAL BUILDING AND ASSOCIATES 8,147 SQ FT OF LANDSCAPING & ASSOCIATED PARKING VARIANCE TO SHARE PARKING WITH ADJACENT SITE OWNED BY SAME OWNER	Riverside	CA	92507	3.62		26076	No Data	2019-09-18 00:00	210190030	Construction	2375 Third St	2	-13064572	4026624.6
203	P19-0620 P19-0621	2941 Market Street	CUP and Design Review for 17 one-to-three bedroom townhomes	Riverside	CA	92501	0.64	No Data		17	CPC AP 10/15/2020	209193018	Construction	2941 Market St	1	-13065644	4027573.4
219	P20-0035	3861 Third Street	COA for 33 unit affordable housing development- The Aspire.	Riverside	CA	92501	No Data	No Data		38	CHB AP 9/09/20	213071008	Construction	3861 3rd St	1	-13065900	4027187.4
222	P20-0107	4088 Mission Inn Avenue	Expansion of existing restaurant	Riverside	CA	92501	0.29		1006	No Data	HPO AP 05/19/2021	214251001	Construction	4088 Mission Inn Ave	1	-13066494	4026767.6
235	P20-0471 P20-0472	3001 Iowa Avenue	Proposal by Seritage KMT Finance, LLC to consider the following entitlements for a mixed-use development consisting of 299 multi-family residential units and 1,385 square-feet of retail area: 1) a Site Plan Review of project plans; and 2) a Parcel Map to subdivide a 13.2-acre parcel into two parcels. The project site is currently developed with a 99,832 square foot commercial building and is located at 3001 Iowa Avenue, situated on the west side of Iowa Avenue, between Massachusetts Avenue and Blaine Street, in the MU-V - Mixed-Use Village Zone, in Ward 1.	Riverside	CA	92507	13.2	No Data		299	CPC AP 03/31/2022	250080005	Construction	3001 Iowa Ave	2	-13062374	4026768.2
245	PR-2020- 000241	3521 Main Street	Proposal by Marco McGuire of McGuire Restaurants Group, Inc. to consider a Minor Conditional Use Permit to permit a 2,050 square-foot banquet hall. The project site is located at 3563 and 3565 Main Street, situated on the west side of Main Street, between Fifth and Sixth Streets, in the DSP-RC-CR – Downtown Specific Plan – Raincross District and Cultural Resources (Mission Inn Historic District) Overlay Zones, in Ward 1.	Riverside	CA	92501	No Data		2050	No Data	DRC AP 08/10/2022	213182008	Construction	3521 Main St	1	-13065906	4026741
256	PR-2021- 000942	1705 Seventh Street	Proposal by Wakeland Housing and Development Corporation to consider a Design Review of project plans to construct a 65-unit multi-family residential development on seven contiguous parcels. The 2.03-acre project site is located at 1705-1761 Seventh Street, situated on the northwest corner of Chicago Avenue and Seventh Street, in the R-3-1500 – Multiple-Family Residential Zone, in Ward 2.	Riverside	CA	92507	2.03	No Data		65	No Data	211181026	Construction	1705 Seventh St	1	-13063211	4025742.7
	P18-0091 P18-0092 P18-0093 P18-0094 P18-0095 P18-0096 P18-0097 P18-0098 P18-0099 P18-0100		THE EXCHANGE - Master-planned mixed use development with 482 multi-family residential units, 44,500 square feet of retail and restaurant space, fuel station with 4,000-sf convenience store and 8 MPDs/16 pumps, two hotels totaling 229 rooms and 27 RV camping spaces. General Plan Amendment, Rezone, Site Plan Review, Conditional Use Permits (5), Tentative Parcel Map, Minor CUP and Design Review. APNS: 209-151-029, 209-151-036 209-020-022, 209-020-047 209-020-048, 209-020-059 209-020-060, 209-020-061 209-020-062, 209-060-023 209-060-027, 209-060-029 209-070-015													
280	P18-0101	NEC Orange Street and Vista Avenue		Riverside	CA	92501	35.4	48,500 retail/restaurant		482 (reside	CC AP 06/04/2019	209060029	Construction	2010 Orange St	1	-13064801	4028317.5
310	PR-2022- 001267	1393 University Avenue	Proposal by Beverly Bailey of Bailey California Properties, LLC, Inc. to consider the following entitlements: 1) Minor Conditional Use Permit to permit the on-sale of general alcoholic beverages at the Farmhouse Collective; and 2) Variance to allow the on-sale of alcoholic beverages within 100-feet of residential uses or property zoned for residential uses. The 0.97-acre project site is developed with a vacant motel, located at 1393 University Avenue, situated on the north side of University Avenue, between Cranford Avenue and Iowa Avenue, in the CR-SP – Commercial Retail and Specific Plan (University Avenue) Overlay Zones, in Ward 2.	Riverside	CA	92507	0.97	No Data		No Data	No Data	250190009	Construction	1393 University Ave	2	-13062448	4025595.5
153	P16-0016	978 Orange	TM: A Tentative Tract Map for one 0.91 acre lot being divided into five parcels.	Riverside	CA	92501	0.91	No Data		5	CPC AP 06/26/2017	246230003	Entitled	978 N Orange St	1	-13063712	4030141.6
	P19-0869 P19-0870 P19-0871																	
208	P19-0872	3491 Market Street	Design review for a new 3,400 square foot commercial retail building on vacant property.	Riverside	CA	92501	No Data		3400	No Data	DRC AP 08/09/2023	213103005	Entitled	3491 Market St	1	-13065992	4026891.3
213	P19-0958 P19-0959	2998 Ivy Street	Design review for self storage facility expansion: related to P19-0926 - see also PR-2021-001120	Riverside	CA	92506	1.73	No Data		No Data	CC AP 12/13/2022	219270006	Entitled	2998 Ivy St	3	-13066477	4023177.1
238	P20-0487	1576 Palmyrita Avenue	Proposal by Lord Constructors Inc. to consider a Design Review of project plans to construct a 27,860 square-foot, phased warehouse development. The 2.69-acre project site is currently developed with a vehicle storage yard and office building. The project site is located at 1576 Palmyrita Avenue, situated on the south side of Palmyrita Avenue, between Ardmore Street and Iowa Avenue, in the I-SP – General Industrial and Specific Plan (Hunter Business Park) Overlay Zones, in Ward 1.	Riverside	CA	92507	2.69		27860	No Data	DRC AP 04/07/2021	249022014	Entitled	1576 Palmyrita Ave	2	-13062844	4029322.1
268	PR-2021- 001052	1535 W. La Cadena Drive	Proposal by Overland Development Company to consider a Design Review of project plans to construct a 115-unit multi-family residential apartment complex.	Riverside	CA	92501	2.66	No Data		115	CPC AP 09/29/2022	206132037	Entitled	1535 W La Cadena Dr	1	-13063877	4028644.8

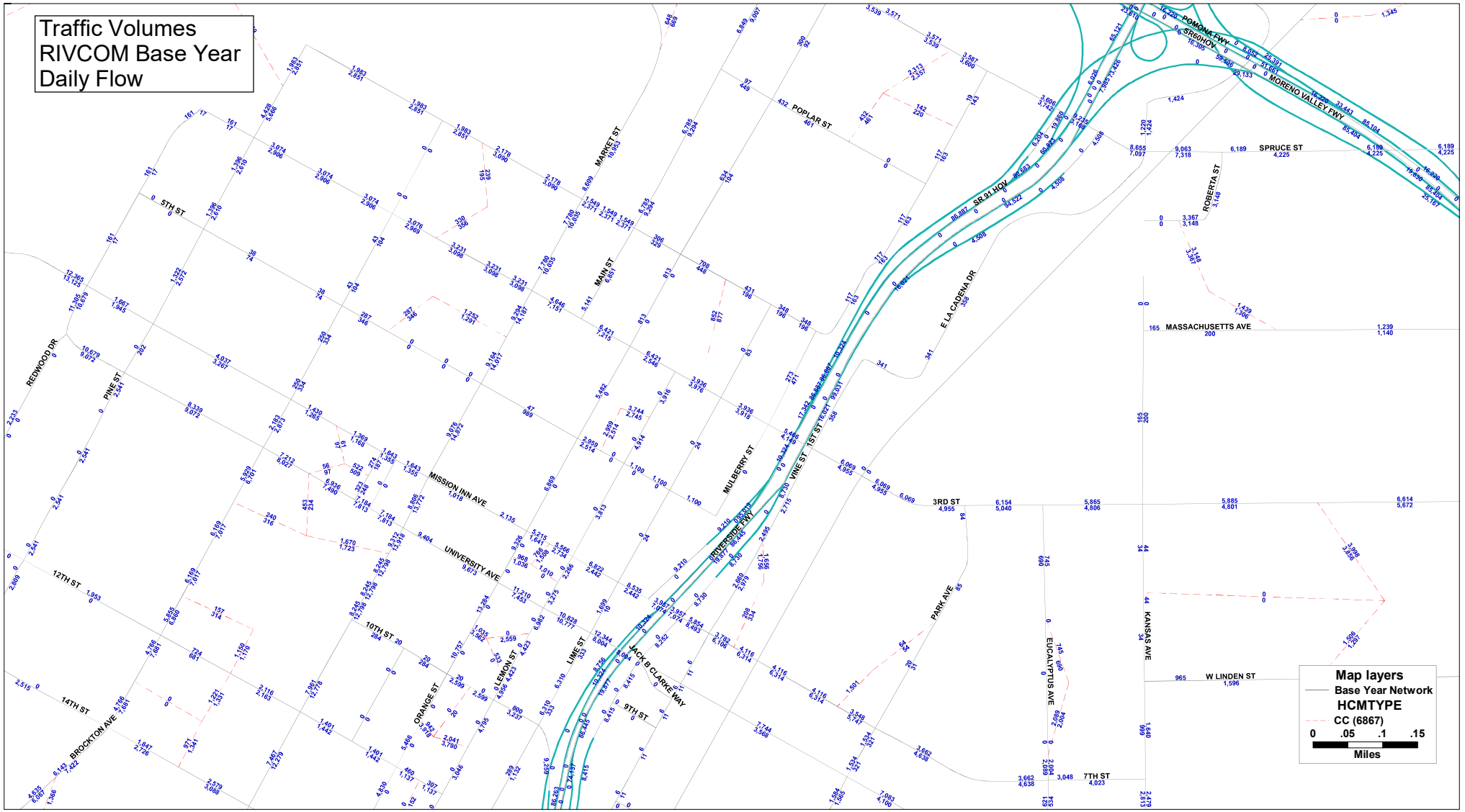
286	PR-2021-001201	3102 Main Street	Proposal by Integrity Housing to consider the following entitlements for the development of an 85-unit, multi-family residential development and entitlements for the restoration of an existing 1,000 square foot commercial building and construction of a 500 square foot commercial building: 1) Design Review of project plans; 2) Variance to allow a reduction in the number of required covered parking stalls; 3) Variance to allow greater than 15 percent of the required parking spaces to be compact; 4) Variance to allow a reduced landscape setback along the rear yard; and 5) Variance to allow a reduced parking lot landscape setback along the Second Street frontage. The 1.53-acre vacant project site is located at 3102 Main Street, situated on the south side of Main Street between First and Third streets, bisected by Second Street, in the DSP-RC - Downtown Specific Plan - Raincross District, in Ward 1.	Riverside	CA	92501	1.53	1500	85	DRC AP 12/15/2021	213031002	Entitled	3102 Main St	1	-13065538	4027236.4
287	PR-2021-001202	3102 Main Street	Proposal by Angela Ponce of Integrity Housing to consider the following entitlements for the restoration of an existing 1,000 square foot vacant fueling station and construction of a 500-square foot commercial building: 1) Design Review of project plans; 2) Variance to allow a reduced landscape setback along the rear yard; and 3) Variance to allow a reduced parking lot landscape setback along the First Street frontage. The 0.37-acre project site is located at 3102 Main Street, situated on the southeast corner of the intersection of Main and First Streets, in the DSP-RC - Downtown Specific Plan - Raincross District, in Ward 1.	Riverside	CA	92501	0.37	1500	No Data	DRC AP 05/18/2022	213031002	Entitled	3102 Main St	1	-13065538	4027236.4
295	PR-2021-001248	9860 indiana	Proposal by Natalie Ustariz to consider the following entitlements for the modification to an existing 1,183 square foot commercial building: 1) a Design Review of project plans; 2) a Variance to allow reduced landscape setbacks adjacent to Fourteen Street frontage. The site is located at 2790 14th Street, situated at the southeast corner of 14th Street and Grove Avenue, in the CR - Commercial Retail Zone, in Ward 2.	Riverside	CA	92507	0.28	1183	No Data	2023-02-08 00:00	211252015	Entitled	2790 14th St	1	-13065251	4024871.1
297	PR-2021-001351	3512 Fourteenth Street	Proposal by Andrew Woodard of Woodard Group to consider a Parcel Map to subdivide a 6.76-acre parcel into two parcels. The project site is developed with the Press Enterprise and is located at 3512 Fourteenth Street, situated on the southeast corner of Fourteenth Street and Orange Grove Avenue, in the DSP – PPO -SP - Downtown Specific Plan - Prospect Place Office District, in Ward 1.	Riverside	CA	92501	6.76	No Data	No Data	DRC AP 08/22/2022	219330040	Entitled	3512 14th St	1	-13066335	4025294.7
306	P19-0420	Patterson Street and Minnesota Street	33-Unit Apartment Complex	Riverside	CA	No Data	1.7	No Data	33	2019-12-26 00:00	211111060	Entitled	Patterson St & Minnesota	1	-13063876	4026322.3
308	PR-2022-001266	1990 Patterson Street	Proposal by Jim Broeske of Broeske Architects to consider project plans for the construction of a 57-unit affordable multi-family development. The 1.7-acre vacant project site is located at 1970 Patterson Street, situated at the southern terminus of Patterson Street, between Linden Street and Minnesota Street, in the R-3-1500 – Multiple Family Zone, in Ward 2.	Riverside	CA	92507	1.7	No Data	57	AP 08/26/2022	211111054	Entitled	1990 Patterson Street	1	-13063886	4026144.4
331	PR-2022-001372	1737 Atlanta Avenue	Proposal by Ozzie Vaca of South Hills Community Church to consider a Conditional Use Permit to establish a 5,245 square foot Assemblies of People – Non-Entertainment (South Hills Community Church) in an existing 42,000 square foot multi-tenant industrial building. The 2.61-acre site is located at 1737 Atlanta Avenue, situated on the southwest corner of Atlanta and Marlborough Avenues, in the BMP-SP – Business and Manufacturing Park and Specific Plan (Hunter Business Park) Overlay Zones, in Ward 1.	Riverside	CA	92507	2.61	42000	No Data	CPC AP 03/16/2023	249100045	Entitled	1737 Atlanta Ave	2	-13062758	4028388.7
339	PR-2023-001429	1575 University Avenue	Proposal by Matthew Keenen of CGI+ | Real Estate Investments to consider a Site Plan Review for a Mixed-Use Development consisting of 257 dwelling units and 4,431 square feet of commercial space. The 4.29-acre project site is developed with a 27,593 square foot multi-tenant commercial building, located at 1575 University Avenue, situated on the north side of University Avenue, between Chicago Avenue and Cranford Avenue in the MU-U-SP – Mixed Use-Urban and Specific Plan (University Avenue) Overlay Zone, in Ward 2.	RIVERSIDE	CA	92507	4.29	32024	257	CPC AP 05/25/2023	250170036	Entitled	1575 University Ave	2	-13062875	4025613.5
369	PR-2021-000915	3491 Market Street	Proposal by Linda Ennabe of Ennabe Properties to consider the following entitlements for the construction of a two-story 4,590 square-foot multi-tenant commercial building: 1) Design Review of project plans; 2) Variance to allow a 20-foot two-way drive-aisle adjacent to parking bays; and 3) Variance for a reduced landscape setback along a property line adjacent to a residential zone. The vacant 0.13-acre parcel is located at 3491 Market Street, at the northwest corner of Market and Fifth Streets, in the DSP-RC – Downtown Specific Plan - Raincross District, in Ward 1.	Riverside	CA	92501	0.13	4590	No Data	2023-08-09 00:00	213103005	Entitled	3491 Market St	1	-13065992	4026891.3
370	PR-2023-001529	3071 Market St	Proposal by JoAnne Tang to consider a Conditional Use Permit and Design Review for plans to construct four live/work units in a 7,479 square foot three-story building. The 0.14-acre vacant project site is located at 3071 Market Street, situated on the northwest corner of Market and First Streets, in the DSP-MSG – Downtown Specific Plan – Market Street Gateway District Zone, in Ward 1. See also PR-2023-00963	Riverside	CA	92501	0.14	7479	4	CPC AP 01/04/2024	209194018	Entitled	3071 Market St	1	-13065705	4027411.9
386	PR-2023-001601	1775 University Ave	Proposal by Feng Xiao to consider a Site Plan Review for a Mixed-Use Development consisting of 18 dwelling units and 1,477 square feet of ground floor retail. The 0.63-acre vacant project site consists of two contiguous parcels, located at 1775 and 1795 University Avenue, situated on the northeast corner of University Avenue and Mesa Street, in the MU-U-SP - Mixed Use-Urban and Specific Plan (University Avenue) Overlay Zones.	Riverside	CA	92507	0.63	1477	18	CPC AP 5/23/2024	211183023, 21:	Entitled	1775 University Ave	1	-13063354	4025582.3
407	PR-2023-001624	3760 Tenth St	Proposal by Xavier Hernandez to consider a Design Review of preliminary plans to construct exterior façade improvements on an existing 5,856-square-footage tenant space for a new restaurant use with on-sale of alcohol (Type 47). The 0.14-acre project site is part of a multi-tenant commercial building, located at 3760 Tenth Street, situated on southeast corner of Market Street and Tenth Street, in the DSP-RC – Downtown Specific Plan (Raincross District).	Riverside	CA	92501	0.14	No Data	No Data	45371	215092004	Entitled	3760 Tenth St	1	-13066304	4026138.7
418	PR-2020-000429	2610 Durahart Street	Proposal by Chris Loera on behalf of C-Below, Inc. to consider the following entitlements for the establishment of an outdoor storage facility: 1) Design Review of project plans for a 4,000 square-foot office building and a 2,000 square-foot workshop; and 2) Variance to allow a security fence higher than allowed by the Zoning Code within the front yard setback.	Riverside	CA	92507	2.68	6000	No Data	DRC AP 05/19/2021	210150026	Entitled	2610 Durahart St	2	-13063409	4027231.4
422	PR-2021-000771	3770 Cranford Avenue	Proposal by Kelly Guo, on behalf of Lisheng Holdings, LLC, to consider a Site Plan Review for a Mixed-Use Development consisting of 24 residential, units and a 600 square foot restaurant. The site consists of a vacant 0.60-acre parcel, located at 3770 Cranford Avenue, situated on the east side of Cranford Avenue, between Seventh Street and University Avenue, in the CR-SP – Commercial Retail and Specific Plan (University Avenue) Overlay Zones, in Ward 2.	Riverside	CA	92507	0.6	600	24	CPC AP 07/08/2021	250190034	Entitled	3770 Cranford Ave	2	-13062695	4025598.9
423	PR-2021-	2039 University	Proposal by Edwin Agabao of Architecture Refined Corporation to consider Design Review of project plans for a new 5,000	Riverside	CA	92507	0.59	5000	No Data	DRC AP 05/18/2022	211174028	Entitled	2039 University Ave	1	-13064018	4025537.1
438	PR-2022-001367	2610 Durahart Street	Proposal by Kevin Kohan of Elevated Entitlements to modify a previously approved entitlement and conditions of approval to an outdoor storage yard; 1) Substantial Conformance to allow the outdoor storage and screening of outdoor storage to be increased in height; and 2) Modification of condition of approval number 2, under previously approved Planning Case PR-2020-000429, to allow outdoor storage to exceed 8-feet in height. The project site is located at 2610 Durahart Street, situated at the terminus of Durahart Street, in the ID - Innovation District overlay Zone, Ward 1	RIVERSIDE	CA	92507	No Data	No Data	No Data	2023-04-19 00:00	210150026	Entitled	2610 Durahart St	2	-13063409	4027231.4

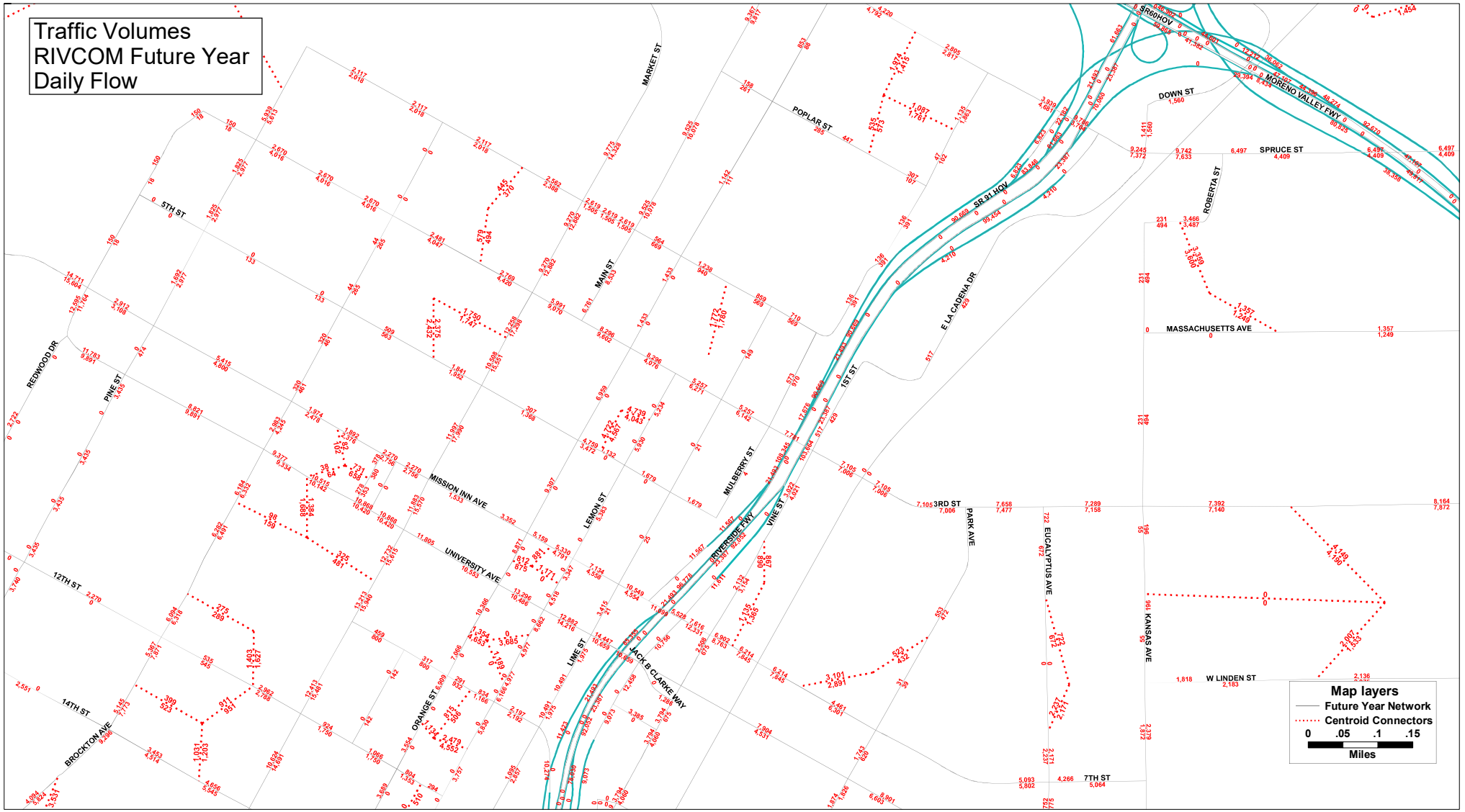
442	PR-2023-00173	2610 Durahart Road	Proposal by Kevin Kohan on behalf of Elevated Entitlements to consider a Design Review of project plans to construct an outdoor storage yard consisting of 52 truck trailer stalls. The 1.59-acre vacant project site is located at APN: 210-140-014, situated at the cul-de-sac of Durahart Street and south of State Highway 60, in the I – ID - Industrial and Innovation District (Industrial Emphasis) Overlay Zones, in Ward 1.	Riverside	CA	92507	1.59	No Data		No Data	2023-06-28 00:00	210140014	Entitled	2610 Durahart Rd	2	-13063409	4027231.4
47	P13-0650 P13-0651	2586 University Ave	MCUP and Certificate of Appropriateness; Proposal to convert an existing 2500 sqft 2-story residence to a bed and breakfast with an 1118 sqft addition	Riverside	CA	92507	0.23		3650	-	ZA 12/19/13, CHB 12/18/13	211133004	Expired	2586 University Ave	1	-13064695	4025558.6
58	P14-0132	4665 Vine St	CUP; Allow a materials (metal) processing facility to operate	Riverside	CA	92507	2.25	2 existing bldgs,	30,324	-	CC AP 07/08/2014	219093016	Expired	4665 Vine St	1	-13066140	4024691.4
199	P16-0862 P16-0863 P16-0864	4399 Main	To consider the following entitlements for the establishment of a 1,425 square foot restaurant with 3,100 square feet of outdoor dining on a 0.30-acre parcel, developed with an existing, abandoned vehicle fuel station: 1) a Minor Conditional Use Permit; to permit a restaurant larger than 1,500 square feet, with outdoor dining and on-sale of alcoholic beverages; 2) Design Review for the conversion of an existing 925-square-foot vehicle fuel station building to a restaurant, construction of a 500-square-foot addition and a 1,715 square foot attached canopy, and reconfiguration of an existing parking lot; and 3) a Variance to allow the on-sale of alcohol within 600 feet of a public park and hospital.	Riverside	CA	92501	0.3		4525	No Data	DRC AP 12/20/2018	215272007	Expired	4399 Main St	1	-13066496	4025616.1
127	P17-0001	North of Paschels Way and east of Clark Street	Tentative Tract Map (TM 37279) to subdivide one vacant parcel, totaling 1.6 acres into 7 residential lots	Riverside	CA	92501	1.6	No Data		No Data	No Data	206100052	Proposed	1010 Clark St	1	-13063707	4029562.9
201	P19-0560 P19-0561 P19-0562 P19-0563	3466 Mission Inn Avenue	CUP, Variance, and Design Review for the construction of a 194,500 square foot 8-story hotel with 225 rooms	Riverside	CA	92501	0.94		194500	No Data	CC AP 11/16/2021	213281006	Proposed	3466 Mission Inn Ave	1	-13065667	4026285.1
251	PR-2021-000908	2450 Market Street	Proposal by Gregory Bloomfield to consider a Minor Conditional Use Permit to modify the projects Conditional Use Permit (P13-0087) by allowing the number of senior residential units to be increased from 67 to 75. The 1.72 acre site is located at 2450 Market Street, situated on the east side of Market Street, between Fairmount Boulevard and Northbend Street, in the DSP - MSG – Downtown Specific Plan - Market Street Gateway District, Ward 1.	Riverside	CA	92501	1.72	No Data		8	No Data	146090039	Proposed	2450 Market St	1	-13065590	4028214.5
333	PR-2022-001397	4135 Market Street	Proposal by Linda Ennabe of Ennabe Properties, Inc. to consider a Design Review of project plans for the construction of: 1) a 30-unit multi-family residential development, consisting of a 47,065-square-foot 4-story building; and 2) to repurpose an existing 1,590 square foot historic building as a recreation room. The 0.48-acre site is currently developed with two commercial buildings and a parking lot and is located at 4135 Market Street, situated on the southwest corner of Eleventh and Market Streets, in the DSP-JC - Downtown Specific Plan - Justice Center District, in Ward 1.	RIVERSIDE	CA	92501	0.48		47065	30	No Data	215251004	Proposed	4135 Market St	1	-13066488	4026052.9
355	PR-2023-001469	3093 Mission Inn Avenue	Proposal by Darrin Olson of Iron Lofts, LLC to consider the following entitlements to facilitate the construction of a Mixed Use development consisting of 363 residential dwelling units and 2,000 square feet of retail space: 1) General Plan Amendment to change the General Plan Land Use designation from B/OP – Business/Office Park to MU-U -Mixed Use – Urban, 2) A Zoning Code Amendment to rezone the property from BMP-SP – Business and Manufacturing Park and Specific Plan (Riverside Marketplace) Overlay Zones and BMP-SP-CR – Business and Manufacturing Park, Specific Plan (Riverside Marketplace), and Cultural Resources Overlay Zones to MU-U-SP – Mixed Use-Urban and Specific Plan (Riverside Marketplace) Overlay Zones and MU-U-SP-CR – Mixed Use-Urban and Specific Plan (Riverside Marketplace), and Cultural Resources Overlay Zones (Structure of Merit and Seventh East Historic District); 3) A Specific Plan Amendment to amend the Riverside Marketplace Specific Plan to expand the Mixed Use Marketplace Sub Area to include the subject properties; 4) a Tentative Tract Map to combine 13 parcels into two parcels, dedicate right-of-way, vacate an alley, and vacate a portion of 6th Street, 5) A Site Plan Review for the proposed Mixed Use development, and 6) A Certificate of Appropriateness for infill within historic district and the integration of the two Structures of Merit structures located at 2993 Mission Inn Avenue and 3596 Commerce Street into the project. The 8.57-acre project site consists of 13 parcels, a 0.63-acre portion of 6th Street, and 0.15-acre portion of an alley and is partially developed with industrial buildings. The project site is located on the east side of Commerce Street between Mission Inn Avenue and 4th Street, in BMP-SP – Business and Manufacturing Park and Specific Plan (Riverside Marketplace) Overlay Zones and in the BMP-SP-CR – Business and Manufacturing Park, Specific Plan (Riverside Marketplace), and Cultural Resources Overlay Zones, in Ward 2.	Riverside	CA	92507	8.57	No Data		363	No Data	211072002 211072001 211071002 211071001 211072021 211072020 211072004 211071024 211071005 211071004 211071023 211022027 211072022 211022026	Proposed	3093 Mission Inn Ave	1	-13065119	4026086.3
391	PR-2023-001580	SEC Nash St & N Orange St	Proposal by Monica Torres of BC&MT Investors to consider a Design Review of project plans for the construction of a 1,386 square-foot manufacturing dwelling and a 441 square-foot attached garage. The vacant 0.22-acre project site (APN: 246-230-031) is situated on the south side of Orange Street between Nash Street and Chase Road, in the NSP-MDR – Northside Specific Plan – Medium Density Residential Zone	Riverside	CA	92501	0.22	No Data		1	No Data	246230031	Proposed	992 Orange St	1	-13063917	4029755.1
392	PR-2023-001585	SEC Nash St & N Orange St	Proposal by Monica Torres of BC&MT Investors to consider a Design Review of project plans for the construction of a 1,526 square-foot manufacturing dwelling and a 441 square-foot attached garage. The vacant 0.22-acre project site (APN: 246-230-033) is situated on the south side of Orange Street between Nash Street and Chase Road, in the NSP-MDR – Northside Specific Plan – Medium Density Residential Zone.	Riverside	CA	92501	0.22	No Data		1	No Data	246230033	Proposed	952 Orange St	1	-13063856	4029821.5
394	PR-2023-001586	SEC Nash St & N Orange St	Proposal by Monica Torres of BC&MT Investors to consider a Design Review of project plans for the construction of a 1,386 square-foot manufacturing dwelling and a 441 square-foot attached garage. The vacant 0.28-acre project site (APN: 246-230-034) is situated on the south side of Orange Street between Nash Street and Chase Road, in the NSP-MDR – Northside Specific Plan – Medium Density Residential Zone.	Riverside	CA	92501	0.28	No Data		1	No Data	246230034	Proposed	988 Orange St	1	-13063805	4029772.9
403	N/A	2060 University Ave	Proposal by the City of Riverside and CannonDesign to construct a 15,000 square foot library (Jesus S. Duran Eastside Library), parking lot modifications and landscape improvements. The 13.7-acre (City-owned) project site is developed with Bobby Bonds Park and Cesar Chavez Community Center, in the PF-CR – Public Facilities and Cultural Resources Overlay Zones, in Ward 1.	Riverside	CA	92507	13.7		15000	No Data	No Data	221040025	Proposed	2060 University Ave	1	-13064047	4025454.1

414	N/A	900 Clark St	Proposal by the City of Riverside to construct an agricultural research and development facility, which will consist of a 14,000 square foot learning center, solar PV greenhouses totaling 50,000 square feet, 7-acres of open space, surface parking lot, and landscaping. The project site is located on two parcels totaling 8.8 acres, situated on the east and west sides of Clark Street and south of Chase Road, in the NSP – OS Northside Specific Plan – Open Space, Parks & Trails Zone.	Riverside	CA	92501	8.8	64000	No Data	No Data	246230020, 24(	Proposed	900 Clark St	1	-13063526	4029796.1
417	PR-2024-001668	4545 Allstate Dr	Proposal by Anthony Massaro on behalf of Mars Hill Studio, Inc. to consider a Conditional Use Permit to establish a church in an existing commercial office building. The 0.23-acre site is developed with one 3,041-square-foot single story building and is located at 4545 Allstate Drive, situated on the north side of Allstate Drive, between Rivera Street and Atlas Drive, in the NSP-B/OP – Northside Specific Plan – Business Office Park Zone.	Riverside	CA	92501	0.23	No Data	No Data	No Data	207180013	Proposed	4545 Allstate Dr	1	-13066243	4029333.2
430	PR-2021-001217	4500 Allstate Drive	Proposal by Rick Jaeger of TR Design Group to consider the following entitlements: 1) Conditional Use Permit to permit the construction of a vehicle fuel station with a 5,678 square foot multi-tenant commercial building with a convenience store, a 3,490 square foot gasoline pump canopy with 12 pumps, and off-sale of alcohol (Type 20 – Off-Sale Beer & Wine); and 2) Design Review of project plans. The 0.98-acre vacant project site is located at 4500 Allstate Drive, situated on the west side of Rivera Street between Allstate Drive and Market Street in the NSP-B/OP – Business Office Park and Specific Plan (Northside) Overlay Zones, in Ward 1.	Riverside	CA	92501	0.98	5,678 / 12 MPDs	No Data	CPC AP 02/16/2023	207180029	Proposed	4500 Allstate Dr	1	-13066171	4029249.3
431	PR-2021-001239	2069 Massachusetts Avenue	Proposal by Kevin Staley of Staley Point Capital to consider the following entitlements for the construction of two industrial buildings, totaling 199,998 square feet; 1) Minor Conditional Use Permit for industrial buildings; and 2) Design Review of site plan and building elevations. The 10.21-acre project site consists of two, partially developed parcels, located at 2069 Massachusetts Avenue and 2626 Kansas Avenue, situated on the east side of Kansas Avenue, between Massachusetts Avenue and Roberta Street, in the EE – Employment Emphasis and HE – Housing Emphasis subdistricts of the ID – Innovation District Overlay Zone, in Ward 1.	Riverside	CA	92507	10.21	199998	No Data	No Data	210130016	Proposed	2069 Massachusetts Ave	2	-13064079	4027014.1
432	PR-2022-001255	SEC Primer Street and Interchange Street	Proposal by KVM Partners, LLC to consider the following entitlements for a drive-thru coffee shop: 1) Conditional Use Permit to permit a 1,100 square foot drive-thru restaurant; 2) Design Review of project plans; 3) Variance to allow fewer on-site parking spaces than required by the Zoning Code; and 4) Variance to allow a reduced landscape setback. The 0.22-acre vacant project site is situated on the east side of Primer Street between Interchange Street and Columbia Avenue, in the NSP-FMU – Northside Specific Plan – Freeway Mixed Use Zone, in Ward 1.	Riverside	CA	No Data	0.22	1100	No Data	No Data	206-121-001	Proposed	Primer St & Interchange S	1	-13063658	4029214.2
444	PR-2023-001482	3112 Kansas Avenue	Proposal by Jeremy Mape of Western RealCo to consider a Rezone of a 21-acre project site to I – Industrial. The project site consists of three contiguous parcels (210-160-001, 210-160-008, and 210-160-009), which are currently developed with manufacturing and warehouses buildings. The site is located at 3016-3112 Kansas Avenue, situated on the southeast corner of Kansas and Massachusetts Avenues, in the I-ID – Industrial and Innovation District Overlay Zones, in Ward 1.	Riverside	CA	92507	21	No Data	No Data	No Data	210160001, 21(	Proposed	3112 Kansas Ave	2	-13064139	4026708.4
445	PR-2023-001500	1385 Linden Street	Proposal by Dr. Virgie Rentie of REACH Leadership S.T.E.A.M. Academy for a Conditional Use Permit and Design Review of plans to construct a charter middle school (grades 5th-8th) consisting of five modular classroom buildings, a gymnasium, and an outdoor Amphitheatre. The 3.95-acre project site consists of two contiguous parcels, one of which is developed with a single-family residence and the other which is developed with a church (Bridges Church). The project site is located at 1363 Linden Street and 3491 Iowa Avenue, situated on the northwest corner of Linden Street and Iowa Avenue, in the MU-V - Mixed Use Village zone, in Ward 2.	Riverside	CA	92507	3.95	No Data	No Data	No Data	250140036, 25(	Proposed	1385 Linden St	2	-13062407	4026035.6
448	PR-2023-001584	SEC Nash St & N Orange St	Proposal by Monica Torres of BC&MT Investors to consider a Design Review of project plans for the construction of a 1,173 square-foot manufacturing dwelling and a 441 square-foot attached garage. The vacant 0.21-acre project site (APN: 246-230-032) is situated on the south side of Orange Street between Nash Street and Chase Road, in the NSP-MDR – Northside Specific Plan – Medium Density Residential Zone.	Riverside	CA	92501	0.21	No Data	1	No Data	246230032	Proposed	996 Orange St	1	-13063714	4030138.2
452	PR-2024-001666	2626 Kansas Ave & 2069 Massachusetts Ave	Proposal by Mike Kang of SCIND Massachusetts Point, LLC, to consider a Design Review of project plans to facilitate development of two warehouse buildings consisting of 99,900 square feet and 99,950 square feet. The project site is partially developed and consists of two contiguous parcels totaling 10.21 acres, located at 2626 Kansas Avenue and 2069 Massachusetts Avenue, situated on the east side of Kansas Avenue, between Massachusetts Avenue and Roberta Street, in the ID – Innovation District (EE – Employment Emphasis and HE – Housing Emphasis subdistricts) Overlay Zone.	Riverside	CA	92507	10.21	199850	No Data	No Data	210130015, 21(	Proposed	2069 Massachusetts Ave	2	-13064079	4027014.1

Appendix K

RIVCOM Traffic Volume Outputs


Traffic Volumes
RIVCOM Base Year
Daily Flow
POMONA FWY
SR60HOV
MORENO VALLEY FWY
SR 91 HOV
RIVERSIDE FWY
MARKET ST
POPLAR ST
MAIN ST
MULBERRY ST
VINE ST
1ST ST
E LA CADENA DR
ROBERTA ST
SPRUCE ST
MASSACHUSETTS AVE
3RD ST
W LINDEN ST
7TH ST
9TH ST
10TH ST
12TH ST
14TH ST
5TH ST
MISSION INN AVE
UNIVERSITY AVE
REDWOOD DR
PINE ST
BROCKTON AVE
ORANGE ST
LEMON ST
LIME ST
JACK B CLARKE WAY
PARK AVE
EUCALYPTUS AVE
KANSAS AVE
Map layers
Base Year Network
HCMTYPE
CC (6867)
0 .05 .1 .15
Miles


Traffic Volumes
RIVCOM Future Year
Daily Flow
MARKET ST
POPLAR ST
DOWN ST
SR60HOV
MORENO VALLEY FWY
SPRUCE ST
ROBERTA ST
SR 91 HOV
E LA CADENA DR
5TH ST
MAIN ST
REDWOOD DR
PINE ST
1ST ST
MASSACHUSETTS AVE
MISSION INN AVE
LEMON ST
MULBERRY ST
VINE ST
RIVERSIDE DRY
3RD ST
PARK AVE
EUCALYPTUS AVE
KANSAS AVE
UNIVERSITY AVE
12TH ST
LIME ST
JACK B CLARKE WAY
W LINDEN ST
14TH ST
ORANGE ST
BROCKTON AVE
7TH ST
Map layers
Future Year Network
Centroid Connectors
0 .05 .1 .15
Miles

Appendix L

Traffic Signal Warrant Worksheets

Appendix L-1

Existing Conditions Analysis

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	290	29	14
2	281	28	14
3	276	28	13
4	258	26	12
5	229	23	11
6	226	23	11
7	223	22	11
8	203	20	10
9	200	20	10
10	197	20	10
11	171	17	8
12	160	16	8
13	157	16	8
14	116	12	6
15	116	12	6
16	81	8	4
17	46	5	2
18	46	5	2
19	26	3	1
20	15	1	1
21	9	1	0
22	3	0	0
23	3	0	0
24	3	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	319	1	14	No	No	No	No	No	No	No	No	No	No
2	3	309	1	14	No	No	No	No	No	No	No	No	No	No
3	3	304	1	13	No	No	No	No	No	No	No	No	No	No
4	3	284	1	12	No	No	No	No	No	No	No	No	No	No
5	3	252	1	11	No	No	No	No	No	No	No	No	No	No
6	3	249	1	11	No	No	No	No	No	No	No	No	No	No
7	3	245	1	11	No	No	No	No	No	No	No	No	No	No
8	3	223	1	10	No	No	No	No	No	No	No	No	No	No
9	3	220	1	10	No	No	No	No	No	No	No	No	No	No
10	3	217	1	10	No	No	No	No	No	No	No	No	No	No
11	3	188	1	8	No	No	No	No	No	No	No	No	No	No
12	3	176	1	8	No	No	No	No	No	No	No	No	No	No
13	3	173	1	8	No	No	No	No	No	No	No	No	No	No
14	3	128	1	6	No	No	No	No	No	No	No	No	No	No
15	3	128	1	6	No	No	No	No	No	No	No	No	No	No
16	3	89	1	4	No	No	No	No	No	No	No	No	No	No
17	3	51	1	2	No	No	No	No	No	No	No	No	No	No
18	3	51	1	2	No	No	No	No	No	No	No	No	No	No
19	3	29	1	1	No	No	No	No	No	No	No	No	No	No
20	3	16	1	1	No	No	No	No	No	No	No	No	No	No
21	3	10	1	0	No	No	No	No	No	No	No	No	No	No
22	3	3	1	0	No	No	No	No	No	No	No	No	No	No
23	3	3	1	0	No	No	No	No	No	No	No	No	No	No
24	3	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	14
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	333
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	717	373	6
2	695	362	6
3	681	354	6
4	638	332	5
5	566	295	5
6	559	291	5
7	552	287	5
8	502	261	4
9	495	257	4
10	488	254	4
11	423	220	4
12	394	205	3
13	387	201	3
14	287	149	2
15	287	149	2
16	201	104	2
17	115	60	1
18	115	60	1
19	65	34	1
20	36	19	0
21	22	11	0
22	7	4	0
23	7	4	0
24	7	4	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1090	1	6	No	No	No	No	No	No	No	No	No	No
2	3	1057	1	6	No	No	No	No	No	No	No	No	No	No
3	3	1035	1	6	No	No	No	No	No	No	No	No	No	No
4	3	970	1	5	No	No	No	No	No	No	No	No	No	No
5	3	861	1	5	No	No	No	No	No	No	No	No	No	No
6	3	850	1	5	No	No	No	No	No	No	No	No	No	No
7	3	839	1	5	No	No	No	No	No	No	No	No	No	No
8	3	763	1	4	No	No	No	No	No	No	No	No	No	No
9	3	752	1	4	No	No	No	No	No	No	No	No	No	No
10	3	742	1	4	No	No	No	No	No	No	No	No	No	No
11	3	643	1	4	No	No	No	No	No	No	No	No	No	No
12	3	599	1	3	No	No	No	No	No	No	No	No	No	No
13	3	588	1	3	No	No	No	No	No	No	No	No	No	No
14	3	436	1	2	No	No	No	No	No	No	No	No	No	No
15	3	436	1	2	No	No	No	No	No	No	No	No	No	No
16	3	305	1	2	No	No	No	No	No	No	No	No	No	No
17	3	175	1	1	No	No	No	No	No	No	No	No	No	No
18	3	175	1	1	No	No	No	No	No	No	No	No	No	No
19	3	99	1	1	No	No	No	No	No	No	No	No	No	No
20	3	55	1	0	No	No	No	No	No	No	No	No	No	No
21	3	33	1	0	No	No	No	No	No	No	No	No	No	No
22	3	11	1	0	No	No	No	No	No	No	No	No	No	No
23	3	11	1	0	No	No	No	No	No	No	No	No	No	No
24	3	11	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	6
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1096
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	788	548	28	25
2	764	532	27	24
3	749	521	27	24
4	701	488	25	22
5	623	433	22	20
6	615	427	22	20
7	607	422	22	19
8	552	384	20	18
9	544	378	19	17
10	536	373	19	17
11	465	323	17	15
12	433	301	15	14
13	426	296	15	14
14	315	219	11	10
15	315	219	11	10
16	221	153	8	7
17	126	88	4	4
18	126	88	4	4
19	71	49	3	2
20	39	27	1	1
21	24	16	1	1
22	8	5	0	0
23	8	5	0	0
24	8	5	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1336	1	28	No	No	No	No	No	No	No	No	No	No
2	3	1296	1	27	No	No	No	No	No	No	No	No	No	No
3	3	1270	1	27	No	No	No	No	No	No	No	No	No	No
4	3	1189	1	25	No	No	No	No	No	No	No	No	No	No
5	3	1056	1	22	No	No	No	No	No	No	No	No	No	No
6	3	1042	1	22	No	No	No	No	No	No	No	No	No	No
7	3	1029	1	22	No	No	No	No	No	No	No	No	No	No
8	3	936	1	20	No	No	No	No	No	No	No	No	No	No
9	3	922	1	19	No	No	No	No	No	No	No	No	No	No
10	3	909	1	19	No	No	No	No	No	No	No	No	No	No
11	3	788	1	17	No	No	No	No	No	No	No	No	No	No
12	3	734	1	15	No	No	No	No	No	No	No	No	No	No
13	3	722	1	15	No	No	No	No	No	No	No	No	No	No
14	3	534	1	11	No	No	No	No	No	No	No	No	No	No
15	3	534	1	11	No	No	No	No	No	No	No	No	No	No
16	3	374	1	8	No	No	No	No	No	No	No	No	No	No
17	3	214	1	4	No	No	No	No	No	No	No	No	No	No
18	3	214	1	4	No	No	No	No	No	No	No	No	No	No
19	3	120	1	3	No	No	No	No	No	No	No	No	No	No
20	3	66	1	1	No	No	No	No	No	No	No	No	No	No
21	3	40	1	1	No	No	No	No	No	No	No	No	No	No
22	3	13	1	0	No	No	No	No	No	No	No	No	No	No
23	3	13	1	0	No	No	No	No	No	No	No	No	No	No
24	3	13	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.8	16.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	0:07
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	28	25
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1389	1389
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	762	527	14	12
2	739	511	14	12
3	724	501	13	11
4	678	469	12	11
5	602	416	11	9
6	594	411	11	9
7	587	406	11	9
8	533	369	10	8
9	526	364	10	8
10	518	358	10	8
11	450	311	8	7
12	419	290	8	7
13	411	285	8	6
14	305	211	6	5
15	305	211	6	5
16	213	148	4	3
17	122	84	2	2
18	122	84	2	2
19	69	47	1	1
20	38	26	1	1
21	23	16	0	0
22	8	5	0	0
23	8	5	0	0
24	8	5	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1289	1	14	No	No	No	No	No	No	No	No	No	No
2	3	1250	1	14	No	No	No	No	No	No	No	No	No	No
3	3	1225	1	13	No	No	No	No	No	No	No	No	No	No
4	3	1147	1	12	No	No	No	No	No	No	No	No	No	No
5	3	1018	1	11	No	No	No	No	No	No	No	No	No	No
6	3	1005	1	11	No	No	No	No	No	No	No	No	No	No
7	3	993	1	11	No	No	No	No	No	No	No	No	No	No
8	3	902	1	10	No	No	No	No	No	No	No	No	No	No
9	3	890	1	10	No	No	No	No	No	No	No	No	No	No
10	3	876	1	10	No	No	No	No	No	No	No	No	No	No
11	3	761	1	8	No	No	No	No	No	No	No	No	No	No
12	3	709	1	8	No	No	No	No	No	No	No	No	No	No
13	3	696	1	8	No	No	No	No	No	No	No	No	No	No
14	3	516	1	6	No	No	No	No	No	No	No	No	No	No
15	3	516	1	6	No	No	No	No	No	No	No	No	No	No
16	3	361	1	4	No	No	No	No	No	No	No	No	No	No
17	3	206	1	2	No	No	No	No	No	No	No	No	No	No
18	3	206	1	2	No	No	No	No	No	No	No	No	No	No
19	3	116	1	1	No	No	No	No	No	No	No	No	No	No
20	3	64	1	1	No	No	No	No	No	No	No	No	No	No
21	3	39	1	0	No	No	No	No	No	No	No	No	No	No
22	3	13	1	0	No	No	No	No	No	No	No	No	No	No
23	3	13	1	0	No	No	No	No	No	No	No	No	No	No
24	3	13	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.2	11.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	14	12
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1315	1315
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	697	502	29	22
2	676	487	28	21
3	662	477	28	21
4	620	447	26	20
5	551	397	23	17
6	544	392	23	17
7	537	387	22	17
8	488	351	20	15
9	481	346	20	15
10	474	341	20	15
11	411	296	17	13
12	383	276	16	12
13	376	271	16	12
14	279	201	12	9
15	279	201	12	9
16	195	141	8	6
17	112	80	5	4
18	112	80	5	4
19	63	45	3	2
20	35	25	1	1
21	21	15	1	1
22	7	5	0	0
23	7	5	0	0
24	7	5	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1199	1	29	No	No	No	No	No	No	No	No	No	No
2	3	1163	1	28	No	No	No	No	No	No	No	No	No	No
3	3	1139	1	28	No	No	No	No	No	No	No	No	No	No
4	3	1067	1	26	No	No	No	No	No	No	No	No	No	No
5	3	948	1	23	No	No	No	No	No	No	No	No	No	No
6	3	936	1	23	No	No	No	No	No	No	No	No	No	No
7	3	924	1	22	No	No	No	No	No	No	No	No	No	No
8	3	839	1	20	No	No	No	No	No	No	No	No	No	No
9	3	827	1	20	No	No	No	No	No	No	No	No	No	No
10	3	815	1	20	No	No	No	No	No	No	No	No	No	No
11	3	707	1	17	No	No	No	No	No	No	No	No	No	No
12	3	659	1	16	No	No	No	No	No	No	No	No	No	No
13	3	647	1	16	No	No	No	No	No	No	No	No	No	No
14	3	480	1	12	No	No	No	No	No	No	No	No	No	No
15	3	480	1	12	No	No	No	No	No	No	No	No	No	No
16	3	336	1	8	No	No	No	No	No	No	No	No	No	No
17	3	192	1	5	No	No	No	No	No	No	No	No	No	No
18	3	192	1	5	No	No	No	No	No	No	No	No	No	No
19	3	108	1	3	No	No	No	No	No	No	No	No	No	No
20	3	60	1	1	No	No	No	No	No	No	No	No	No	No
21	3	36	1	1	No	No	No	No	No	No	No	No	No	No
22	3	12	1	0	No	No	No	No	No	No	No	No	No	No
23	3	12	1	0	No	No	No	No	No	No	No	No	No	No
24	3	12	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	20.5	24.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09	0:09
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	29	22
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1250	1250
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	522	595	32	11
2	506	577	31	11
3	496	565	30	10
4	465	530	28	10
5	412	470	25	9
6	407	464	25	9
7	402	458	25	8
8	365	417	22	8
9	360	411	22	8
10	355	405	22	7
11	308	351	19	6
12	287	327	18	6
13	282	321	17	6
14	209	238	13	4
15	209	238	13	4
16	146	167	9	3
17	84	95	5	2
18	84	95	5	2
19	47	54	3	1
20	26	30	2	1
21	16	18	1	0
22	5	6	0	0
23	5	6	0	0
24	5	6	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1117	1	32	No	No	No	No	No	No	No	No	No	No
2	3	1083	1	31	No	No	No	No	No	No	No	No	No	No
3	3	1061	1	30	No	No	No	No	No	No	No	No	No	No
4	3	995	1	28	No	No	No	No	No	No	No	No	No	No
5	3	882	1	25	No	No	No	No	No	No	No	No	No	No
6	3	871	1	25	No	No	No	No	No	No	No	No	No	No
7	3	860	1	25	No	No	No	No	No	No	No	No	No	No
8	3	782	1	22	No	No	No	No	No	No	No	No	No	No
9	3	771	1	22	No	No	No	No	No	No	No	No	No	No
10	3	760	1	22	No	No	No	No	No	No	No	No	No	No
11	3	659	1	19	No	No	No	No	No	No	No	No	No	No
12	3	614	1	18	No	No	No	No	No	No	No	No	No	No
13	3	603	1	17	No	No	No	No	No	No	No	No	No	No
14	3	447	1	13	No	No	No	No	No	No	No	No	No	No
15	3	447	1	13	No	No	No	No	No	No	No	No	No	No
16	3	313	1	9	No	No	No	No	No	No	No	No	No	No
17	3	179	1	5	No	No	No	No	No	No	No	No	No	No
18	3	179	1	5	No	No	No	No	No	No	No	No	No	No
19	3	101	1	3	No	No	No	No	No	No	No	No	No	No
20	3	56	1	2	No	No	No	No	No	No	No	No	No	No
21	3	34	1	1	No	No	No	No	No	No	No	No	No	No
22	3	11	1	0	No	No	No	No	No	No	No	No	No	No
23	3	11	1	0	No	No	No	No	No	No	No	No	No	No
24	3	11	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	16.9	17.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09	0:03
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	32	11
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1160	1160
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	69	55	3
2	67	53	3
3	66	52	3
4	61	49	3
5	55	43	2
6	54	43	2
7	53	42	2
8	48	39	2
9	48	38	2
10	47	37	2
11	41	32	2
12	38	30	2
13	37	30	2
14	28	22	1
15	28	22	1
16	19	15	1
17	11	9	0
18	11	9	0
19	6	5	0
20	3	3	0
21	2	2	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	124	1	3	No	No	No	No	No	No	No	No	No	No
2	2	120	1	3	No	No	No	No	No	No	No	No	No	No
3	2	118	1	3	No	No	No	No	No	No	No	No	No	No
4	2	110	1	3	No	No	No	No	No	No	No	No	No	No
5	2	98	1	2	No	No	No	No	No	No	No	No	No	No
6	2	97	1	2	No	No	No	No	No	No	No	No	No	No
7	2	95	1	2	No	No	No	No	No	No	No	No	No	No
8	2	87	1	2	No	No	No	No	No	No	No	No	No	No
9	2	86	1	2	No	No	No	No	No	No	No	No	No	No
10	2	84	1	2	No	No	No	No	No	No	No	No	No	No
11	2	73	1	2	No	No	No	No	No	No	No	No	No	No
12	2	68	1	2	No	No	No	No	No	No	No	No	No	No
13	2	67	1	2	No	No	No	No	No	No	No	No	No	No
14	2	50	1	1	No	No	No	No	No	No	No	No	No	No
15	2	50	1	1	No	No	No	No	No	No	No	No	No	No
16	2	34	1	1	No	No	No	No	No	No	No	No	No	No
17	2	20	1	0	No	No	No	No	No	No	No	No	No	No
18	2	20	1	0	No	No	No	No	No	No	No	No	No	No
19	2	11	1	0	No	No	No	No	No	No	No	No	No	No
20	2	6	1	0	No	No	No	No	No	No	No	No	No	No
21	2	4	1	0	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	3
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	127
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	64	22	97	82
2	62	21	94	80
3	61	21	92	78
4	57	20	86	73
5	51	17	77	65
6	50	17	76	64
7	49	17	75	63
8	45	15	68	57
9	44	15	67	57
10	44	15	66	56
11	38	13	57	48
12	35	12	53	45
13	35	12	52	44
14	26	9	39	33
15	26	9	39	33
16	18	6	27	23
17	10	4	16	13
18	10	4	16	13
19	6	2	9	7
20	3	1	5	4
21	2	1	3	2
22	1	0	1	1
23	1	0	1	1
24	1	0	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	86	1	97	No	No	No	No	No	No	No	No	No	No
2	2	83	1	94	No	No	No	No	No	No	No	No	No	No
3	2	82	1	92	No	No	No	No	No	No	No	No	No	No
4	2	77	1	86	No	No	No	No	No	No	No	No	No	No
5	2	68	1	77	No	No	No	No	No	No	No	No	No	No
6	2	67	1	76	No	No	No	No	No	No	No	No	No	No
7	2	66	1	75	No	No	No	No	No	No	No	No	No	No
8	2	60	1	68	No	No	No	No	No	No	No	No	No	No
9	2	59	1	67	No	No	No	No	No	No	No	No	No	No
10	2	59	1	66	No	No	No	No	No	No	No	No	No	No
11	2	51	1	57	No	No	No	No	No	No	No	No	No	No
12	2	47	1	53	No	No	No	No	No	No	No	No	No	No
13	2	47	1	52	No	No	No	No	No	No	No	No	No	No
14	2	35	1	39	No	No	No	No	No	No	No	No	No	No
15	2	35	1	39	No	No	No	No	No	No	No	No	No	No
16	2	24	1	27	No	No	No	No	No	No	No	No	No	No
17	2	14	1	16	No	No	No	No	No	No	No	No	No	No
18	2	14	1	16	No	No	No	No	No	No	No	No	No	No
19	2	8	1	9	No	No	No	No	No	No	No	No	No	No
20	2	4	1	5	No	No	No	No	No	No	No	No	No	No
21	2	3	1	3	No	No	No	No	No	No	No	No	No	No
22	2	1	1	1	No	No	No	No	No	No	No	No	No	No
23	2	1	1	1	No	No	No	No	No	No	No	No	No	No
24	2	1	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	7.8	7.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:12	0:10
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	97	82
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	265	265
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	52	32	28	33
2	50	31	27	32
3	49	30	27	31
4	46	28	25	29
5	41	25	22	26
6	41	25	22	26
7	40	25	22	25
8	36	22	20	23
9	36	22	19	23
10	35	22	19	22
11	31	19	17	19
12	29	18	15	18
13	28	17	15	18
14	21	13	11	13
15	21	13	11	13
16	15	9	8	9
17	8	5	4	5
18	8	5	4	5
19	5	3	3	3
20	3	2	1	2
21	2	1	1	1
22	1	0	0	0
23	1	0	0	0
24	1	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	84	1	33	No	No	No	No	No	No	No	No	No	No
2	3	81	1	32	No	No	No	No	No	No	No	No	No	No
3	3	79	1	31	No	No	No	No	No	No	No	No	No	No
4	3	74	1	29	No	No	No	No	No	No	No	No	No	No
5	3	66	1	26	No	No	No	No	No	No	No	No	No	No
6	3	66	1	26	No	No	No	No	No	No	No	No	No	No
7	3	65	1	25	No	No	No	No	No	No	No	No	No	No
8	3	58	1	23	No	No	No	No	No	No	No	No	No	No
9	3	58	1	23	No	No	No	No	No	No	No	No	No	No
10	3	57	1	22	No	No	No	No	No	No	No	No	No	No
11	3	50	1	19	No	No	No	No	No	No	No	No	No	No
12	3	47	1	18	No	No	No	No	No	No	No	No	No	No
13	3	45	1	18	No	No	No	No	No	No	No	No	No	No
14	3	34	1	13	No	No	No	No	No	No	No	No	No	No
15	3	34	1	13	No	No	No	No	No	No	No	No	No	No
16	3	24	1	9	No	No	No	No	No	No	No	No	No	No
17	3	13	1	5	No	No	No	No	No	No	No	No	No	No
18	3	13	1	5	No	No	No	No	No	No	No	No	No	No
19	3	8	1	3	No	No	No	No	No	No	No	No	No	No
20	3	5	1	2	No	No	No	No	No	No	No	No	No	No
21	3	3	1	1	No	No	No	No	No	No	No	No	No	No
22	3	1	1	0	No	No	No	No	No	No	No	No	No	No
23	3	1	1	0	No	No	No	No	No	No	No	No	No	No
24	3	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	7.8	7.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03	0:04
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	28	33
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	145	145
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	133	143	6	8
2	129	139	6	8
3	126	136	6	8
4	118	127	5	7
5	105	113	5	6
6	104	112	5	6
7	102	110	5	6
8	93	100	4	6
9	92	99	4	6
10	90	97	4	5
11	78	84	4	5
12	73	79	3	4
13	72	77	3	4
14	53	57	2	3
15	53	57	2	3
16	37	40	2	2
17	21	23	1	1
18	21	23	1	1
19	12	13	1	1
20	7	7	0	0
21	4	4	0	0
22	1	1	0	0
23	1	1	0	0
24	1	1	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	276	1	8	No	No	No	No	No	No	No	No	No	No
2	2	268	1	8	No	No	No	No	No	No	No	No	No	No
3	2	262	1	8	No	No	No	No	No	No	No	No	No	No
4	2	245	1	7	No	No	No	No	No	No	No	No	No	No
5	2	218	1	6	No	No	No	No	No	No	No	No	No	No
6	2	216	1	6	No	No	No	No	No	No	No	No	No	No
7	2	212	1	6	No	No	No	No	No	No	No	No	No	No
8	2	193	1	6	No	No	No	No	No	No	No	No	No	No
9	2	191	1	6	No	No	No	No	No	No	No	No	No	No
10	2	187	1	5	No	No	No	No	No	No	No	No	No	No
11	2	162	1	5	No	No	No	No	No	No	No	No	No	No
12	2	152	1	4	No	No	No	No	No	No	No	No	No	No
13	2	149	1	4	No	No	No	No	No	No	No	No	No	No
14	2	110	1	3	No	No	No	No	No	No	No	No	No	No
15	2	110	1	3	No	No	No	No	No	No	No	No	No	No
16	2	77	1	2	No	No	No	No	No	No	No	No	No	No
17	2	44	1	1	No	No	No	No	No	No	No	No	No	No
18	2	44	1	1	No	No	No	No	No	No	No	No	No	No
19	2	25	1	1	No	No	No	No	No	No	No	No	No	No
20	2	14	1	0	No	No	No	No	No	No	No	No	No	No
21	2	8	1	0	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.8	8.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00	0:01
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	6	8
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	290	290
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	143	212	17	45
2	139	206	16	44
3	136	201	16	43
4	127	189	15	40
5	113	167	13	36
6	112	165	13	35
7	110	163	13	35
8	100	148	12	31
9	99	146	12	31
10	97	144	12	31
11	84	125	10	27
12	79	117	9	25
13	77	114	9	24
14	57	85	7	18
15	57	85	7	18
16	40	59	5	13
17	23	34	3	7
18	23	34	3	7
19	13	19	2	4
20	7	11	1	2
21	4	6	1	1
22	1	2	0	0
23	1	2	0	0
24	1	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	355	1	45	No	No	No	No	No	No	No	No	No	No
2	1	345	1	44	No	No	No	No	No	No	No	No	No	No
3	1	337	1	43	No	No	No	No	No	No	No	No	No	No
4	1	316	1	40	No	No	No	No	No	No	No	No	No	No
5	1	280	1	36	No	No	No	No	No	No	No	No	No	No
6	1	277	1	35	No	No	No	No	No	No	No	No	No	No
7	1	273	1	35	No	No	No	No	No	No	No	No	No	No
8	1	248	1	31	No	No	No	No	No	No	No	No	No	No
9	1	245	1	31	No	No	No	No	No	No	No	No	No	No
10	1	241	1	31	No	No	No	No	No	No	No	No	No	No
11	1	209	1	27	No	No	No	No	No	No	No	No	No	No
12	1	196	1	25	No	No	No	No	No	No	No	No	No	No
13	1	191	1	24	No	No	No	No	No	No	No	No	No	No
14	1	142	1	18	No	No	No	No	No	No	No	No	No	No
15	1	142	1	18	No	No	No	No	No	No	No	No	No	No
16	1	99	1	13	No	No	No	No	No	No	No	No	No	No
17	1	57	1	7	No	No	No	No	No	No	No	No	No	No
18	1	57	1	7	No	No	No	No	No	No	No	No	No	No
19	1	32	1	4	No	No	No	No	No	No	No	No	No	No
20	1	18	1	2	No	No	No	No	No	No	No	No	No	No
21	1	10	1	1	No	No	No	No	No	No	No	No	No	No
22	1	3	1	0	No	No	No	No	No	No	No	No	No	No
23	1	3	1	0	No	No	No	No	No	No	No	No	No	No
24	1	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.3	10.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03	0:07
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	17	45
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	417	417
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	437	347	14
2	424	337	14
3	415	330	13
4	389	309	12
5	345	274	11
6	341	271	11
7	336	267	11
8	306	243	10
9	302	239	10
10	297	236	10
11	258	205	8
12	240	191	8
13	236	187	8
14	175	139	6
15	175	139	6
16	122	97	4
17	70	56	2
18	70	56	2
19	39	31	1
20	22	17	1
21	13	10	0
22	4	3	0
23	4	3	0
24	4	3	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	784	1	14	No	No	No	No	No	No	No	No	No	No
2	3	761	1	14	No	No	No	No	No	No	No	No	No	No
3	3	745	1	13	No	No	No	No	No	No	No	No	No	No
4	3	698	1	12	No	No	No	No	No	No	No	No	No	No
5	3	619	1	11	No	No	No	No	No	No	No	No	No	No
6	3	612	1	11	No	No	No	No	No	No	No	No	No	No
7	3	603	1	11	No	No	No	No	No	No	No	No	No	No
8	3	549	1	10	No	No	No	No	No	No	No	No	No	No
9	3	541	1	10	No	No	No	No	No	No	No	No	No	No
10	3	533	1	10	No	No	No	No	No	No	No	No	No	No
11	3	463	1	8	No	No	No	No	No	No	No	No	No	No
12	3	431	1	8	No	No	No	No	No	No	No	No	No	No
13	3	423	1	8	No	No	No	No	No	No	No	No	No	No
14	3	314	1	6	No	No	No	No	No	No	No	No	No	No
15	3	314	1	6	No	No	No	No	No	No	No	No	No	No
16	3	219	1	4	No	No	No	No	No	No	No	No	No	No
17	3	126	1	2	No	No	No	No	No	No	No	No	No	No
18	3	126	1	2	No	No	No	No	No	No	No	No	No	No
19	3	70	1	1	No	No	No	No	No	No	No	No	No	No
20	3	39	1	1	No	No	No	No	No	No	No	No	No	No
21	3	23	1	0	No	No	No	No	No	No	No	No	No	No
22	3	7	1	0	No	No	No	No	No	No	No	No	No	No
23	3	7	1	0	No	No	No	No	No	No	No	No	No	No
24	3	7	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	14
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	798
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	1041	711	14
2	1010	690	14
3	989	675	13
4	926	633	12
5	822	562	11
6	812	555	11
7	802	547	11
8	729	498	10
9	718	491	10
10	708	483	10
11	614	419	8
12	573	391	8
13	562	384	8
14	416	284	6
15	416	284	6
16	291	199	4
17	167	114	2
18	167	114	2
19	94	64	1
20	52	36	1
21	31	21	0
22	10	7	0
23	10	7	0
24	10	7	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1752	1	14	No	No	No	No	No	No	No	No	No	No
2	3	1700	1	14	No	No	No	No	No	No	No	No	No	No
3	3	1664	1	13	No	No	No	No	No	No	No	No	No	No
4	3	1559	1	12	No	No	No	No	No	No	No	No	No	No
5	3	1384	1	11	No	No	No	No	No	No	No	No	No	No
6	3	1367	1	11	No	No	No	No	No	No	No	No	No	No
7	3	1349	1	11	No	No	No	No	No	No	No	No	No	No
8	3	1227	1	10	No	No	No	No	No	No	No	No	No	No
9	3	1209	1	10	No	No	No	No	No	No	No	No	No	No
10	3	1191	1	10	No	No	No	No	No	No	No	No	No	No
11	3	1033	1	8	No	No	No	No	No	No	No	No	No	No
12	3	964	1	8	No	No	No	No	No	No	No	No	No	No
13	3	946	1	8	No	No	No	No	No	No	No	No	No	No
14	3	700	1	6	No	No	No	No	No	No	No	No	No	No
15	3	700	1	6	No	No	No	No	No	No	No	No	No	No
16	3	490	1	4	No	No	No	No	No	No	No	No	No	No
17	3	281	1	2	No	No	No	No	No	No	No	No	No	No
18	3	281	1	2	No	No	No	No	No	No	No	No	No	No
19	3	158	1	1	No	No	No	No	No	No	No	No	No	No
20	3	88	1	1	No	No	No	No	No	No	No	No	No	No
21	3	52	1	0	No	No	No	No	No	No	No	No	No	No
22	3	17	1	0	No	No	No	No	No	No	No	No	No	No
23	3	17	1	0	No	No	No	No	No	No	No	No	No	No
24	3	17	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	18.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	14
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1766
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	791	902	14	22
2	767	875	14	21
3	751	857	13	21
4	704	803	12	20
5	625	713	11	17
6	617	704	11	17
7	609	695	11	17
8	554	631	10	15
9	546	622	10	15
10	538	613	10	15
11	467	532	8	13
12	435	496	8	12
13	427	487	8	12
14	316	361	6	9
15	316	361	6	9
16	221	253	4	6
17	127	144	2	4
18	127	144	2	4
19	71	81	1	2
20	40	45	1	1
21	24	27	0	1
22	8	9	0	0
23	8	9	0	0
24	8	9	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1693	1	22	No	No	No	No	No	No	No	No	No	No
2	3	1642	1	21	No	No	No	No	No	No	No	No	No	No
3	3	1608	1	21	No	No	No	No	No	No	No	No	No	No
4	3	1507	1	20	No	No	No	No	No	No	No	No	No	No
5	3	1338	1	17	No	No	No	No	No	No	No	No	No	No
6	3	1321	1	17	No	No	No	No	No	No	No	No	No	No
7	3	1304	1	17	No	No	No	No	No	No	No	No	No	No
8	3	1185	1	15	No	No	No	No	No	No	No	No	No	No
9	3	1168	1	15	No	No	No	No	No	No	No	No	No	No
10	3	1151	1	15	No	No	No	No	No	No	No	No	No	No
11	3	999	1	13	No	No	No	No	No	No	No	No	No	No
12	3	931	1	12	No	No	No	No	No	No	No	No	No	No
13	3	914	1	12	No	No	No	No	No	No	No	No	No	No
14	3	677	1	9	No	No	No	No	No	No	No	No	No	No
15	3	677	1	9	No	No	No	No	No	No	No	No	No	No
16	3	474	1	6	No	No	No	No	No	No	No	No	No	No
17	3	271	1	4	No	No	No	No	No	No	No	No	No	No
18	3	271	1	4	No	No	No	No	No	No	No	No	No	No
19	3	152	1	2	No	No	No	No	No	No	No	No	No	No
20	3	85	1	1	No	No	No	No	No	No	No	No	No	No
21	3	51	1	1	No	No	No	No	No	No	No	No	No	No
22	3	17	1	0	No	No	No	No	No	No	No	No	No	No
23	3	17	1	0	No	No	No	No	No	No	No	No	No	No
24	3	17	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.7	15.6
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	14	22
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1729	1729
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	744	892	48	49
2	722	865	47	48
3	707	847	46	47
4	662	794	43	44
5	588	705	38	39
6	580	696	37	38
7	573	687	37	38
8	521	624	34	34
9	513	615	33	34
10	506	607	33	33
11	439	526	28	29
12	409	491	26	27
13	402	482	26	26
14	298	357	19	20
15	298	357	19	20
16	208	250	13	14
17	119	143	8	8
18	119	143	8	8
19	67	80	4	4
20	37	45	2	2
21	22	27	1	1
22	7	9	0	0
23	7	9	0	0
24	7	9	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1636	1	49	No	No	No	No	No	No	No	Yes	No	No
2	3	1587	1	48	No	No	No	No	No	No	No	Yes	No	No
3	3	1554	1	47	No	No	No	No	No	No	No	Yes	No	No
4	3	1456	1	44	No	No	No	No	No	No	No	Yes	No	No
5	3	1293	1	39	No	No	No	No	No	No	No	No	No	No
6	3	1276	1	38	No	No	No	No	No	No	No	No	No	No
7	3	1260	1	38	No	No	No	No	No	No	No	No	No	No
8	3	1145	1	34	No	No	No	No	No	No	No	No	No	No
9	3	1128	1	34	No	No	No	No	No	No	No	No	No	No
10	3	1113	1	33	No	No	No	No	No	No	No	No	No	No
11	3	965	1	29	No	No	No	No	No	No	No	No	No	No
12	3	900	1	27	No	No	No	No	No	No	No	No	No	No
13	3	884	1	26	No	No	No	No	No	No	No	No	No	No
14	3	655	1	20	No	No	No	No	No	No	No	No	No	No
15	3	655	1	20	No	No	No	No	No	No	No	No	No	No
16	3	458	1	14	No	No	No	No	No	No	No	No	No	No
17	3	262	1	8	No	No	No	No	No	No	No	No	No	No
18	3	262	1	8	No	No	No	No	No	No	No	No	No	No
19	3	147	1	4	No	No	No	No	No	No	No	No	No	No
20	3	82	1	2	No	No	No	No	No	No	No	No	No	No
21	3	49	1	1	No	No	No	No	No	No	No	No	No	No
22	3	16	1	0	No	No	No	No	No	No	No	No	No	No
23	3	16	1	0	No	No	No	No	No	No	No	No	No	No
24	3	16	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.2	11.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09	0:09
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	48	49
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1733	1733
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	709	748	24	47
2	688	726	23	46
3	674	711	23	45
4	631	666	21	42
5	560	591	19	37
6	553	583	19	37
7	546	576	18	36
8	496	524	17	33
9	489	516	17	32
10	482	509	16	32
11	418	441	14	28
12	390	411	13	26
13	383	404	13	25
14	284	299	10	19
15	284	299	10	19
16	199	209	7	13
17	113	120	4	8
18	113	120	4	8
19	64	67	2	4
20	35	37	1	2
21	21	22	1	1
22	7	7	0	0
23	7	7	0	0
24	7	7	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1457	1	47	No	No	No	No	No	No	No	Yes	No	No
2	3	1414	1	46	No	No	No	No	No	No	No	Yes	No	No
3	3	1385	1	45	No	No	No	No	No	No	No	Yes	No	No
4	3	1297	1	42	No	No	No	No	No	No	No	Yes	No	No
5	3	1151	1	37	No	No	No	No	No	No	No	No	No	No
6	3	1136	1	37	No	No	No	No	No	No	No	No	No	No
7	3	1122	1	36	No	No	No	No	No	No	No	No	No	No
8	3	1020	1	33	No	No	No	No	No	No	No	No	No	No
9	3	1005	1	32	No	No	No	No	No	No	No	No	No	No
10	3	991	1	32	No	No	No	No	No	No	No	No	No	No
11	3	859	1	28	No	No	No	No	No	No	No	No	No	No
12	3	801	1	26	No	No	No	No	No	No	No	No	No	No
13	3	787	1	25	No	No	No	No	No	No	No	No	No	No
14	3	583	1	19	No	No	No	No	No	No	No	No	No	No
15	3	583	1	19	No	No	No	No	No	No	No	No	No	No
16	3	408	1	13	No	No	No	No	No	No	No	No	No	No
17	3	233	1	8	No	No	No	No	No	No	No	No	No	No
18	3	233	1	8	No	No	No	No	No	No	No	No	No	No
19	3	131	1	4	No	No	No	No	No	No	No	No	No	No
20	3	72	1	2	No	No	No	No	No	No	No	No	No	No
21	3	43	1	1	No	No	No	No	No	No	No	No	No	No
22	3	14	1	0	No	No	No	No	No	No	No	No	No	No
23	3	14	1	0	No	No	No	No	No	No	No	No	No	No
24	3	14	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.2	15.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06	0:12
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	24	47
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1528	1528
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	778	624	57	66
2	755	605	55	64
3	739	593	54	63
4	692	555	51	59
5	615	493	45	52
6	607	487	44	51
7	599	480	44	51
8	545	437	40	46
9	537	431	39	46
10	529	424	39	45
11	459	368	34	39
12	428	343	31	36
13	420	337	31	36
14	311	250	23	26
15	311	250	23	26
16	218	175	16	18
17	124	100	9	11
18	124	100	9	11
19	70	56	5	6
20	39	31	3	3
21	23	19	2	2
22	8	6	1	1
23	8	6	1	1
24	8	6	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1402	1	66	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	1360	1	64	No	No	No	No	No	Yes	Yes	Yes	No	No
3	3	1332	1	63	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	1247	1	59	No	No	No	No	No	No	Yes	Yes	No	No
5	3	1108	1	52	No	No	No	No	No	No	Yes	Yes	No	No
6	3	1094	1	51	No	No	No	No	No	No	No	Yes	No	No
7	3	1079	1	51	No	No	No	No	No	No	No	Yes	No	No
8	3	982	1	46	No	No	No	No	No	No	No	Yes	No	No
9	3	968	1	46	No	No	No	No	No	No	No	Yes	No	No
10	3	953	1	45	No	No	No	No	No	No	No	Yes	No	No
11	3	827	1	39	No	No	No	No	No	No	No	No	No	No
12	3	771	1	36	No	No	No	No	No	No	No	No	No	No
13	3	757	1	36	No	No	No	No	No	No	No	No	No	No
14	3	561	1	26	No	No	No	No	No	No	No	No	No	No
15	3	561	1	26	No	No	No	No	No	No	No	No	No	No
16	3	393	1	18	No	No	No	No	No	No	No	No	No	No
17	3	224	1	11	No	No	No	No	No	No	No	No	No	No
18	3	224	1	11	No	No	No	No	No	No	No	No	No	No
19	3	126	1	6	No	No	No	No	No	No	No	No	No	No
20	3	70	1	3	No	No	No	No	No	No	No	No	No	No
21	3	42	1	2	No	No	No	No	No	No	No	No	No	No
22	3	14	1	1	No	No	No	No	No	No	No	No	No	No
23	3	14	1	1	No	No	No	No	No	No	No	No	No	No
24	3	14	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	3	5	10	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.5	19.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13	0:21
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	57	66
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1525	1525
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	59	103	13
2	57	100	13
3	56	98	12
4	53	92	12
5	47	81	10
6	46	80	10
7	45	79	10
8	41	72	9
9	41	71	9
10	40	70	9
11	35	61	8
12	32	57	7
13	32	56	7
14	24	41	5
15	24	41	5
16	17	29	4
17	9	16	2
18	9	16	2
19	5	9	1
20	3	5	1
21	2	3	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	162	1	13	No	No	No	No	No	No	No	No	No	No
2	2	157	1	13	No	No	No	No	No	No	No	No	No	No
3	2	154	1	12	No	No	No	No	No	No	No	No	No	No
4	2	145	1	12	No	No	No	No	No	No	No	No	No	No
5	2	128	1	10	No	No	No	No	No	No	No	No	No	No
6	2	126	1	10	No	No	No	No	No	No	No	No	No	No
7	2	124	1	10	No	No	No	No	No	No	No	No	No	No
8	2	113	1	9	No	No	No	No	No	No	No	No	No	No
9	2	112	1	9	No	No	No	No	No	No	No	No	No	No
10	2	110	1	9	No	No	No	No	No	No	No	No	No	No
11	2	96	1	8	No	No	No	No	No	No	No	No	No	No
12	2	89	1	7	No	No	No	No	No	No	No	No	No	No
13	2	88	1	7	No	No	No	No	No	No	No	No	No	No
14	2	65	1	5	No	No	No	No	No	No	No	No	No	No
15	2	65	1	5	No	No	No	No	No	No	No	No	No	No
16	2	46	1	4	No	No	No	No	No	No	No	No	No	No
17	2	25	1	2	No	No	No	No	No	No	No	No	No	No
18	2	25	1	2	No	No	No	No	No	No	No	No	No	No
19	2	14	1	1	No	No	No	No	No	No	No	No	No	No
20	2	8	1	1	No	No	No	No	No	No	No	No	No	No
21	2	5	1	0	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	13
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	175
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	58	53	78	147
2	56	51	76	143
3	55	50	74	140
4	52	47	69	131
5	46	42	62	116
6	45	41	61	115
7	45	41	60	113
8	41	37	55	103
9	40	37	54	101
10	39	36	53	100
11	34	31	46	87
12	32	29	43	81
13	31	29	42	79
14	23	21	31	59
15	23	21	31	59
16	16	15	22	41
17	9	8	12	24
18	9	8	12	24
19	5	5	7	13
20	3	3	4	7
21	2	2	2	4
22	1	1	1	1
23	1	1	1	1
24	1	1	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	111	1	147	No	No	No	No	No	No	No	No	No	No
2	2	107	1	143	No	No	No	No	No	No	No	No	No	No
3	2	105	1	140	No	No	No	No	No	No	No	No	No	No
4	2	99	1	131	No	No	No	No	No	No	No	No	No	No
5	2	88	1	116	No	No	No	No	No	No	No	No	No	No
6	2	86	1	115	No	No	No	No	No	No	No	No	No	No
7	2	86	1	113	No	No	No	No	No	No	No	No	No	No
8	2	78	1	103	No	No	No	No	No	No	No	No	No	No
9	2	77	1	101	No	No	No	No	No	No	No	No	No	No
10	2	75	1	100	No	No	No	No	No	No	No	No	No	No
11	2	65	1	87	No	No	No	No	No	No	No	No	No	No
12	2	61	1	81	No	No	No	No	No	No	No	No	No	No
13	2	60	1	79	No	No	No	No	No	No	No	No	No	No
14	2	44	1	59	No	No	No	No	No	No	No	No	No	No
15	2	44	1	59	No	No	No	No	No	No	No	No	No	No
16	2	31	1	41	No	No	No	No	No	No	No	No	No	No
17	2	17	1	24	No	No	No	No	No	No	No	No	No	No
18	2	17	1	24	No	No	No	No	No	No	No	No	No	No
19	2	10	1	13	No	No	No	No	No	No	No	No	No	No
20	2	6	1	7	No	No	No	No	No	No	No	No	No	No
21	2	4	1	4	No	No	No	No	No	No	No	No	No	No
22	2	2	1	1	No	No	No	No	No	No	No	No	No	No
23	2	2	1	1	No	No	No	No	No	No	No	No	No	No
24	2	2	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	7.9	8.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10	0:20
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	78	147
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	336	336
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	78	99	41	74
2	76	96	40	72
3	74	94	39	70
4	69	88	36	66
5	62	78	32	58
6	61	77	32	58
7	60	76	32	57
8	55	69	29	52
9	54	68	28	51
10	53	67	28	50
11	46	58	24	44
12	43	54	23	41
13	42	53	22	40
14	31	40	16	30
15	31	40	16	30
16	22	28	11	21
17	12	16	7	12
18	12	16	7	12
19	7	9	4	7
20	4	5	2	4
21	2	3	1	2
22	1	1	0	1
23	1	1	0	1
24	1	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	177	1	74	No	No	No	No	No	No	No	No	No	No
2	3	172	1	72	No	No	No	No	No	No	No	No	No	No
3	3	168	1	70	No	No	No	No	No	No	No	No	No	No
4	3	157	1	66	No	No	No	No	No	No	No	No	No	No
5	3	140	1	58	No	No	No	No	No	No	No	No	No	No
6	3	138	1	58	No	No	No	No	No	No	No	No	No	No
7	3	136	1	57	No	No	No	No	No	No	No	No	No	No
8	3	124	1	52	No	No	No	No	No	No	No	No	No	No
9	3	122	1	51	No	No	No	No	No	No	No	No	No	No
10	3	120	1	50	No	No	No	No	No	No	No	No	No	No
11	3	104	1	44	No	No	No	No	No	No	No	No	No	No
12	3	97	1	41	No	No	No	No	No	No	No	No	No	No
13	3	95	1	40	No	No	No	No	No	No	No	No	No	No
14	3	71	1	30	No	No	No	No	No	No	No	No	No	No
15	3	71	1	30	No	No	No	No	No	No	No	No	No	No
16	3	50	1	21	No	No	No	No	No	No	No	No	No	No
17	3	28	1	12	No	No	No	No	No	No	No	No	No	No
18	3	28	1	12	No	No	No	No	No	No	No	No	No	No
19	3	16	1	7	No	No	No	No	No	No	No	No	No	No
20	3	9	1	4	No	No	No	No	No	No	No	No	No	No
21	3	5	1	2	No	No	No	No	No	No	No	No	No	No
22	3	2	1	1	No	No	No	No	No	No	No	No	No	No
23	3	2	1	1	No	No	No	No	No	No	No	No	No	No
24	3	2	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.4	8.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	0:10
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	41	74
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	292	292
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	177	226	5	16
2	172	219	5	16
3	168	215	5	15
4	158	201	4	14
5	140	179	4	13
6	138	176	4	12
7	136	174	4	12
8	124	158	4	11
9	122	156	3	11
10	120	154	3	11
11	104	133	3	9
12	97	124	3	9
13	96	122	3	9
14	71	90	2	6
15	71	90	2	6
16	50	63	1	4
17	28	36	1	3
18	28	36	1	3
19	16	20	0	1
20	9	11	0	1
21	5	7	0	0
22	2	2	0	0
23	2	2	0	0
24	2	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	403	1	16	No	No	No	No	No	No	No	No	No	No
2	2	391	1	16	No	No	No	No	No	No	No	No	No	No
3	2	383	1	15	No	No	No	No	No	No	No	No	No	No
4	2	359	1	14	No	No	No	No	No	No	No	No	No	No
5	2	319	1	13	No	No	No	No	No	No	No	No	No	No
6	2	314	1	12	No	No	No	No	No	No	No	No	No	No
7	2	310	1	12	No	No	No	No	No	No	No	No	No	No
8	2	282	1	11	No	No	No	No	No	No	No	No	No	No
9	2	278	1	11	No	No	No	No	No	No	No	No	No	No
10	2	274	1	11	No	No	No	No	No	No	No	No	No	No
11	2	237	1	9	No	No	No	No	No	No	No	No	No	No
12	2	221	1	9	No	No	No	No	No	No	No	No	No	No
13	2	218	1	9	No	No	No	No	No	No	No	No	No	No
14	2	161	1	6	No	No	No	No	No	No	No	No	No	No
15	2	161	1	6	No	No	No	No	No	No	No	No	No	No
16	2	113	1	4	No	No	No	No	No	No	No	No	No	No
17	2	64	1	3	No	No	No	No	No	No	No	No	No	No
18	2	64	1	3	No	No	No	No	No	No	No	No	No	No
19	2	36	1	1	No	No	No	No	No	No	No	No	No	No
20	2	20	1	1	No	No	No	No	No	No	No	No	No	No
21	2	12	1	0	No	No	No	No	No	No	No	No	No	No
22	2	4	1	0	No	No	No	No	No	No	No	No	No	No
23	2	4	1	0	No	No	No	No	No	No	No	No	No	No
24	2	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.5	9.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	5	16
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	424	424
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	190	232	47	70
2	184	225	46	68
3	181	220	45	67
4	169	206	42	62
5	150	183	37	55
6	148	181	37	55
7	146	179	36	54
8	133	162	33	49
9	131	160	32	48
10	129	158	32	48
11	112	137	28	41
12	105	128	26	39
13	103	125	25	38
14	76	93	19	28
15	76	93	19	28
16	53	65	13	20
17	30	37	8	11
18	30	37	8	11
19	17	21	4	6
20	10	12	2	4
21	6	7	1	2
22	2	2	0	1
23	2	2	0	1
24	2	2	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	422	1	70	No	No	No	No	No	No	No	Yes	No	No
2	1	409	1	68	No	No	No	No	No	No	No	No	No	No
3	1	401	1	67	No	No	No	No	No	No	No	No	No	No
4	1	375	1	62	No	No	No	No	No	No	No	No	No	No
5	1	333	1	55	No	No	No	No	No	No	No	No	No	No
6	1	329	1	55	No	No	No	No	No	No	No	No	No	No
7	1	325	1	54	No	No	No	No	No	No	No	No	No	No
8	1	295	1	49	No	No	No	No	No	No	No	No	No	No
9	1	291	1	48	No	No	No	No	No	No	No	No	No	No
10	1	287	1	48	No	No	No	No	No	No	No	No	No	No
11	1	249	1	41	No	No	No	No	No	No	No	No	No	No
12	1	233	1	39	No	No	No	No	No	No	No	No	No	No
13	1	228	1	38	No	No	No	No	No	No	No	No	No	No
14	1	169	1	28	No	No	No	No	No	No	No	No	No	No
15	1	169	1	28	No	No	No	No	No	No	No	No	No	No
16	1	118	1	20	No	No	No	No	No	No	No	No	No	No
17	1	67	1	11	No	No	No	No	No	No	No	No	No	No
18	1	67	1	11	No	No	No	No	No	No	No	No	No	No
19	1	38	1	6	No	No	No	No	No	No	No	No	No	No
20	1	22	1	4	No	No	No	No	No	No	No	No	No	No
21	1	13	1	2	No	No	No	No	No	No	No	No	No	No
22	1	4	1	1	No	No	No	No	No	No	No	No	No	No
23	1	4	1	1	No	No	No	No	No	No	No	No	No	No
24	1	4	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	1	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.9	10.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10	0:12
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	47	70
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	539	539
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Appendix H-2

Background Conditions

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	353	212	14
2	342	206	14
3	335	201	13
4	314	189	12
5	279	167	11
6	275	165	11
7	272	163	11
8	247	148	10
9	244	146	10
10	240	144	10
11	208	125	8
12	194	117	8
13	191	114	8
14	141	85	6
15	141	85	6
16	99	59	4
17	56	34	2
18	56	34	2
19	32	19	1
20	18	11	1
21	11	6	0
22	4	2	0
23	4	2	0
24	4	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	565	1	14	No	No	No	No	No	No	No	No	No	No
2	1	548	1	14	No	No	No	No	No	No	No	No	No	No
3	1	536	1	13	No	No	No	No	No	No	No	No	No	No
4	1	503	1	12	No	No	No	No	No	No	No	No	No	No
5	1	446	1	11	No	No	No	No	No	No	No	No	No	No
6	1	440	1	11	No	No	No	No	No	No	No	No	No	No
7	1	435	1	11	No	No	No	No	No	No	No	No	No	No
8	1	395	1	10	No	No	No	No	No	No	No	No	No	No
9	1	390	1	10	No	No	No	No	No	No	No	No	No	No
10	1	384	1	10	No	No	No	No	No	No	No	No	No	No
11	1	333	1	8	No	No	No	No	No	No	No	No	No	No
12	1	311	1	8	No	No	No	No	No	No	No	No	No	No
13	1	305	1	8	No	No	No	No	No	No	No	No	No	No
14	1	226	1	6	No	No	No	No	No	No	No	No	No	No
15	1	226	1	6	No	No	No	No	No	No	No	No	No	No
16	1	158	1	4	No	No	No	No	No	No	No	No	No	No
17	1	90	1	2	No	No	No	No	No	No	No	No	No	No
18	1	90	1	2	No	No	No	No	No	No	No	No	No	No
19	1	51	1	1	No	No	No	No	No	No	No	No	No	No
20	1	29	1	1	No	No	No	No	No	No	No	No	No	No
21	1	17	1	0	No	No	No	No	No	No	No	No	No	No
22	1	6	1	0	No	No	No	No	No	No	No	No	No	No
23	1	6	1	0	No	No	No	No	No	No	No	No	No	No
24	1	6	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	14
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	579
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	915	511	6
2	888	496	6
3	869	485	6
4	814	455	5
5	723	404	5
6	714	399	5
7	705	393	5
8	641	358	4
9	631	353	4
10	622	347	4
11	540	301	4
12	503	281	3
13	494	276	3
14	366	204	2
15	366	204	2
16	256	143	2
17	146	82	1
18	146	82	1
19	82	46	1
20	46	26	0
21	27	15	0
22	9	5	0
23	9	5	0
24	9	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1426	1	6	No	No	No	No	No	No	No	No	No	No
2	3	1384	1	6	No	No	No	No	No	No	No	No	No	No
3	3	1354	1	6	No	No	No	No	No	No	No	No	No	No
4	3	1269	1	5	No	No	No	No	No	No	No	No	No	No
5	3	1127	1	5	No	No	No	No	No	No	No	No	No	No
6	3	1113	1	5	No	No	No	No	No	No	No	No	No	No
7	3	1098	1	5	No	No	No	No	No	No	No	No	No	No
8	3	999	1	4	No	No	No	No	No	No	No	No	No	No
9	3	984	1	4	No	No	No	No	No	No	No	No	No	No
10	3	969	1	4	No	No	No	No	No	No	No	No	No	No
11	3	841	1	4	No	No	No	No	No	No	No	No	No	No
12	3	784	1	3	No	No	No	No	No	No	No	No	No	No
13	3	770	1	3	No	No	No	No	No	No	No	No	No	No
14	3	570	1	2	No	No	No	No	No	No	No	No	No	No
15	3	570	1	2	No	No	No	No	No	No	No	No	No	No
16	3	399	1	2	No	No	No	No	No	No	No	No	No	No
17	3	228	1	1	No	No	No	No	No	No	No	No	No	No
18	3	228	1	1	No	No	No	No	No	No	No	No	No	No
19	3	128	1	1	No	No	No	No	No	No	No	No	No	No
20	3	72	1	0	No	No	No	No	No	No	No	No	No	No
21	3	42	1	0	No	No	No	No	No	No	No	No	No	No
22	3	14	1	0	No	No	No	No	No	No	No	No	No	No
23	3	14	1	0	No	No	No	No	No	No	No	No	No	No
24	3	14	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	6
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1432
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	986	686	28	25
2	956	665	27	24
3	937	652	27	24
4	878	611	25	22
5	779	542	22	20
6	769	535	22	20
7	759	528	22	19
8	690	480	20	18
9	680	473	19	17
10	670	466	19	17
11	582	405	17	15
12	542	377	15	14
13	532	370	15	14
14	394	274	11	10
15	394	274	11	10
16	276	192	8	7
17	158	110	4	4
18	158	110	4	4
19	89	62	3	2
20	49	34	1	1
21	30	21	1	1
22	10	7	0	0
23	10	7	0	0
24	10	7	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1672	1	28	No	No	No	No	No	No	No	No	No	No
2	3	1621	1	27	No	No	No	No	No	No	No	No	No	No
3	3	1589	1	27	No	No	No	No	No	No	No	No	No	No
4	3	1489	1	25	No	No	No	No	No	No	No	No	No	No
5	3	1321	1	22	No	No	No	No	No	No	No	No	No	No
6	3	1304	1	22	No	No	No	No	No	No	No	No	No	No
7	3	1287	1	22	No	No	No	No	No	No	No	No	No	No
8	3	1170	1	20	No	No	No	No	No	No	No	No	No	No
9	3	1153	1	19	No	No	No	No	No	No	No	No	No	No
10	3	1136	1	19	No	No	No	No	No	No	No	No	No	No
11	3	987	1	17	No	No	No	No	No	No	No	No	No	No
12	3	919	1	15	No	No	No	No	No	No	No	No	No	No
13	3	902	1	15	No	No	No	No	No	No	No	No	No	No
14	3	668	1	11	No	No	No	No	No	No	No	No	No	No
15	3	668	1	11	No	No	No	No	No	No	No	No	No	No
16	3	468	1	8	No	No	No	No	No	No	No	No	No	No
17	3	268	1	4	No	No	No	No	No	No	No	No	No	No
18	3	268	1	4	No	No	No	No	No	No	No	No	No	No
19	3	151	1	3	No	No	No	No	No	No	No	No	No	No
20	3	83	1	1	No	No	No	No	No	No	No	No	No	No
21	3	51	1	1	No	No	No	No	No	No	No	No	No	No
22	3	17	1	0	No	No	No	No	No	No	No	No	No	No
23	3	17	1	0	No	No	No	No	No	No	No	No	No	No
24	3	17	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.7	21.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	0:08
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	28	25
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1725	1725
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	960	665	14	12
2	931	645	14	12
3	912	632	13	11
4	854	592	12	11
5	758	525	11	9
6	749	519	11	9
7	739	512	11	9
8	672	465	10	8
9	662	459	10	8
10	653	452	10	8
11	566	392	8	7
12	528	366	8	7
13	518	359	8	6
14	384	266	6	5
15	384	266	6	5
16	269	186	4	3
17	154	106	2	2
18	154	106	2	2
19	86	60	1	1
20	48	33	1	1
21	29	20	0	0
22	10	7	0	0
23	10	7	0	0
24	10	7	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1625	1	14	No	No	No	No	No	No	No	No	No	No
2	3	1576	1	14	No	No	No	No	No	No	No	No	No	No
3	3	1544	1	13	No	No	No	No	No	No	No	No	No	No
4	3	1446	1	12	No	No	No	No	No	No	No	No	No	No
5	3	1283	1	11	No	No	No	No	No	No	No	No	No	No
6	3	1268	1	11	No	No	No	No	No	No	No	No	No	No
7	3	1251	1	11	No	No	No	No	No	No	No	No	No	No
8	3	1137	1	10	No	No	No	No	No	No	No	No	No	No
9	3	1121	1	10	No	No	No	No	No	No	No	No	No	No
10	3	1105	1	10	No	No	No	No	No	No	No	No	No	No
11	3	958	1	8	No	No	No	No	No	No	No	No	No	No
12	3	894	1	8	No	No	No	No	No	No	No	No	No	No
13	3	877	1	8	No	No	No	No	No	No	No	No	No	No
14	3	650	1	6	No	No	No	No	No	No	No	No	No	No
15	3	650	1	6	No	No	No	No	No	No	No	No	No	No
16	3	455	1	4	No	No	No	No	No	No	No	No	No	No
17	3	260	1	2	No	No	No	No	No	No	No	No	No	No
18	3	260	1	2	No	No	No	No	No	No	No	No	No	No
19	3	146	1	1	No	No	No	No	No	No	No	No	No	No
20	3	81	1	1	No	No	No	No	No	No	No	No	No	No
21	3	49	1	0	No	No	No	No	No	No	No	No	No	No
22	3	17	1	0	No	No	No	No	No	No	No	No	No	No
23	3	17	1	0	No	No	No	No	No	No	No	No	No	No
24	3	17	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.8	12.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	14	12
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1651	1651
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	968	649	29	22
2	939	630	28	21
3	920	617	28	21
4	862	578	26	20
5	765	513	23	17
6	755	506	23	17
7	745	500	22	17
8	678	454	20	15
9	668	448	20	15
10	658	441	20	15
11	571	383	17	13
12	532	357	16	12
13	523	350	16	12
14	387	260	12	9
15	387	260	12	9
16	271	182	8	6
17	155	104	5	4
18	155	104	5	4
19	87	58	3	2
20	48	32	1	1
21	29	19	1	1
22	10	6	0	0
23	10	6	0	0
24	10	6	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1617	1	29	No	No	No	No	No	No	No	No	No	No
2	3	1569	1	28	No	No	No	No	No	No	No	No	No	No
3	3	1537	1	28	No	No	No	No	No	No	No	No	No	No
4	3	1440	1	26	No	No	No	No	No	No	No	No	No	No
5	3	1278	1	23	No	No	No	No	No	No	No	No	No	No
6	3	1261	1	23	No	No	No	No	No	No	No	No	No	No
7	3	1245	1	22	No	No	No	No	No	No	No	No	No	No
8	3	1132	1	20	No	No	No	No	No	No	No	No	No	No
9	3	1116	1	20	No	No	No	No	No	No	No	No	No	No
10	3	1099	1	20	No	No	No	No	No	No	No	No	No	No
11	3	954	1	17	No	No	No	No	No	No	No	No	No	No
12	3	889	1	16	No	No	No	No	No	No	No	No	No	No
13	3	873	1	16	No	No	No	No	No	No	No	No	No	No
14	3	647	1	12	No	No	No	No	No	No	No	No	No	No
15	3	647	1	12	No	No	No	No	No	No	No	No	No	No
16	3	453	1	8	No	No	No	No	No	No	No	No	No	No
17	3	259	1	5	No	No	No	No	No	No	No	No	No	No
18	3	259	1	5	No	No	No	No	No	No	No	No	No	No
19	3	145	1	3	No	No	No	No	No	No	No	No	No	No
20	3	80	1	1	No	No	No	No	No	No	No	No	No	No
21	3	48	1	1	No	No	No	No	No	No	No	No	No	No
22	3	16	1	0	No	No	No	No	No	No	No	No	No	No
23	3	16	1	0	No	No	No	No	No	No	No	No	No	No
24	3	16	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	36.7	49.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:17	0:18
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	29	22
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1668	1668
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	793	742	32	11
2	769	720	31	11
3	753	705	30	10
4	706	660	28	10
5	626	586	25	9
6	619	579	25	9
7	611	571	25	8
8	555	519	22	8
9	547	512	22	8
10	539	505	22	7
11	468	438	19	6
12	436	408	18	6
13	428	401	17	6
14	317	297	13	4
15	317	297	13	4
16	222	208	9	3
17	127	119	5	2
18	127	119	5	2
19	71	67	3	1
20	40	37	2	1
21	24	22	1	0
22	8	7	0	0
23	8	7	0	0
24	8	7	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1535	1	32	No	No	No	No	No	No	No	No	No	No
2	3	1489	1	31	No	No	No	No	No	No	No	No	No	No
3	3	1458	1	30	No	No	No	No	No	No	No	No	No	No
4	3	1366	1	28	No	No	No	No	No	No	No	No	No	No
5	3	1212	1	25	No	No	No	No	No	No	No	No	No	No
6	3	1198	1	25	No	No	No	No	No	No	No	No	No	No
7	3	1182	1	25	No	No	No	No	No	No	No	No	No	No
8	3	1074	1	22	No	No	No	No	No	No	No	No	No	No
9	3	1059	1	22	No	No	No	No	No	No	No	No	No	No
10	3	1044	1	22	No	No	No	No	No	No	No	No	No	No
11	3	906	1	19	No	No	No	No	No	No	No	No	No	No
12	3	844	1	18	No	No	No	No	No	No	No	No	No	No
13	3	829	1	17	No	No	No	No	No	No	No	No	No	No
14	3	614	1	13	No	No	No	No	No	No	No	No	No	No
15	3	614	1	13	No	No	No	No	No	No	No	No	No	No
16	3	430	1	9	No	No	No	No	No	No	No	No	No	No
17	3	246	1	5	No	No	No	No	No	No	No	No	No	No
18	3	246	1	5	No	No	No	No	No	No	No	No	No	No
19	3	138	1	3	No	No	No	No	No	No	No	No	No	No
20	3	77	1	2	No	No	No	No	No	No	No	No	No	No
21	3	46	1	1	No	No	No	No	No	No	No	No	No	No
22	3	15	1	0	No	No	No	No	No	No	No	No	No	No
23	3	15	1	0	No	No	No	No	No	No	No	No	No	No
24	3	15	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	26.4	28.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:14	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	32	11
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1578	1578
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	126	218	3
2	122	211	3
3	120	207	3
4	112	194	3
5	100	172	2
6	98	170	2
7	97	168	2
8	88	153	2
9	87	150	2
10	86	148	2
11	74	129	2
12	69	120	2
13	68	118	2
14	50	87	1
15	50	87	1
16	35	61	1
17	20	35	0
18	20	35	0
19	11	20	0
20	6	11	0
21	4	7	0
22	1	2	0
23	1	2	0
24	1	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	344	1	3	No	No	No	No	No	No	No	No	No	No
2	2	333	1	3	No	No	No	No	No	No	No	No	No	No
3	2	327	1	3	No	No	No	No	No	No	No	No	No	No
4	2	306	1	3	No	No	No	No	No	No	No	No	No	No
5	2	272	1	2	No	No	No	No	No	No	No	No	No	No
6	2	268	1	2	No	No	No	No	No	No	No	No	No	No
7	2	265	1	2	No	No	No	No	No	No	No	No	No	No
8	2	241	1	2	No	No	No	No	No	No	No	No	No	No
9	2	237	1	2	No	No	No	No	No	No	No	No	No	No
10	2	234	1	2	No	No	No	No	No	No	No	No	No	No
11	2	203	1	2	No	No	No	No	No	No	No	No	No	No
12	2	189	1	2	No	No	No	No	No	No	No	No	No	No
13	2	186	1	2	No	No	No	No	No	No	No	No	No	No
14	2	137	1	1	No	No	No	No	No	No	No	No	No	No
15	2	137	1	1	No	No	No	No	No	No	No	No	No	No
16	2	96	1	1	No	No	No	No	No	No	No	No	No	No
17	2	55	1	0	No	No	No	No	No	No	No	No	No	No
18	2	55	1	0	No	No	No	No	No	No	No	No	No	No
19	2	31	1	0	No	No	No	No	No	No	No	No	No	No
20	2	17	1	0	No	No	No	No	No	No	No	No	No	No
21	2	11	1	0	No	No	No	No	No	No	No	No	No	No
22	2	3	1	0	No	No	No	No	No	No	No	No	No	No
23	2	3	1	0	No	No	No	No	No	No	No	No	No	No
24	2	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	10
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	3
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	347
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	121	185	97	82
2	117	179	94	80
3	115	176	92	78
4	108	165	86	73
5	96	146	77	65
6	94	144	76	64
7	93	142	75	63
8	85	130	68	57
9	83	128	67	57
10	82	126	66	56
11	71	109	57	48
12	67	102	53	45
13	65	100	52	44
14	48	74	39	33
15	48	74	39	33
16	34	52	27	23
17	19	30	16	13
18	19	30	16	13
19	11	17	9	7
20	6	9	5	4
21	4	6	3	2
22	1	2	1	1
23	1	2	1	1
24	1	2	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	306	1	97	No	No	No	No	No	No	No	No	No	No
2	2	296	1	94	No	No	No	No	No	No	No	No	No	No
3	2	291	1	92	No	No	No	No	No	No	No	No	No	No
4	2	273	1	86	No	No	No	No	No	No	No	No	No	No
5	2	242	1	77	No	No	No	No	No	No	No	No	No	No
6	2	238	1	76	No	No	No	No	No	No	No	No	No	No
7	2	235	1	75	No	No	No	No	No	No	No	No	No	No
8	2	215	1	68	No	No	No	No	No	No	No	No	No	No
9	2	211	1	67	No	No	No	No	No	No	No	No	No	No
10	2	208	1	66	No	No	No	No	No	No	No	No	No	No
11	2	180	1	57	No	No	No	No	No	No	No	No	No	No
12	2	169	1	53	No	No	No	No	No	No	No	No	No	No
13	2	165	1	52	No	No	No	No	No	No	No	No	No	No
14	2	122	1	39	No	No	No	No	No	No	No	No	No	No
15	2	122	1	39	No	No	No	No	No	No	No	No	No	No
16	2	86	1	27	No	No	No	No	No	No	No	No	No	No
17	2	49	1	16	No	No	No	No	No	No	No	No	No	No
18	2	49	1	16	No	No	No	No	No	No	No	No	No	No
19	2	28	1	9	No	No	No	No	No	No	No	No	No	No
20	2	15	1	5	No	No	No	No	No	No	No	No	No	No
21	2	10	1	3	No	No	No	No	No	No	No	No	No	No
22	2	3	1	1	No	No	No	No	No	No	No	No	No	No
23	2	3	1	1	No	No	No	No	No	No	No	No	No	No
24	2	3	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.7	8.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:14	0:11
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	97	82
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	485	485
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	109	195	28	33
2	106	189	27	32
3	104	185	27	31
4	97	174	25	29
5	86	154	22	26
6	85	152	22	26
7	84	150	22	25
8	76	137	20	23
9	75	135	19	23
10	74	133	19	22
11	64	115	17	19
12	60	107	15	18
13	59	105	15	18
14	44	78	11	13
15	44	78	11	13
16	31	55	8	9
17	17	31	4	5
18	17	31	4	5
19	10	18	3	3
20	5	10	1	2
21	3	6	1	1
22	1	2	0	0
23	1	2	0	0
24	1	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	304	1	33	No	No	No	No	No	No	No	No	No	No
2	3	295	1	32	No	No	No	No	No	No	No	No	No	No
3	3	289	1	31	No	No	No	No	No	No	No	No	No	No
4	3	271	1	29	No	No	No	No	No	No	No	No	No	No
5	3	240	1	26	No	No	No	No	No	No	No	No	No	No
6	3	237	1	26	No	No	No	No	No	No	No	No	No	No
7	3	234	1	25	No	No	No	No	No	No	No	No	No	No
8	3	213	1	23	No	No	No	No	No	No	No	No	No	No
9	3	210	1	23	No	No	No	No	No	No	No	No	No	No
10	3	207	1	22	No	No	No	No	No	No	No	No	No	No
11	3	179	1	19	No	No	No	No	No	No	No	No	No	No
12	3	167	1	18	No	No	No	No	No	No	No	No	No	No
13	3	164	1	18	No	No	No	No	No	No	No	No	No	No
14	3	122	1	13	No	No	No	No	No	No	No	No	No	No
15	3	122	1	13	No	No	No	No	No	No	No	No	No	No
16	3	86	1	9	No	No	No	No	No	No	No	No	No	No
17	3	48	1	5	No	No	No	No	No	No	No	No	No	No
18	3	48	1	5	No	No	No	No	No	No	No	No	No	No
19	3	28	1	3	No	No	No	No	No	No	No	No	No	No
20	3	15	1	2	No	No	No	No	No	No	No	No	No	No
21	3	9	1	1	No	No	No	No	No	No	No	No	No	No
22	3	3	1	0	No	No	No	No	No	No	No	No	No	No
23	3	3	1	0	No	No	No	No	No	No	No	No	No	No
24	3	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.5	8.6
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03	0:04
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	28	33
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	365	365
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	141	150	6	8
2	137	146	6	8
3	134	143	6	8
4	125	134	5	7
5	111	119	5	6
6	110	117	5	6
7	109	116	5	6
8	99	105	4	6
9	97	103	4	6
10	96	102	4	5
11	83	89	4	5
12	78	83	3	4
13	76	81	3	4
14	56	60	2	3
15	56	60	2	3
16	39	42	2	2
17	23	24	1	1
18	23	24	1	1
19	13	14	1	1
20	7	8	0	0
21	4	5	0	0
22	1	2	0	0
23	1	2	0	0
24	1	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	291	1	8	No	No	No	No	No	No	No	No	No	No
2	2	283	1	8	No	No	No	No	No	No	No	No	No	No
3	2	277	1	8	No	No	No	No	No	No	No	No	No	No
4	2	259	1	7	No	No	No	No	No	No	No	No	No	No
5	2	230	1	6	No	No	No	No	No	No	No	No	No	No
6	2	227	1	6	No	No	No	No	No	No	No	No	No	No
7	2	225	1	6	No	No	No	No	No	No	No	No	No	No
8	2	204	1	6	No	No	No	No	No	No	No	No	No	No
9	2	200	1	6	No	No	No	No	No	No	No	No	No	No
10	2	198	1	5	No	No	No	No	No	No	No	No	No	No
11	2	172	1	5	No	No	No	No	No	No	No	No	No	No
12	2	161	1	4	No	No	No	No	No	No	No	No	No	No
13	2	157	1	4	No	No	No	No	No	No	No	No	No	No
14	2	116	1	3	No	No	No	No	No	No	No	No	No	No
15	2	116	1	3	No	No	No	No	No	No	No	No	No	No
16	2	81	1	2	No	No	No	No	No	No	No	No	No	No
17	2	47	1	1	No	No	No	No	No	No	No	No	No	No
18	2	47	1	1	No	No	No	No	No	No	No	No	No	No
19	2	27	1	1	No	No	No	No	No	No	No	No	No	No
20	2	15	1	0	No	No	No	No	No	No	No	No	No	No
21	2	9	1	0	No	No	No	No	No	No	No	No	No	No
22	2	3	1	0	No	No	No	No	No	No	No	No	No	No
23	2	3	1	0	No	No	No	No	No	No	No	No	No	No
24	2	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.9	8.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00	0:01
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	6	8
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	305	305
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	151	219	17	45
2	146	212	16	44
3	143	208	16	43
4	134	195	15	40
5	119	173	13	36
6	118	171	13	35
7	116	169	13	35
8	106	153	12	31
9	104	151	12	31
10	103	149	12	31
11	89	129	10	27
12	83	120	9	25
13	82	118	9	24
14	60	88	7	18
15	60	88	7	18
16	42	61	5	13
17	24	35	3	7
18	24	35	3	7
19	14	20	2	4
20	8	11	1	2
21	5	7	1	1
22	2	2	0	0
23	2	2	0	0
24	2	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	370	1	45	No	No	No	No	No	No	No	No	No	No
2	1	358	1	44	No	No	No	No	No	No	No	No	No	No
3	1	351	1	43	No	No	No	No	No	No	No	No	No	No
4	1	329	1	40	No	No	No	No	No	No	No	No	No	No
5	1	292	1	36	No	No	No	No	No	No	No	No	No	No
6	1	289	1	35	No	No	No	No	No	No	No	No	No	No
7	1	285	1	35	No	No	No	No	No	No	No	No	No	No
8	1	259	1	31	No	No	No	No	No	No	No	No	No	No
9	1	255	1	31	No	No	No	No	No	No	No	No	No	No
10	1	252	1	31	No	No	No	No	No	No	No	No	No	No
11	1	218	1	27	No	No	No	No	No	No	No	No	No	No
12	1	203	1	25	No	No	No	No	No	No	No	No	No	No
13	1	200	1	24	No	No	No	No	No	No	No	No	No	No
14	1	148	1	18	No	No	No	No	No	No	No	No	No	No
15	1	148	1	18	No	No	No	No	No	No	No	No	No	No
16	1	103	1	13	No	No	No	No	No	No	No	No	No	No
17	1	59	1	7	No	No	No	No	No	No	No	No	No	No
18	1	59	1	7	No	No	No	No	No	No	No	No	No	No
19	1	34	1	4	No	No	No	No	No	No	No	No	No	No
20	1	19	1	2	No	No	No	No	No	No	No	No	No	No
21	1	12	1	1	No	No	No	No	No	No	No	No	No	No
22	1	4	1	0	No	No	No	No	No	No	No	No	No	No
23	1	4	1	0	No	No	No	No	No	No	No	No	No	No
24	1	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.6	10.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03	0:07
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	17	45
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	432	432
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	624	450	14
2	605	437	14
3	593	428	13
4	555	401	12
5	493	356	11
6	487	351	11
7	480	347	11
8	437	315	10
9	431	311	10
10	424	306	10
11	368	266	8
12	343	248	8
13	337	243	8
14	250	180	6
15	250	180	6
16	175	126	4
17	100	72	2
18	100	72	2
19	56	41	1
20	31	23	1
21	19	14	0
22	6	5	0
23	6	5	0
24	6	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	1074	1	14	No	No	No	No	No	No	No	No	No	No
2	1	1042	1	14	No	No	No	No	No	No	No	No	No	No
3	1	1021	1	13	No	No	No	No	No	No	No	No	No	No
4	1	956	1	12	No	No	No	No	No	No	No	No	No	No
5	1	849	1	11	No	No	No	No	No	No	No	No	No	No
6	1	838	1	11	No	No	No	No	No	No	No	No	No	No
7	1	827	1	11	No	No	No	No	No	No	No	No	No	No
8	1	752	1	10	No	No	No	No	No	No	No	No	No	No
9	1	742	1	10	No	No	No	No	No	No	No	No	No	No
10	1	730	1	10	No	No	No	No	No	No	No	No	No	No
11	1	634	1	8	No	No	No	No	No	No	No	No	No	No
12	1	591	1	8	No	No	No	No	No	No	No	No	No	No
13	1	580	1	8	No	No	No	No	No	No	No	No	No	No
14	1	430	1	6	No	No	No	No	No	No	No	No	No	No
15	1	430	1	6	No	No	No	No	No	No	No	No	No	No
16	1	301	1	4	No	No	No	No	No	No	No	No	No	No
17	1	172	1	2	No	No	No	No	No	No	No	No	No	No
18	1	172	1	2	No	No	No	No	No	No	No	No	No	No
19	1	97	1	1	No	No	No	No	No	No	No	No	No	No
20	1	54	1	1	No	No	No	No	No	No	No	No	No	No
21	1	33	1	0	No	No	No	No	No	No	No	No	No	No
22	1	11	1	0	No	No	No	No	No	No	No	No	No	No
23	1	11	1	0	No	No	No	No	No	No	No	No	No	No
24	1	11	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	18.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	14
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1088
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	1199	921	14
2	1163	893	14
3	1139	875	13
4	1067	820	12
5	947	728	11
6	935	718	11
7	923	709	11
8	839	645	10
9	827	635	10
10	815	626	10
11	707	543	8
12	659	507	8
13	647	497	8
14	480	368	6
15	480	368	6
16	336	258	4
17	192	147	2
18	192	147	2
19	108	83	1
20	60	46	1
21	36	28	0
22	12	9	0
23	12	9	0
24	12	9	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2120	1	14	No	No	No	No	No	No	No	No	No	No
2	3	2056	1	14	No	No	No	No	No	No	No	No	No	No
3	3	2014	1	13	No	No	No	No	No	No	No	No	No	No
4	3	1887	1	12	No	No	No	No	No	No	No	No	No	No
5	3	1675	1	11	No	No	No	No	No	No	No	No	No	No
6	3	1653	1	11	No	No	No	No	No	No	No	No	No	No
7	3	1632	1	11	No	No	No	No	No	No	No	No	No	No
8	3	1484	1	10	No	No	No	No	No	No	No	No	No	No
9	3	1462	1	10	No	No	No	No	No	No	No	No	No	No
10	3	1441	1	10	No	No	No	No	No	No	No	No	No	No
11	3	1250	1	8	No	No	No	No	No	No	No	No	No	No
12	3	1166	1	8	No	No	No	No	No	No	No	No	No	No
13	3	1144	1	8	No	No	No	No	No	No	No	No	No	No
14	3	848	1	6	No	No	No	No	No	No	No	No	No	No
15	3	848	1	6	No	No	No	No	No	No	No	No	No	No
16	3	594	1	4	No	No	No	No	No	No	No	No	No	No
17	3	339	1	2	No	No	No	No	No	No	No	No	No	No
18	3	339	1	2	No	No	No	No	No	No	No	No	No	No
19	3	191	1	1	No	No	No	No	No	No	No	No	No	No
20	3	106	1	1	No	No	No	No	No	No	No	No	No	No
21	3	64	1	0	No	No	No	No	No	No	No	No	No	No
22	3	21	1	0	No	No	No	No	No	No	No	No	No	No
23	3	21	1	0	No	No	No	No	No	No	No	No	No	No
24	3	21	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	22.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	14
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	2134
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	949	1112	14	22
2	921	1079	14	21
3	902	1056	13	21
4	845	990	12	20
5	750	878	11	17
6	740	867	11	17
7	731	856	11	17
8	664	778	10	15
9	655	767	10	15
10	645	756	10	15
11	560	656	8	13
12	522	612	8	12
13	512	600	8	12
14	380	445	6	9
15	380	445	6	9
16	266	311	4	6
17	152	178	2	4
18	152	178	2	4
19	85	100	1	2
20	47	56	1	1
21	28	33	0	1
22	9	11	0	0
23	9	11	0	0
24	9	11	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2061	1	22	No	No	No	No	No	No	No	No	No	No
2	3	2000	1	21	No	No	No	No	No	No	No	No	No	No
3	3	1958	1	21	No	No	No	No	No	No	No	No	No	No
4	3	1835	1	20	No	No	No	No	No	No	No	No	No	No
5	3	1628	1	17	No	No	No	No	No	No	No	No	No	No
6	3	1607	1	17	No	No	No	No	No	No	No	No	No	No
7	3	1587	1	17	No	No	No	No	No	No	No	No	No	No
8	3	1442	1	15	No	No	No	No	No	No	No	No	No	No
9	3	1422	1	15	No	No	No	No	No	No	No	No	No	No
10	3	1401	1	15	No	No	No	No	No	No	No	No	No	No
11	3	1216	1	13	No	No	No	No	No	No	No	No	No	No
12	3	1134	1	12	No	No	No	No	No	No	No	No	No	No
13	3	1112	1	12	No	No	No	No	No	No	No	No	No	No
14	3	825	1	9	No	No	No	No	No	No	No	No	No	No
15	3	825	1	9	No	No	No	No	No	No	No	No	No	No
16	3	577	1	6	No	No	No	No	No	No	No	No	No	No
17	3	330	1	4	No	No	No	No	No	No	No	No	No	No
18	3	330	1	4	No	No	No	No	No	No	No	No	No	No
19	3	185	1	2	No	No	No	No	No	No	No	No	No	No
20	3	103	1	1	No	No	No	No	No	No	No	No	No	No
21	3	61	1	1	No	No	No	No	No	No	No	No	No	No
22	3	20	1	0	No	No	No	No	No	No	No	No	No	No
23	3	20	1	0	No	No	No	No	No	No	No	No	No	No
24	3	20	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13	18.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03	0:06
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	14	22
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2097	2097
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	902	1102	48	49
2	875	1069	47	48
3	857	1047	46	47
4	803	981	43	44
5	713	871	38	39
6	704	860	37	38
7	695	849	37	38
8	631	771	34	34
9	622	760	33	34
10	613	749	33	33
11	532	650	28	29
12	496	606	26	27
13	487	595	26	26
14	361	441	19	20
15	361	441	19	20
16	253	309	13	14
17	144	176	8	8
18	144	176	8	8
19	81	99	4	4
20	45	55	2	2
21	27	33	1	1
22	9	11	0	0
23	9	11	0	0
24	9	11	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2004	1	49	No	No	No	No	No	No	No	Yes	No	No
2	3	1944	1	48	No	No	No	No	No	No	No	Yes	No	No
3	3	1904	1	47	No	No	No	No	No	No	No	Yes	No	No
4	3	1784	1	44	No	No	No	No	No	No	No	Yes	No	No
5	3	1584	1	39	No	No	No	No	No	No	No	No	No	No
6	3	1564	1	38	No	No	No	No	No	No	No	No	No	No
7	3	1544	1	38	No	No	No	No	No	No	No	No	No	No
8	3	1402	1	34	No	No	No	No	No	No	No	No	No	No
9	3	1382	1	34	No	No	No	No	No	No	No	No	No	No
10	3	1362	1	33	No	No	No	No	No	No	No	No	No	No
11	3	1182	1	29	No	No	No	No	No	No	No	No	No	No
12	3	1102	1	27	No	No	No	No	No	No	No	No	No	No
13	3	1082	1	26	No	No	No	No	No	No	No	No	No	No
14	3	802	1	20	No	No	No	No	No	No	No	No	No	No
15	3	802	1	20	No	No	No	No	No	No	No	No	No	No
16	3	562	1	14	No	No	No	No	No	No	No	No	No	No
17	3	320	1	8	No	No	No	No	No	No	No	No	No	No
18	3	320	1	8	No	No	No	No	No	No	No	No	No	No
19	3	180	1	4	No	No	No	No	No	No	No	No	No	No
20	3	100	1	2	No	No	No	No	No	No	No	No	No	No
21	3	60	1	1	No	No	No	No	No	No	No	No	No	No
22	3	20	1	0	No	No	No	No	No	No	No	No	No	No
23	3	20	1	0	No	No	No	No	No	No	No	No	No	No
24	3	20	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.6	12.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10	0:10
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	48	49
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2101	2101
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	895	1041	24	47
2	868	1010	23	46
3	850	989	23	45
4	797	926	21	42
5	707	822	19	37
6	698	812	19	37
7	689	802	18	36
8	627	729	17	33
9	618	718	17	32
10	609	708	16	32
11	528	614	14	28
12	492	573	13	26
13	483	562	13	25
14	358	416	10	19
15	358	416	10	19
16	251	291	7	13
17	143	167	4	8
18	143	167	4	8
19	81	94	2	4
20	45	52	1	2
21	27	31	1	1
22	9	10	0	0
23	9	10	0	0
24	9	10	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1936	1	47	No	No	No	No	No	No	No	Yes	No	No
2	3	1878	1	46	No	No	No	No	No	No	No	Yes	No	No
3	3	1839	1	45	No	No	No	No	No	No	No	Yes	No	No
4	3	1723	1	42	No	No	No	No	No	No	No	Yes	No	No
5	3	1529	1	37	No	No	No	No	No	No	No	No	No	No
6	3	1510	1	37	No	No	No	No	No	No	No	No	No	No
7	3	1491	1	36	No	No	No	No	No	No	No	No	No	No
8	3	1356	1	33	No	No	No	No	No	No	No	No	No	No
9	3	1336	1	32	No	No	No	No	No	No	No	No	No	No
10	3	1317	1	32	No	No	No	No	No	No	No	No	No	No
11	3	1142	1	28	No	No	No	No	No	No	No	No	No	No
12	3	1065	1	26	No	No	No	No	No	No	No	No	No	No
13	3	1045	1	25	No	No	No	No	No	No	No	No	No	No
14	3	774	1	19	No	No	No	No	No	No	No	No	No	No
15	3	774	1	19	No	No	No	No	No	No	No	No	No	No
16	3	542	1	13	No	No	No	No	No	No	No	No	No	No
17	3	310	1	8	No	No	No	No	No	No	No	No	No	No
18	3	310	1	8	No	No	No	No	No	No	No	No	No	No
19	3	175	1	4	No	No	No	No	No	No	No	No	No	No
20	3	97	1	2	No	No	No	No	No	No	No	No	No	No
21	3	58	1	1	No	No	No	No	No	No	No	No	No	No
22	3	19	1	0	No	No	No	No	No	No	No	No	No	No
23	3	19	1	0	No	No	No	No	No	No	No	No	No	No
24	3	19	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	22.8	22
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09	0:17
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	24	47
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2007	2007
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	964	917	57	66
2	935	889	55	64
3	916	871	54	63
4	858	816	51	59
5	762	724	45	52
6	752	715	44	51
7	742	706	44	51
8	675	642	40	46
9	665	633	39	46
10	656	624	39	45
11	569	541	34	39
12	530	504	31	36
13	521	495	31	36
14	386	367	23	26
15	386	367	23	26
16	270	257	16	18
17	154	147	9	11
18	154	147	9	11
19	87	83	5	6
20	48	46	3	3
21	29	28	2	2
22	10	9	1	1
23	10	9	1	1
24	10	9	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1881	1	66	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	1824	1	64	No	No	No	No	No	Yes	Yes	Yes	No	No
3	3	1787	1	63	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	1674	1	59	No	No	No	No	No	No	Yes	Yes	No	No
5	3	1486	1	52	No	No	No	No	No	No	Yes	Yes	No	No
6	3	1467	1	51	No	No	No	No	No	No	No	Yes	No	No
7	3	1448	1	51	No	No	No	No	No	No	No	Yes	No	No
8	3	1317	1	46	No	No	No	No	No	No	No	Yes	No	No
9	3	1298	1	46	No	No	No	No	No	No	No	Yes	No	No
10	3	1280	1	45	No	No	No	No	No	No	No	Yes	No	No
11	3	1110	1	39	No	No	No	No	No	No	No	No	No	No
12	3	1034	1	36	No	No	No	No	No	No	No	No	No	No
13	3	1016	1	36	No	No	No	No	No	No	No	No	No	No
14	3	753	1	26	No	No	No	No	No	No	No	No	No	No
15	3	753	1	26	No	No	No	No	No	No	No	No	No	No
16	3	527	1	18	No	No	No	No	No	No	No	No	No	No
17	3	301	1	11	No	No	No	No	No	No	No	No	No	No
18	3	301	1	11	No	No	No	No	No	No	No	No	No	No
19	3	170	1	6	No	No	No	No	No	No	No	No	No	No
20	3	94	1	3	No	No	No	No	No	No	No	No	No	No
21	3	57	1	2	No	No	No	No	No	No	No	No	No	No
22	3	19	1	1	No	No	No	No	No	No	No	No	No	No
23	3	19	1	1	No	No	No	No	No	No	No	No	No	No
24	3	19	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	3	5	10	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	22.6	37.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:21	0:40
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	57	66
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2004	2004
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	229	190	13
2	222	184	13
3	218	181	12
4	204	169	12
5	181	150	10
6	179	148	10
7	176	146	10
8	160	133	9
9	158	131	9
10	156	129	9
11	135	112	8
12	126	105	7
13	124	103	7
14	92	76	5
15	92	76	5
16	64	53	4
17	37	30	2
18	37	30	2
19	21	17	1
20	11	10	1
21	7	6	0
22	2	2	0
23	2	2	0
24	2	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	419	1	13	No	No	No	No	No	No	No	No	No	No
2	2	406	1	13	No	No	No	No	No	No	No	No	No	No
3	2	399	1	12	No	No	No	No	No	No	No	No	No	No
4	2	373	1	12	No	No	No	No	No	No	No	No	No	No
5	2	331	1	10	No	No	No	No	No	No	No	No	No	No
6	2	327	1	10	No	No	No	No	No	No	No	No	No	No
7	2	322	1	10	No	No	No	No	No	No	No	No	No	No
8	2	293	1	9	No	No	No	No	No	No	No	No	No	No
9	2	289	1	9	No	No	No	No	No	No	No	No	No	No
10	2	285	1	9	No	No	No	No	No	No	No	No	No	No
11	2	247	1	8	No	No	No	No	No	No	No	No	No	No
12	2	231	1	7	No	No	No	No	No	No	No	No	No	No
13	2	227	1	7	No	No	No	No	No	No	No	No	No	No
14	2	168	1	5	No	No	No	No	No	No	No	No	No	No
15	2	168	1	5	No	No	No	No	No	No	No	No	No	No
16	2	117	1	4	No	No	No	No	No	No	No	No	No	No
17	2	67	1	2	No	No	No	No	No	No	No	No	No	No
18	2	67	1	2	No	No	No	No	No	No	No	No	No	No
19	2	38	1	1	No	No	No	No	No	No	No	No	No	No
20	2	21	1	1	No	No	No	No	No	No	No	No	No	No
21	2	13	1	0	No	No	No	No	No	No	No	No	No	No
22	2	4	1	0	No	No	No	No	No	No	No	No	No	No
23	2	4	1	0	No	No	No	No	No	No	No	No	No	No
24	2	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	13
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	432
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	228	140	78	147
2	221	136	76	143
3	217	133	74	140
4	203	125	69	131
5	180	111	62	116
6	178	109	61	115
7	176	108	60	113
8	160	98	55	103
9	157	97	54	101
10	155	95	53	100
11	135	83	46	87
12	125	77	43	81
13	123	76	42	79
14	91	56	31	59
15	91	56	31	59
16	64	39	22	41
17	36	22	12	24
18	36	22	12	24
19	21	13	7	13
20	11	7	4	7
21	7	4	2	4
22	2	1	1	1
23	2	1	1	1
24	2	1	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	368	1	147	No	No	No	Yes	No	No	No	No	No	No
2	2	357	1	143	No	No	No	Yes	No	No	No	No	No	No
3	2	350	1	140	No	No	No	Yes	No	No	No	No	No	No
4	2	328	1	131	No	No	No	No	No	No	No	No	No	No
5	2	291	1	116	No	No	No	No	No	No	No	No	No	No
6	2	287	1	115	No	No	No	No	No	No	No	No	No	No
7	2	284	1	113	No	No	No	No	No	No	No	No	No	No
8	2	258	1	103	No	No	No	No	No	No	No	No	No	No
9	2	254	1	101	No	No	No	No	No	No	No	No	No	No
10	2	250	1	100	No	No	No	No	No	No	No	No	No	No
11	2	218	1	87	No	No	No	No	No	No	No	No	No	No
12	2	202	1	81	No	No	No	No	No	No	No	No	No	No
13	2	199	1	79	No	No	No	No	No	No	No	No	No	No
14	2	147	1	59	No	No	No	No	No	No	No	No	No	No
15	2	147	1	59	No	No	No	No	No	No	No	No	No	No
16	2	103	1	41	No	No	No	No	No	No	No	No	No	No
17	2	58	1	24	No	No	No	No	No	No	No	No	No	No
18	2	58	1	24	No	No	No	No	No	No	No	No	No	No
19	2	34	1	13	No	No	No	No	No	No	No	No	No	No
20	2	18	1	7	No	No	No	No	No	No	No	No	No	No
21	2	11	1	4	No	No	No	No	No	No	No	No	No	No
22	2	3	1	1	No	No	No	No	No	No	No	No	No	No
23	2	3	1	1	No	No	No	No	No	No	No	No	No	No
24	2	3	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	3	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1	10
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:11	0:24
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	78	147
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	593	593
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	248	186	41	74
2	241	180	40	72
3	236	177	39	70
4	221	166	36	66
5	196	147	32	58
6	193	145	32	58
7	191	143	32	57
8	174	130	29	52
9	171	128	28	51
10	169	126	28	50
11	146	110	24	44
12	136	102	23	41
13	134	100	22	40
14	99	74	16	30
15	99	74	16	30
16	69	52	11	21
17	40	30	7	12
18	40	30	7	12
19	22	17	4	7
20	12	9	2	4
21	7	6	1	2
22	2	2	0	1
23	2	2	0	1
24	2	2	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	434	1	74	No	No	No	No	No	No	No	No	No	No
2	3	421	1	72	No	No	No	No	No	No	No	No	No	No
3	3	413	1	70	No	No	No	No	No	No	No	No	No	No
4	3	387	1	66	No	No	No	No	No	No	No	No	No	No
5	3	343	1	58	No	No	No	No	No	No	No	No	No	No
6	3	338	1	58	No	No	No	No	No	No	No	No	No	No
7	3	334	1	57	No	No	No	No	No	No	No	No	No	No
8	3	304	1	52	No	No	No	No	No	No	No	No	No	No
9	3	299	1	51	No	No	No	No	No	No	No	No	No	No
10	3	295	1	50	No	No	No	No	No	No	No	No	No	No
11	3	256	1	44	No	No	No	No	No	No	No	No	No	No
12	3	238	1	41	No	No	No	No	No	No	No	No	No	No
13	3	234	1	40	No	No	No	No	No	No	No	No	No	No
14	3	173	1	30	No	No	No	No	No	No	No	No	No	No
15	3	173	1	30	No	No	No	No	No	No	No	No	No	No
16	3	121	1	21	No	No	No	No	No	No	No	No	No	No
17	3	70	1	12	No	No	No	No	No	No	No	No	No	No
18	3	70	1	12	No	No	No	No	No	No	No	No	No	No
19	3	39	1	7	No	No	No	No	No	No	No	No	No	No
20	3	21	1	4	No	No	No	No	No	No	No	No	No	No
21	3	13	1	2	No	No	No	No	No	No	No	No	No	No
22	3	4	1	1	No	No	No	No	No	No	No	No	No	No
23	3	4	1	1	No	No	No	No	No	No	No	No	No	No
24	3	4	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.2	9.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06	0:11
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	41	74
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	549	549
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	188	238	5	16
2	182	231	5	16
3	179	226	5	15
4	167	212	4	14
5	149	188	4	13
6	147	186	4	12
7	145	183	4	12
8	132	167	4	11
9	130	164	3	11
10	128	162	3	11
11	111	140	3	9
12	103	131	3	9
13	102	129	3	9
14	75	95	2	6
15	75	95	2	6
16	53	67	1	4
17	30	38	1	3
18	30	38	1	3
19	17	21	0	1
20	9	12	0	1
21	6	7	0	0
22	2	2	0	0
23	2	2	0	0
24	2	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	426	1	16	No	No	No	No	No	No	No	No	No	No
2	2	413	1	16	No	No	No	No	No	No	No	No	No	No
3	2	405	1	15	No	No	No	No	No	No	No	No	No	No
4	2	379	1	14	No	No	No	No	No	No	No	No	No	No
5	2	337	1	13	No	No	No	No	No	No	No	No	No	No
6	2	333	1	12	No	No	No	No	No	No	No	No	No	No
7	2	328	1	12	No	No	No	No	No	No	No	No	No	No
8	2	299	1	11	No	No	No	No	No	No	No	No	No	No
9	2	294	1	11	No	No	No	No	No	No	No	No	No	No
10	2	290	1	11	No	No	No	No	No	No	No	No	No	No
11	2	251	1	9	No	No	No	No	No	No	No	No	No	No
12	2	234	1	9	No	No	No	No	No	No	No	No	No	No
13	2	231	1	9	No	No	No	No	No	No	No	No	No	No
14	2	170	1	6	No	No	No	No	No	No	No	No	No	No
15	2	170	1	6	No	No	No	No	No	No	No	No	No	No
16	2	120	1	4	No	No	No	No	No	No	No	No	No	No
17	2	68	1	3	No	No	No	No	No	No	No	No	No	No
18	2	68	1	3	No	No	No	No	No	No	No	No	No	No
19	2	38	1	1	No	No	No	No	No	No	No	No	No	No
20	2	21	1	1	No	No	No	No	No	No	No	No	No	No
21	2	13	1	0	No	No	No	No	No	No	No	No	No	No
22	2	4	1	0	No	No	No	No	No	No	No	No	No	No
23	2	4	1	0	No	No	No	No	No	No	No	No	No	No
24	2	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.6	9.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	5	16
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	447	447
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	201	244	47	70
2	195	237	46	68
3	191	232	45	67
4	179	217	42	62
5	159	193	37	55
6	157	190	37	55
7	155	188	36	54
8	141	171	33	49
9	139	168	32	48
10	137	166	32	48
11	119	144	28	41
12	111	134	26	39
13	109	132	25	38
14	80	98	19	28
15	80	98	19	28
16	56	68	13	20
17	32	39	8	11
18	32	39	8	11
19	18	22	4	6
20	10	12	2	4
21	6	7	1	2
22	2	2	0	1
23	2	2	0	1
24	2	2	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	445	1	70	No	No	No	No	No	No	No	Yes	No	No
2	1	432	1	68	No	No	No	No	No	No	No	Yes	No	No
3	1	423	1	67	No	No	No	No	No	No	No	Yes	No	No
4	1	396	1	62	No	No	No	No	No	No	No	No	No	No
5	1	352	1	55	No	No	No	No	No	No	No	No	No	No
6	1	347	1	55	No	No	No	No	No	No	No	No	No	No
7	1	343	1	54	No	No	No	No	No	No	No	No	No	No
8	1	312	1	49	No	No	No	No	No	No	No	No	No	No
9	1	307	1	48	No	No	No	No	No	No	No	No	No	No
10	1	303	1	48	No	No	No	No	No	No	No	No	No	No
11	1	263	1	41	No	No	No	No	No	No	No	No	No	No
12	1	245	1	39	No	No	No	No	No	No	No	No	No	No
13	1	241	1	38	No	No	No	No	No	No	No	No	No	No
14	1	178	1	28	No	No	No	No	No	No	No	No	No	No
15	1	178	1	28	No	No	No	No	No	No	No	No	No	No
16	1	124	1	20	No	No	No	No	No	No	No	No	No	No
17	1	71	1	11	No	No	No	No	No	No	No	No	No	No
18	1	71	1	11	No	No	No	No	No	No	No	No	No	No
19	1	40	1	6	No	No	No	No	No	No	No	No	No	No
20	1	22	1	4	No	No	No	No	No	No	No	No	No	No
21	1	13	1	2	No	No	No	No	No	No	No	No	No	No
22	1	4	1	1	No	No	No	No	No	No	No	No	No	No
23	1	4	1	1	No	No	No	No	No	No	No	No	No	No
24	1	4	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	3	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.2	10.6
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10	0:12
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	47	70
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	562	562
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Appendix H-3

Background Conditions + Project

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	472	317	14
2	458	307	14
3	448	301	13
4	420	282	12
5	373	250	11
6	368	247	11
7	363	244	11
8	330	222	10
9	326	219	10
10	321	216	10
11	278	187	8
12	260	174	8
13	255	171	8
14	189	127	6
15	189	127	6
16	132	89	4
17	76	51	2
18	76	51	2
19	42	29	1
20	24	16	1
21	14	10	0
22	5	3	0
23	5	3	0
24	5	3	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	789	1	14	No	No	No	No	No	No	No	No	No	No
2	1	765	1	14	No	No	No	No	No	No	No	No	No	No
3	1	749	1	13	No	No	No	No	No	No	No	No	No	No
4	1	702	1	12	No	No	No	No	No	No	No	No	No	No
5	1	623	1	11	No	No	No	No	No	No	No	No	No	No
6	1	615	1	11	No	No	No	No	No	No	No	No	No	No
7	1	607	1	11	No	No	No	No	No	No	No	No	No	No
8	1	552	1	10	No	No	No	No	No	No	No	No	No	No
9	1	545	1	10	No	No	No	No	No	No	No	No	No	No
10	1	537	1	10	No	No	No	No	No	No	No	No	No	No
11	1	465	1	8	No	No	No	No	No	No	No	No	No	No
12	1	434	1	8	No	No	No	No	No	No	No	No	No	No
13	1	426	1	8	No	No	No	No	No	No	No	No	No	No
14	1	316	1	6	No	No	No	No	No	No	No	No	No	No
15	1	316	1	6	No	No	No	No	No	No	No	No	No	No
16	1	221	1	4	No	No	No	No	No	No	No	No	No	No
17	1	127	1	2	No	No	No	No	No	No	No	No	No	No
18	1	127	1	2	No	No	No	No	No	No	No	No	No	No
19	1	71	1	1	No	No	No	No	No	No	No	No	No	No
20	1	40	1	1	No	No	No	No	No	No	No	No	No	No
21	1	24	1	0	No	No	No	No	No	No	No	No	No	No
22	1	8	1	0	No	No	No	No	No	No	No	No	No	No
23	1	8	1	0	No	No	No	No	No	No	No	No	No	No
24	1	8	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	14
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	803
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	932	526	6
2	904	510	6
3	885	500	6
4	829	468	5
5	736	416	5
6	727	410	5
7	718	405	5
8	652	368	4
9	643	363	4
10	634	358	4
11	550	310	4
12	513	289	3
13	503	284	3
14	373	210	2
15	373	210	2
16	261	147	2
17	149	84	1
18	149	84	1
19	84	47	1
20	47	26	0
21	28	16	0
22	9	5	0
23	9	5	0
24	9	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1458	1	6	No	No	No	No	No	No	No	No	No	No
2	3	1414	1	6	No	No	No	No	No	No	No	No	No	No
3	3	1385	1	6	No	No	No	No	No	No	No	No	No	No
4	3	1297	1	5	No	No	No	No	No	No	No	No	No	No
5	3	1152	1	5	No	No	No	No	No	No	No	No	No	No
6	3	1137	1	5	No	No	No	No	No	No	No	No	No	No
7	3	1123	1	5	No	No	No	No	No	No	No	No	No	No
8	3	1020	1	4	No	No	No	No	No	No	No	No	No	No
9	3	1006	1	4	No	No	No	No	No	No	No	No	No	No
10	3	992	1	4	No	No	No	No	No	No	No	No	No	No
11	3	860	1	4	No	No	No	No	No	No	No	No	No	No
12	3	802	1	3	No	No	No	No	No	No	No	No	No	No
13	3	787	1	3	No	No	No	No	No	No	No	No	No	No
14	3	583	1	2	No	No	No	No	No	No	No	No	No	No
15	3	583	1	2	No	No	No	No	No	No	No	No	No	No
16	3	408	1	2	No	No	No	No	No	No	No	No	No	No
17	3	233	1	1	No	No	No	No	No	No	No	No	No	No
18	3	233	1	1	No	No	No	No	No	No	No	No	No	No
19	3	131	1	1	No	No	No	No	No	No	No	No	No	No
20	3	73	1	0	No	No	No	No	No	No	No	No	No	No
21	3	44	1	0	No	No	No	No	No	No	No	No	No	No
22	3	14	1	0	No	No	No	No	No	No	No	No	No	No
23	3	14	1	0	No	No	No	No	No	No	No	No	No	No
24	3	14	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.4
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	6
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1464
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	1041	694	144	25
2	1010	673	140	24
3	989	659	137	24
4	926	618	128	22
5	822	548	114	20
6	812	541	112	20
7	802	534	111	19
8	729	486	101	18
9	718	479	99	17
10	708	472	98	17
11	614	409	85	15
12	573	382	79	14
13	562	375	78	14
14	416	278	58	10
15	416	278	58	10
16	291	194	40	7
17	167	111	23	4
18	167	111	23	4
19	94	62	13	2
20	52	35	7	1
21	31	21	4	1
22	10	7	1	0
23	10	7	1	0
24	10	7	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1735	1	144	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	1683	1	140	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	1648	1	137	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	1544	1	128	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
5	3	1370	1	114	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
6	3	1353	1	112	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
7	3	1336	1	111	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
8	3	1215	1	101	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
9	3	1197	1	99	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
10	3	1180	1	98	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
11	3	1023	1	85	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
12	3	955	1	79	No	No	No	No	Yes	Yes	Yes	Yes	No	No
13	3	937	1	78	No	No	No	No	Yes	Yes	Yes	Yes	No	No
14	3	694	1	58	No	No	No	No	No	No	Yes	Yes	No	No
15	3	694	1	58	No	No	No	No	No	No	Yes	Yes	No	No
16	3	485	1	40	No	No	No	No	No	No	No	No	No	No
17	3	278	1	23	No	No	No	No	No	No	No	No	No	No
18	3	278	1	23	No	No	No	No	No	No	No	No	No	No
19	3	156	1	13	No	No	No	No	No	No	No	No	No	No
20	3	87	1	7	No	No	No	No	No	No	No	No	No	No
21	3	52	1	4	No	No	No	No	No	No	No	No	No	No
22	3	17	1	1	No	No	No	No	No	No	No	No	No	No
23	3	17	1	1	No	No	No	No	No	No	No	No	No	No
24	3	17	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	4	7	11	13	13	15	15	8	3

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14	26.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:33	0:10
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	144	25
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	1904	1904
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	1056	773	14	12
2	1024	750	14	12
3	1003	734	13	11
4	940	688	12	11
5	834	611	11	9
6	824	603	11	9
7	813	595	11	9
8	739	541	10	8
9	729	533	10	8
10	718	526	10	8
11	623	456	8	7
12	581	425	8	7
13	570	417	8	6
14	422	309	6	5
15	422	309	6	5
16	296	216	4	3
17	169	124	2	2
18	169	124	2	2
19	95	70	1	1
20	53	39	1	1
21	32	23	0	0
22	11	8	0	0
23	11	8	0	0
24	11	8	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1829	1	14	No	No	No	No	No	No	No	No	No	No
2	3	1774	1	14	No	No	No	No	No	No	No	No	No	No
3	3	1737	1	13	No	No	No	No	No	No	No	No	No	No
4	3	1628	1	12	No	No	No	No	No	No	No	No	No	No
5	3	1445	1	11	No	No	No	No	No	No	No	No	No	No
6	3	1427	1	11	No	No	No	No	No	No	No	No	No	No
7	3	1408	1	11	No	No	No	No	No	No	No	No	No	No
8	3	1280	1	10	No	No	No	No	No	No	No	No	No	No
9	3	1262	1	10	No	No	No	No	No	No	No	No	No	No
10	3	1244	1	10	No	No	No	No	No	No	No	No	No	No
11	3	1079	1	8	No	No	No	No	No	No	No	No	No	No
12	3	1006	1	8	No	No	No	No	No	No	No	No	No	No
13	3	987	1	8	No	No	No	No	No	No	No	No	No	No
14	3	731	1	6	No	No	No	No	No	No	No	No	No	No
15	3	731	1	6	No	No	No	No	No	No	No	No	No	No
16	3	512	1	4	No	No	No	No	No	No	No	No	No	No
17	3	293	1	2	No	No	No	No	No	No	No	No	No	No
18	3	293	1	2	No	No	No	No	No	No	No	No	No	No
19	3	165	1	1	No	No	No	No	No	No	No	No	No	No
20	3	92	1	1	No	No	No	No	No	No	No	No	No	No
21	3	55	1	0	No	No	No	No	No	No	No	No	No	No
22	3	19	1	0	No	No	No	No	No	No	No	No	No	No
23	3	19	1	0	No	No	No	No	No	No	No	No	No	No
24	3	19	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.4	13.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	14	12
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1855	1855
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	1028	716	29	22
2	997	695	28	21
3	977	680	28	21
4	915	637	26	20
5	812	566	23	17
6	802	558	23	17
7	792	551	22	17
8	720	501	20	15
9	709	494	20	15
10	699	487	20	15
11	607	422	17	13
12	565	394	16	12
13	555	387	16	12
14	411	286	12	9
15	411	286	12	9
16	288	200	8	6
17	164	115	5	4
18	164	115	5	4
19	93	64	3	2
20	51	36	1	1
21	31	21	1	1
22	10	7	0	0
23	10	7	0	0
24	10	7	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1744	1	29	No	No	No	No	No	No	No	No	No	No
2	3	1692	1	28	No	No	No	No	No	No	No	No	No	No
3	3	1657	1	28	No	No	No	No	No	No	No	No	No	No
4	3	1552	1	26	No	No	No	No	No	No	No	No	No	No
5	3	1378	1	23	No	No	No	No	No	No	No	No	No	No
6	3	1360	1	23	No	No	No	No	No	No	No	No	No	No
7	3	1343	1	22	No	No	No	No	No	No	No	No	No	No
8	3	1221	1	20	No	No	No	No	No	No	No	No	No	No
9	3	1203	1	20	No	No	No	No	No	No	No	No	No	No
10	3	1186	1	20	No	No	No	No	No	No	No	No	No	No
11	3	1029	1	17	No	No	No	No	No	No	No	No	No	No
12	3	959	1	16	No	No	No	No	No	No	No	No	No	No
13	3	942	1	16	No	No	No	No	No	No	No	No	No	No
14	3	697	1	12	No	No	No	No	No	No	No	No	No	No
15	3	697	1	12	No	No	No	No	No	No	No	No	No	No
16	3	488	1	8	No	No	No	No	No	No	No	No	No	No
17	3	279	1	5	No	No	No	No	No	No	No	No	No	No
18	3	279	1	5	No	No	No	No	No	No	No	No	No	No
19	3	157	1	3	No	No	No	No	No	No	No	No	No	No
20	3	87	1	1	No	No	No	No	No	No	No	No	No	No
21	3	52	1	1	No	No	No	No	No	No	No	No	No	No
22	3	17	1	0	No	No	No	No	No	No	No	No	No	No
23	3	17	1	0	No	No	No	No	No	No	No	No	No	No
24	3	17	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	47.4	64.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:22	0:23
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	29	22
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1795	1795
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	843	798	32	11
2	818	774	31	11
3	801	758	30	10
4	750	710	28	10
5	666	630	25	9
6	658	622	25	9
7	649	614	25	8
8	590	559	22	8
9	582	551	22	8
10	573	543	22	7
11	497	471	19	6
12	464	439	18	6
13	455	431	17	6
14	337	319	13	4
15	337	319	13	4
16	236	223	9	3
17	135	128	5	2
18	135	128	5	2
19	76	72	3	1
20	42	40	2	1
21	25	24	1	0
22	8	8	0	0
23	8	8	0	0
24	8	8	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1641	1	32	No	No	No	No	No	No	No	No	No	No
2	3	1592	1	31	No	No	No	No	No	No	No	No	No	No
3	3	1559	1	30	No	No	No	No	No	No	No	No	No	No
4	3	1460	1	28	No	No	No	No	No	No	No	No	No	No
5	3	1296	1	25	No	No	No	No	No	No	No	No	No	No
6	3	1280	1	25	No	No	No	No	No	No	No	No	No	No
7	3	1263	1	25	No	No	No	No	No	No	No	No	No	No
8	3	1149	1	22	No	No	No	No	No	No	No	No	No	No
9	3	1133	1	22	No	No	No	No	No	No	No	No	No	No
10	3	1116	1	22	No	No	No	No	No	No	No	No	No	No
11	3	968	1	19	No	No	No	No	No	No	No	No	No	No
12	3	903	1	18	No	No	No	No	No	No	No	No	No	No
13	3	886	1	17	No	No	No	No	No	No	No	No	No	No
14	3	656	1	13	No	No	No	No	No	No	No	No	No	No
15	3	656	1	13	No	No	No	No	No	No	No	No	No	No
16	3	459	1	9	No	No	No	No	No	No	No	No	No	No
17	3	263	1	5	No	No	No	No	No	No	No	No	No	No
18	3	263	1	5	No	No	No	No	No	No	No	No	No	No
19	3	148	1	3	No	No	No	No	No	No	No	No	No	No
20	3	82	1	2	No	No	No	No	No	No	No	No	No	No
21	3	49	1	1	No	No	No	No	No	No	No	No	No	No
22	3	16	1	0	No	No	No	No	No	No	No	No	No	No
23	3	16	1	0	No	No	No	No	No	No	No	No	No	No
24	3	16	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	30.8	32.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:16	0:06
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	32	11
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1684	1684
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	228	249	3
2	221	242	3
3	217	237	3
4	203	222	3
5	180	197	2
6	178	194	2
7	176	192	2
8	160	174	2
9	157	172	2
10	155	169	2
11	135	147	2
12	125	137	2
13	123	134	2
14	91	100	1
15	91	100	1
16	64	70	1
17	36	40	0
18	36	40	0
19	21	22	0
20	11	12	0
21	7	7	0
22	2	2	0
23	2	2	0
24	2	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	477	1	3	No	No	No	No	No	No	No	No	No	No
2	2	463	1	3	No	No	No	No	No	No	No	No	No	No
3	2	454	1	3	No	No	No	No	No	No	No	No	No	No
4	2	425	1	3	No	No	No	No	No	No	No	No	No	No
5	2	377	1	2	No	No	No	No	No	No	No	No	No	No
6	2	372	1	2	No	No	No	No	No	No	No	No	No	No
7	2	368	1	2	No	No	No	No	No	No	No	No	No	No
8	2	334	1	2	No	No	No	No	No	No	No	No	No	No
9	2	329	1	2	No	No	No	No	No	No	No	No	No	No
10	2	324	1	2	No	No	No	No	No	No	No	No	No	No
11	2	282	1	2	No	No	No	No	No	No	No	No	No	No
12	2	262	1	2	No	No	No	No	No	No	No	No	No	No
13	2	257	1	2	No	No	No	No	No	No	No	No	No	No
14	2	191	1	1	No	No	No	No	No	No	No	No	No	No
15	2	191	1	1	No	No	No	No	No	No	No	No	No	No
16	2	134	1	1	No	No	No	No	No	No	No	No	No	No
17	2	76	1	0	No	No	No	No	No	No	No	No	No	No
18	2	76	1	0	No	No	No	No	No	No	No	No	No	No
19	2	43	1	0	No	No	No	No	No	No	No	No	No	No
20	2	23	1	0	No	No	No	No	No	No	No	No	No	No
21	2	14	1	0	No	No	No	No	No	No	No	No	No	No
22	2	4	1	0	No	No	No	No	No	No	No	No	No	No
23	2	4	1	0	No	No	No	No	No	No	No	No	No	No
24	2	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	3
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	480
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	257	404	148	257
2	249	392	144	249
3	244	384	141	244
4	229	360	132	229
5	203	319	117	203
6	200	315	115	200
7	198	311	114	198
8	180	283	104	180
9	177	279	102	177
10	175	275	101	175
11	152	238	87	152
12	141	222	81	141
13	139	218	80	139
14	103	162	59	103
15	103	162	59	103
16	72	113	41	72
17	41	65	24	41
18	41	65	24	41
19	23	36	13	23
20	13	20	7	13
21	8	12	4	8
22	3	4	1	3
23	3	4	1	3
24	3	4	1	3

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	661	1	257	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
2	2	641	1	249	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
3	2	628	1	244	Yes	Yes	Yes	Yes	No	No	No	Yes	No	No
4	2	589	1	229	No	Yes	Yes	Yes	No	No	No	Yes	No	No
5	2	522	1	203	No	Yes	Yes	Yes	No	No	No	Yes	No	No
6	2	515	1	200	No	Yes	Yes	Yes	No	No	No	Yes	No	No
7	2	509	1	198	No	Yes	Yes	Yes	No	No	No	Yes	No	No
8	2	463	1	180	No	No	Yes	Yes	No	No	No	No	No	No
9	2	456	1	177	No	No	Yes	Yes	No	No	No	No	No	No
10	2	450	1	175	No	No	Yes	Yes	No	No	No	No	No	No
11	2	390	1	152	No	No	No	Yes	No	No	No	No	No	No
12	2	363	1	141	No	No	No	Yes	No	No	No	No	No	No
13	2	357	1	139	No	No	No	Yes	No	No	No	No	No	No
14	2	265	1	103	No	No	No	No	No	No	No	No	No	No
15	2	265	1	103	No	No	No	No	No	No	No	No	No	No
16	2	185	1	72	No	No	No	No	No	No	No	No	No	No
17	2	106	1	41	No	No	No	No	No	No	No	No	No	No
18	2	106	1	41	No	No	No	No	No	No	No	No	No	No
19	2	59	1	23	No	No	No	No	No	No	No	No	No	No
20	2	33	1	13	No	No	No	No	No	No	No	No	No	No
21	2	20	1	8	No	No	No	No	No	No	No	No	No	No
22	2	7	1	3	No	No	No	No	No	No	No	No	No	No
23	2	7	1	3	No	No	No	No	No	No	No	No	No	No
24	2	7	1	3	No	No	No	No	No	No	No	No	No	No
Hours Met					3	7	10	13	0	0	2	7	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.7	15.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:31	1:04
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	148	257
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	1066	1066
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	302	414	28	33
2	293	402	27	32
3	287	393	27	31
4	269	368	25	29
5	239	327	22	26
6	236	323	22	26
7	233	319	22	25
8	211	290	20	23
9	208	286	19	23
10	205	282	19	22
11	178	244	17	19
12	166	228	15	18
13	163	224	15	18
14	121	166	11	13
15	121	166	11	13
16	85	116	8	9
17	48	66	4	5
18	48	66	4	5
19	27	37	3	3
20	15	21	1	2
21	9	12	1	1
22	3	4	0	0
23	3	4	0	0
24	3	4	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	716	1	33	No	No	No	No	No	No	No	No	No	No
2	3	695	1	32	No	No	No	No	No	No	No	No	No	No
3	3	680	1	31	No	No	No	No	No	No	No	No	No	No
4	3	637	1	29	No	No	No	No	No	No	No	No	No	No
5	3	566	1	26	No	No	No	No	No	No	No	No	No	No
6	3	559	1	26	No	No	No	No	No	No	No	No	No	No
7	3	552	1	25	No	No	No	No	No	No	No	No	No	No
8	3	501	1	23	No	No	No	No	No	No	No	No	No	No
9	3	494	1	23	No	No	No	No	No	No	No	No	No	No
10	3	487	1	22	No	No	No	No	No	No	No	No	No	No
11	3	422	1	19	No	No	No	No	No	No	No	No	No	No
12	3	394	1	18	No	No	No	No	No	No	No	No	No	No
13	3	387	1	18	No	No	No	No	No	No	No	No	No	No
14	3	287	1	13	No	No	No	No	No	No	No	No	No	No
15	3	287	1	13	No	No	No	No	No	No	No	No	No	No
16	3	201	1	9	No	No	No	No	No	No	No	No	No	No
17	3	114	1	5	No	No	No	No	No	No	No	No	No	No
18	3	114	1	5	No	No	No	No	No	No	No	No	No	No
19	3	64	1	3	No	No	No	No	No	No	No	No	No	No
20	3	36	1	2	No	No	No	No	No	No	No	No	No	No
21	3	21	1	1	No	No	No	No	No	No	No	No	No	No
22	3	7	1	0	No	No	No	No	No	No	No	No	No	No
23	3	7	1	0	No	No	No	No	No	No	No	No	No	No
24	3	7	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.8	9.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	28	33
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	777	777
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	141	150	6	8
2	137	146	6	8
3	134	143	6	8
4	125	134	5	7
5	111	119	5	6
6	110	117	5	6
7	109	116	5	6
8	99	105	4	6
9	97	103	4	6
10	96	102	4	5
11	83	89	4	5
12	78	83	3	4
13	76	81	3	4
14	56	60	2	3
15	56	60	2	3
16	39	42	2	2
17	23	24	1	1
18	23	24	1	1
19	13	14	1	1
20	7	8	0	0
21	4	5	0	0
22	1	2	0	0
23	1	2	0	0
24	1	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	291	1	8	No	No	No	No	No	No	No	No	No	No
2	2	283	1	8	No	No	No	No	No	No	No	No	No	No
3	2	277	1	8	No	No	No	No	No	No	No	No	No	No
4	2	259	1	7	No	No	No	No	No	No	No	No	No	No
5	2	230	1	6	No	No	No	No	No	No	No	No	No	No
6	2	227	1	6	No	No	No	No	No	No	No	No	No	No
7	2	225	1	6	No	No	No	No	No	No	No	No	No	No
8	2	204	1	6	No	No	No	No	No	No	No	No	No	No
9	2	200	1	6	No	No	No	No	No	No	No	No	No	No
10	2	198	1	5	No	No	No	No	No	No	No	No	No	No
11	2	172	1	5	No	No	No	No	No	No	No	No	No	No
12	2	161	1	4	No	No	No	No	No	No	No	No	No	No
13	2	157	1	4	No	No	No	No	No	No	No	No	No	No
14	2	116	1	3	No	No	No	No	No	No	No	No	No	No
15	2	116	1	3	No	No	No	No	No	No	No	No	No	No
16	2	81	1	2	No	No	No	No	No	No	No	No	No	No
17	2	47	1	1	No	No	No	No	No	No	No	No	No	No
18	2	47	1	1	No	No	No	No	No	No	No	No	No	No
19	2	27	1	1	No	No	No	No	No	No	No	No	No	No
20	2	15	1	0	No	No	No	No	No	No	No	No	No	No
21	2	9	1	0	No	No	No	No	No	No	No	No	No	No
22	2	3	1	0	No	No	No	No	No	No	No	No	No	No
23	2	3	1	0	No	No	No	No	No	No	No	No	No	No
24	2	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.9	8.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00	0:01
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	6	8
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	305	305
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	151	270	17	91
2	146	262	16	88
3	143	257	16	86
4	134	240	15	81
5	119	213	13	72
6	118	211	13	71
7	116	208	13	70
8	106	189	12	64
9	104	186	12	63
10	103	184	12	62
11	89	159	10	54
12	83	149	9	50
13	82	146	9	49
14	60	108	7	36
15	60	108	7	36
16	42	76	5	25
17	24	43	3	15
18	24	43	3	15
19	14	24	2	8
20	8	14	1	5
21	5	8	1	3
22	2	3	0	1
23	2	3	0	1
24	2	3	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	421	1	91	No	No	No	Yes	No	No	No	Yes	No	No
2	1	408	1	88	No	No	No	Yes	No	No	No	No	No	No
3	1	400	1	86	No	No	No	Yes	No	No	No	No	No	No
4	1	374	1	81	No	No	No	No	No	No	No	No	No	No
5	1	332	1	72	No	No	No	No	No	No	No	No	No	No
6	1	329	1	71	No	No	No	No	No	No	No	No	No	No
7	1	324	1	70	No	No	No	No	No	No	No	No	No	No
8	1	295	1	64	No	No	No	No	No	No	No	No	No	No
9	1	290	1	63	No	No	No	No	No	No	No	No	No	No
10	1	287	1	62	No	No	No	No	No	No	No	No	No	No
11	1	248	1	54	No	No	No	No	No	No	No	No	No	No
12	1	232	1	50	No	No	No	No	No	No	No	No	No	No
13	1	228	1	49	No	No	No	No	No	No	No	No	No	No
14	1	168	1	36	No	No	No	No	No	No	No	No	No	No
15	1	168	1	36	No	No	No	No	No	No	No	No	No	No
16	1	118	1	25	No	No	No	No	No	No	No	No	No	No
17	1	67	1	15	No	No	No	No	No	No	No	No	No	No
18	1	67	1	15	No	No	No	No	No	No	No	No	No	No
19	1	38	1	8	No	No	No	No	No	No	No	No	No	No
20	1	22	1	5	No	No	No	No	No	No	No	No	No	No
21	1	13	1	3	No	No	No	No	No	No	No	No	No	No
22	1	5	1	1	No	No	No	No	No	No	No	No	No	No
23	1	5	1	1	No	No	No	No	No	No	No	No	No	No
24	1	5	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	3	0	0	0	1	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	17	10.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04	0:15
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	17	91
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	529	529
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	700	566	14
2	679	549	14
3	665	538	13
4	623	504	12
5	553	447	11
6	546	441	11
7	539	436	11
8	490	396	10
9	483	391	10
10	476	385	10
11	413	334	8
12	385	311	8
13	378	306	8
14	280	226	6
15	280	226	6
16	196	158	4
17	112	91	2
18	112	91	2
19	63	51	1
20	35	28	1
21	21	17	0
22	7	6	0
23	7	6	0
24	7	6	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	1266	1	14	No	No	No	No	No	No	No	No	No	No
2	1	1228	1	14	No	No	No	No	No	No	No	No	No	No
3	1	1203	1	13	No	No	No	No	No	No	No	No	No	No
4	1	1127	1	12	No	No	No	No	No	No	No	No	No	No
5	1	1000	1	11	No	No	No	No	No	No	No	No	No	No
6	1	987	1	11	No	No	No	No	No	No	No	No	No	No
7	1	975	1	11	No	No	No	No	No	No	No	No	No	No
8	1	886	1	10	No	No	No	No	No	No	No	No	No	No
9	1	874	1	10	No	No	No	No	No	No	No	No	No	No
10	1	861	1	10	No	No	No	No	No	No	No	No	No	No
11	1	747	1	8	No	No	No	No	No	No	No	No	No	No
12	1	696	1	8	No	No	No	No	No	No	No	No	No	No
13	1	684	1	8	No	No	No	No	No	No	No	No	No	No
14	1	506	1	6	No	No	No	No	No	No	No	No	No	No
15	1	506	1	6	No	No	No	No	No	No	No	No	No	No
16	1	354	1	4	No	No	No	No	No	No	No	No	No	No
17	1	203	1	2	No	No	No	No	No	No	No	No	No	No
18	1	203	1	2	No	No	No	No	No	No	No	No	No	No
19	1	114	1	1	No	No	No	No	No	No	No	No	No	No
20	1	63	1	1	No	No	No	No	No	No	No	No	No	No
21	1	38	1	0	No	No	No	No	No	No	No	No	No	No
22	1	13	1	0	No	No	No	No	No	No	No	No	No	No
23	1	13	1	0	No	No	No	No	No	No	No	No	No	No
24	1	13	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	23.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	14
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1280
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	1210	937	14
2	1174	909	14
3	1150	890	13
4	1077	834	12
5	956	740	11
6	944	731	11
7	932	721	11
8	847	656	10
9	835	647	10
10	823	637	10
11	714	553	8
12	666	515	8
13	653	506	8
14	484	375	6
15	484	375	6
16	339	262	4
17	194	150	2
18	194	150	2
19	109	84	1
20	61	47	1
21	36	28	0
22	12	9	0
23	12	9	0
24	12	9	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2147	1	14	No	No	No	No	No	No	No	No	No	No
2	3	2083	1	14	No	No	No	No	No	No	No	No	No	No
3	3	2040	1	13	No	No	No	No	No	No	No	No	No	No
4	3	1911	1	12	No	No	No	No	No	No	No	No	No	No
5	3	1696	1	11	No	No	No	No	No	No	No	No	No	No
6	3	1675	1	11	No	No	No	No	No	No	No	No	No	No
7	3	1653	1	11	No	No	No	No	No	No	No	No	No	No
8	3	1503	1	10	No	No	No	No	No	No	No	No	No	No
9	3	1482	1	10	No	No	No	No	No	No	No	No	No	No
10	3	1460	1	10	No	No	No	No	No	No	No	No	No	No
11	3	1267	1	8	No	No	No	No	No	No	No	No	No	No
12	3	1181	1	8	No	No	No	No	No	No	No	No	No	No
13	3	1159	1	8	No	No	No	No	No	No	No	No	No	No
14	3	859	1	6	No	No	No	No	No	No	No	No	No	No
15	3	859	1	6	No	No	No	No	No	No	No	No	No	No
16	3	601	1	4	No	No	No	No	No	No	No	No	No	No
17	3	344	1	2	No	No	No	No	No	No	No	No	No	No
18	3	344	1	2	No	No	No	No	No	No	No	No	No	No
19	3	193	1	1	No	No	No	No	No	No	No	No	No	No
20	3	108	1	1	No	No	No	No	No	No	No	No	No	No
21	3	64	1	0	No	No	No	No	No	No	No	No	No	No
22	3	21	1	0	No	No	No	No	No	No	No	No	No	No
23	3	21	1	0	No	No	No	No	No	No	No	No	No	No
24	3	21	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	22.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	14
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	2161
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	984	1117	142	22
2	954	1083	138	21
3	935	1061	135	21
4	876	994	126	20
5	777	882	112	17
6	768	871	111	17
7	758	860	109	17
8	689	782	99	15
9	679	771	98	15
10	669	760	97	15
11	581	659	84	13
12	541	614	78	12
13	531	603	77	12
14	394	447	57	9
15	394	447	57	9
16	276	313	40	6
17	157	179	23	4
18	157	179	23	4
19	89	101	13	2
20	49	56	7	1
21	30	34	4	1
22	10	11	1	0
23	10	11	1	0
24	10	11	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2101	1	142	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	2037	1	138	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	1996	1	135	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	1870	1	126	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	3	1659	1	112	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
6	3	1639	1	111	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
7	3	1618	1	109	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
8	3	1471	1	99	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
9	3	1450	1	98	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
10	3	1429	1	97	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
11	3	1240	1	84	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
12	3	1155	1	78	No	No	No	No	Yes	Yes	Yes	Yes	No	No
13	3	1134	1	77	No	No	No	No	Yes	Yes	Yes	Yes	No	No
14	3	841	1	57	No	No	No	No	No	No	Yes	Yes	No	No
15	3	841	1	57	No	No	No	No	No	No	Yes	Yes	No	No
16	3	589	1	40	No	No	No	No	No	No	No	No	No	No
17	3	336	1	23	No	No	No	No	No	No	No	No	No	No
18	3	336	1	23	No	No	No	No	No	No	No	No	No	No
19	3	190	1	13	No	No	No	No	No	No	No	No	No	No
20	3	105	1	7	No	No	No	No	No	No	No	No	No	No
21	3	64	1	4	No	No	No	No	No	No	No	No	No	No
22	3	21	1	1	No	No	No	No	No	No	No	No	No	No
23	3	21	1	1	No	No	No	No	No	No	No	No	No	No
24	3	21	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	4	7	11	13	13	15	15	10	4

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	18.6	22
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:43	0:08
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	142	22
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	2265	2265
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	1008	1171	48	49
2	978	1136	47	48
3	958	1112	46	47
4	897	1042	43	44
5	796	925	38	39
6	786	913	37	38
7	776	902	37	38
8	706	820	34	34
9	696	808	33	34
10	685	796	33	33
11	595	691	28	29
12	554	644	26	27
13	544	632	26	26
14	403	468	19	20
15	403	468	19	20
16	282	328	13	14
17	161	187	8	8
18	161	187	8	8
19	91	105	4	4
20	50	59	2	2
21	30	35	1	1
22	10	12	0	0
23	10	12	0	0
24	10	12	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2179	1	49	No	No	No	No	No	No	No	Yes	No	No
2	3	2114	1	48	No	No	No	No	No	No	No	Yes	No	No
3	3	2070	1	47	No	No	No	No	No	No	No	Yes	No	No
4	3	1939	1	44	No	No	No	No	No	No	No	Yes	No	No
5	3	1721	1	39	No	No	No	No	No	No	No	No	No	No
6	3	1699	1	38	No	No	No	No	No	No	No	No	No	No
7	3	1678	1	38	No	No	No	No	No	No	No	No	No	No
8	3	1526	1	34	No	No	No	No	No	No	No	No	No	No
9	3	1504	1	34	No	No	No	No	No	No	No	No	No	No
10	3	1481	1	33	No	No	No	No	No	No	No	No	No	No
11	3	1286	1	29	No	No	No	No	No	No	No	No	No	No
12	3	1198	1	27	No	No	No	No	No	No	No	No	No	No
13	3	1176	1	26	No	No	No	No	No	No	No	No	No	No
14	3	871	1	20	No	No	No	No	No	No	No	No	No	No
15	3	871	1	20	No	No	No	No	No	No	No	No	No	No
16	3	610	1	14	No	No	No	No	No	No	No	No	No	No
17	3	348	1	8	No	No	No	No	No	No	No	No	No	No
18	3	348	1	8	No	No	No	No	No	No	No	No	No	No
19	3	196	1	4	No	No	No	No	No	No	No	No	No	No
20	3	109	1	2	No	No	No	No	No	No	No	No	No	No
21	3	65	1	1	No	No	No	No	No	No	No	No	No	No
22	3	22	1	0	No	No	No	No	No	No	No	No	No	No
23	3	22	1	0	No	No	No	No	No	No	No	No	No	No
24	3	22	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.2	13.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:11	0:10
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	48	49
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2276	2276
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	962	1084	24	47
2	933	1051	23	46
3	914	1030	23	45
4	856	965	21	42
5	760	856	19	37
6	750	846	19	37
7	741	835	18	36
8	673	759	17	33
9	664	748	17	32
10	654	737	16	32
11	568	640	14	28
12	529	596	13	26
13	519	585	13	25
14	385	434	10	19
15	385	434	10	19
16	269	304	7	13
17	154	173	4	8
18	154	173	4	8
19	87	98	2	4
20	48	54	1	2
21	29	33	1	1
22	10	11	0	0
23	10	11	0	0
24	10	11	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2046	1	47	No	No	No	No	No	No	No	Yes	No	No
2	3	1984	1	46	No	No	No	No	No	No	No	Yes	No	No
3	3	1944	1	45	No	No	No	No	No	No	No	Yes	No	No
4	3	1821	1	42	No	No	No	No	No	No	No	Yes	No	No
5	3	1616	1	37	No	No	No	No	No	No	No	No	No	No
6	3	1596	1	37	No	No	No	No	No	No	No	No	No	No
7	3	1576	1	36	No	No	No	No	No	No	No	No	No	No
8	3	1432	1	33	No	No	No	No	No	No	No	No	No	No
9	3	1412	1	32	No	No	No	No	No	No	No	No	No	No
10	3	1391	1	32	No	No	No	No	No	No	No	No	No	No
11	3	1208	1	28	No	No	No	No	No	No	No	No	No	No
12	3	1125	1	26	No	No	No	No	No	No	No	No	No	No
13	3	1104	1	25	No	No	No	No	No	No	No	No	No	No
14	3	819	1	19	No	No	No	No	No	No	No	No	No	No
15	3	819	1	19	No	No	No	No	No	No	No	No	No	No
16	3	573	1	13	No	No	No	No	No	No	No	No	No	No
17	3	327	1	8	No	No	No	No	No	No	No	No	No	No
18	3	327	1	8	No	No	No	No	No	No	No	No	No	No
19	3	185	1	4	No	No	No	No	No	No	No	No	No	No
20	3	102	1	2	No	No	No	No	No	No	No	No	No	No
21	3	62	1	1	No	No	No	No	No	No	No	No	No	No
22	3	21	1	0	No	No	No	No	No	No	No	No	No	No
23	3	21	1	0	No	No	No	No	No	No	No	No	No	No
24	3	21	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	25.1	24.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10	0:19
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	24	47
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2117	2117
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	1019	953	57	66
2	988	924	55	64
3	968	905	54	63
4	907	848	51	59
5	805	753	45	52
6	795	743	44	51
7	785	734	44	51
8	713	667	40	46
9	703	658	39	46
10	693	648	39	45
11	601	562	34	39
12	560	524	31	36
13	550	515	31	36
14	408	381	23	26
15	408	381	23	26
16	285	267	16	18
17	163	152	9	11
18	163	152	9	11
19	92	86	5	6
20	51	48	3	3
21	31	29	2	2
22	10	10	1	1
23	10	10	1	1
24	10	10	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1972	1	66	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	1912	1	64	No	No	No	No	No	Yes	Yes	Yes	No	No
3	3	1873	1	63	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	1755	1	59	No	No	No	No	No	No	Yes	Yes	No	No
5	3	1558	1	52	No	No	No	No	No	No	Yes	Yes	No	No
6	3	1538	1	51	No	No	No	No	No	No	No	Yes	No	No
7	3	1519	1	51	No	No	No	No	No	No	No	Yes	No	No
8	3	1380	1	46	No	No	No	No	No	No	No	Yes	No	No
9	3	1361	1	46	No	No	No	No	No	No	No	Yes	No	No
10	3	1341	1	45	No	No	No	No	No	No	No	Yes	No	No
11	3	1163	1	39	No	No	No	No	No	No	No	No	No	No
12	3	1084	1	36	No	No	No	No	No	No	No	No	No	No
13	3	1065	1	36	No	No	No	No	No	No	No	No	No	No
14	3	789	1	26	No	No	No	No	No	No	No	No	No	No
15	3	789	1	26	No	No	No	No	No	No	No	No	No	No
16	3	552	1	18	No	No	No	No	No	No	No	No	No	No
17	3	315	1	11	No	No	No	No	No	No	No	No	No	No
18	3	315	1	11	No	No	No	No	No	No	No	No	No	No
19	3	178	1	6	No	No	No	No	No	No	No	No	No	No
20	3	99	1	3	No	No	No	No	No	No	No	No	No	No
21	3	60	1	2	No	No	No	No	No	No	No	No	No	No
22	3	20	1	1	No	No	No	No	No	No	No	No	No	No
23	3	20	1	1	No	No	No	No	No	No	No	No	No	No
24	3	20	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	3	5	10	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	24.9	44.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:23	0:48
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	57	66
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2095	2095
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	294	224	13
2	285	217	13
3	279	213	12
4	262	199	12
5	232	177	10
6	229	175	10
7	226	172	10
8	206	157	9
9	203	155	9
10	200	152	9
11	173	132	8
12	162	123	7
13	159	121	7
14	118	90	5
15	118	90	5
16	82	63	4
17	47	36	2
18	47	36	2
19	26	20	1
20	15	11	1
21	9	7	0
22	3	2	0
23	3	2	0
24	3	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	518	1	13	No	No	No	No	No	No	No	No	No	No
2	2	502	1	13	No	No	No	No	No	No	No	No	No	No
3	2	492	1	12	No	No	No	No	No	No	No	No	No	No
4	2	461	1	12	No	No	No	No	No	No	No	No	No	No
5	2	409	1	10	No	No	No	No	No	No	No	No	No	No
6	2	404	1	10	No	No	No	No	No	No	No	No	No	No
7	2	398	1	10	No	No	No	No	No	No	No	No	No	No
8	2	363	1	9	No	No	No	No	No	No	No	No	No	No
9	2	358	1	9	No	No	No	No	No	No	No	No	No	No
10	2	352	1	9	No	No	No	No	No	No	No	No	No	No
11	2	305	1	8	No	No	No	No	No	No	No	No	No	No
12	2	285	1	7	No	No	No	No	No	No	No	No	No	No
13	2	280	1	7	No	No	No	No	No	No	No	No	No	No
14	2	208	1	5	No	No	No	No	No	No	No	No	No	No
15	2	208	1	5	No	No	No	No	No	No	No	No	No	No
16	2	145	1	4	No	No	No	No	No	No	No	No	No	No
17	2	83	1	2	No	No	No	No	No	No	No	No	No	No
18	2	83	1	2	No	No	No	No	No	No	No	No	No	No
19	2	46	1	1	No	No	No	No	No	No	No	No	No	No
20	2	26	1	1	No	No	No	No	No	No	No	No	No	No
21	2	16	1	0	No	No	No	No	No	No	No	No	No	No
22	2	5	1	0	No	No	No	No	No	No	No	No	No	No
23	2	5	1	0	No	No	No	No	No	No	No	No	No	No
24	2	5	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	13
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	531
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	347	279	111	338
2	337	271	108	328
3	330	265	105	321
4	309	248	99	301
5	274	220	88	267
6	271	218	87	264
7	267	215	85	260
8	243	195	78	237
9	239	193	77	233
10	236	190	75	230
11	205	165	65	199
12	191	153	61	186
13	187	151	60	183
14	139	112	44	135
15	139	112	44	135
16	97	78	31	95
17	56	45	18	54
18	56	45	18	54
19	31	25	10	30
20	17	14	6	17
21	10	8	3	10
22	3	3	1	3
23	3	3	1	3
24	3	3	1	3

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	626	1	338	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No
2	2	608	1	328	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No
3	2	595	1	321	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No
4	2	557	1	301	No	Yes	Yes	Yes	No	No	No	Yes	No	No
5	2	494	1	267	No	Yes	Yes	Yes	No	No	No	No	No	No
6	2	489	1	264	No	Yes	Yes	Yes	No	No	No	No	No	No
7	2	482	1	260	No	Yes	Yes	Yes	No	No	No	No	No	No
8	2	438	1	237	No	No	Yes	Yes	No	No	No	No	No	No
9	2	432	1	233	No	No	Yes	Yes	No	No	No	No	No	No
10	2	426	1	230	No	No	Yes	Yes	No	No	No	No	No	No
11	2	370	1	199	No	No	No	Yes	No	No	No	No	No	No
12	2	344	1	186	No	No	No	Yes	No	No	No	No	No	No
13	2	338	1	183	No	No	No	Yes	No	No	No	No	No	No
14	2	251	1	135	No	No	No	No	No	No	No	No	No	No
15	2	251	1	135	No	No	No	No	No	No	No	No	No	No
16	2	175	1	95	No	No	No	No	No	No	No	No	No	No
17	2	101	1	54	No	No	No	No	No	No	No	No	No	No
18	2	101	1	54	No	No	No	No	No	No	No	No	No	No
19	2	56	1	30	No	No	No	No	No	No	No	No	No	No
20	2	31	1	17	No	No	No	No	No	No	No	No	No	No
21	2	18	1	10	No	No	No	No	No	No	No	No	No	No
22	2	6	1	3	No	No	No	No	No	No	No	No	No	No
23	2	6	1	3	No	No	No	No	No	No	No	No	No	No
24	2	6	1	3	No	No	No	No	No	No	No	No	No	No
Hours Met					2	7	10	13	0	0	0	4	3	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.8	27.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:25	2:32
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	111	338
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	1075	1075
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	462	326	41	74
2	448	316	40	72
3	439	310	39	70
4	411	290	36	66
5	365	258	32	58
6	360	254	32	58
7	356	251	32	57
8	323	228	29	52
9	319	225	28	51
10	314	222	28	50
11	273	192	24	44
12	254	179	23	41
13	249	176	22	40
14	185	130	16	30
15	185	130	16	30
16	129	91	11	21
17	74	52	7	12
18	74	52	7	12
19	42	29	4	7
20	23	16	2	4
21	14	10	1	2
22	5	3	0	1
23	5	3	0	1
24	5	3	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	788	1	74	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	764	1	72	No	No	No	No	No	Yes	Yes	Yes	No	No
3	3	749	1	70	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	701	1	66	No	No	No	No	No	No	Yes	Yes	No	No
5	3	623	1	58	No	No	No	No	No	No	No	Yes	No	No
6	3	614	1	58	No	No	No	No	No	No	No	Yes	No	No
7	3	607	1	57	No	No	No	No	No	No	No	Yes	No	No
8	3	551	1	52	No	No	No	No	No	No	No	Yes	No	No
9	3	544	1	51	No	No	No	No	No	No	No	Yes	No	No
10	3	536	1	50	No	No	No	No	No	No	No	Yes	No	No
11	3	465	1	44	No	No	No	No	No	No	No	No	No	No
12	3	433	1	41	No	No	No	No	No	No	No	No	No	No
13	3	425	1	40	No	No	No	No	No	No	No	No	No	No
14	3	315	1	30	No	No	No	No	No	No	No	No	No	No
15	3	315	1	30	No	No	No	No	No	No	No	No	No	No
16	3	220	1	21	No	No	No	No	No	No	No	No	No	No
17	3	126	1	12	No	No	No	No	No	No	No	No	No	No
18	3	126	1	12	No	No	No	No	No	No	No	No	No	No
19	3	71	1	7	No	No	No	No	No	No	No	No	No	No
20	3	39	1	4	No	No	No	No	No	No	No	No	No	No
21	3	24	1	2	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	3	4	10	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.5	10.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07	0:13
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	41	74
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	903	903
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	188	238	5	16
2	182	231	5	16
3	179	226	5	15
4	167	212	4	14
5	149	188	4	13
6	147	186	4	12
7	145	183	4	12
8	132	167	4	11
9	130	164	3	11
10	128	162	3	11
11	111	140	3	9
12	103	131	3	9
13	102	129	3	9
14	75	95	2	6
15	75	95	2	6
16	53	67	1	4
17	30	38	1	3
18	30	38	1	3
19	17	21	0	1
20	9	12	0	1
21	6	7	0	0
22	2	2	0	0
23	2	2	0	0
24	2	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	426	1	16	No	No	No	No	No	No	No	No	No	No
2	2	413	1	16	No	No	No	No	No	No	No	No	No	No
3	2	405	1	15	No	No	No	No	No	No	No	No	No	No
4	2	379	1	14	No	No	No	No	No	No	No	No	No	No
5	2	337	1	13	No	No	No	No	No	No	No	No	No	No
6	2	333	1	12	No	No	No	No	No	No	No	No	No	No
7	2	328	1	12	No	No	No	No	No	No	No	No	No	No
8	2	299	1	11	No	No	No	No	No	No	No	No	No	No
9	2	294	1	11	No	No	No	No	No	No	No	No	No	No
10	2	290	1	11	No	No	No	No	No	No	No	No	No	No
11	2	251	1	9	No	No	No	No	No	No	No	No	No	No
12	2	234	1	9	No	No	No	No	No	No	No	No	No	No
13	2	231	1	9	No	No	No	No	No	No	No	No	No	No
14	2	170	1	6	No	No	No	No	No	No	No	No	No	No
15	2	170	1	6	No	No	No	No	No	No	No	No	No	No
16	2	120	1	4	No	No	No	No	No	No	No	No	No	No
17	2	68	1	3	No	No	No	No	No	No	No	No	No	No
18	2	68	1	3	No	No	No	No	No	No	No	No	No	No
19	2	38	1	1	No	No	No	No	No	No	No	No	No	No
20	2	21	1	1	No	No	No	No	No	No	No	No	No	No
21	2	13	1	0	No	No	No	No	No	No	No	No	No	No
22	2	4	1	0	No	No	No	No	No	No	No	No	No	No
23	2	4	1	0	No	No	No	No	No	No	No	No	No	No
24	2	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.6	9.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	5	16
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	447	447
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	201	277	47	120
2	195	269	46	116
3	191	263	45	114
4	179	247	42	107
5	159	219	37	95
6	157	216	37	94
7	155	213	36	92
8	141	194	33	84
9	139	191	32	83
10	137	188	32	82
11	119	163	28	71
12	111	152	26	66
13	109	150	25	65
14	80	111	19	48
15	80	111	19	48
16	56	78	13	34
17	32	44	8	19
18	32	44	8	19
19	18	25	4	11
20	10	14	2	6
21	6	8	1	4
22	2	3	0	1
23	2	3	0	1
24	2	3	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	478	1	120	No	Yes	Yes	Yes	No	No	No	Yes	No	No
2	1	464	1	116	No	No	Yes	Yes	No	No	No	Yes	No	No
3	1	454	1	114	No	No	Yes	Yes	No	No	No	Yes	No	No
4	1	426	1	107	No	No	Yes	Yes	No	No	No	Yes	No	No
5	1	378	1	95	No	No	No	Yes	No	No	No	No	No	No
6	1	373	1	94	No	No	No	Yes	No	No	No	No	No	No
7	1	368	1	92	No	No	No	Yes	No	No	No	No	No	No
8	1	335	1	84	No	No	No	Yes	No	No	No	No	No	No
9	1	330	1	83	No	No	No	No	No	No	No	No	No	No
10	1	325	1	82	No	No	No	No	No	No	No	No	No	No
11	1	282	1	71	No	No	No	No	No	No	No	No	No	No
12	1	263	1	66	No	No	No	No	No	No	No	No	No	No
13	1	259	1	65	No	No	No	No	No	No	No	No	No	No
14	1	191	1	48	No	No	No	No	No	No	No	No	No	No
15	1	191	1	48	No	No	No	No	No	No	No	No	No	No
16	1	134	1	34	No	No	No	No	No	No	No	No	No	No
17	1	76	1	19	No	No	No	No	No	No	No	No	No	No
18	1	76	1	19	No	No	No	No	No	No	No	No	No	No
19	1	43	1	11	No	No	No	No	No	No	No	No	No	No
20	1	24	1	6	No	No	No	No	No	No	No	No	No	No
21	1	14	1	4	No	No	No	No	No	No	No	No	No	No
22	1	5	1	1	No	No	No	No	No	No	No	No	No	No
23	1	5	1	1	No	No	No	No	No	No	No	No	No	No
24	1	5	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	1	4	8	0	0	0	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.2	10.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:11	0:21
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	47	120
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	645	645
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Appendix H-4

Cumulative Conditions

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	342	34	16
2	332	33	16
3	325	32	15
4	304	30	14
5	270	27	13
6	267	27	12
7	263	26	12
8	239	24	11
9	236	23	11
10	233	23	11
11	202	20	9
12	188	19	9
13	185	18	9
14	137	14	6
15	137	14	6
16	96	10	4
17	55	5	3
18	55	5	3
19	31	3	1
20	17	2	1
21	10	1	0
22	3	0	0
23	3	0	0
24	3	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	376	1	16	No	No	No	No	No	No	No	No	No	No
2	1	365	1	16	No	No	No	No	No	No	No	No	No	No
3	1	357	1	15	No	No	No	No	No	No	No	No	No	No
4	1	334	1	14	No	No	No	No	No	No	No	No	No	No
5	1	297	1	13	No	No	No	No	No	No	No	No	No	No
6	1	294	1	12	No	No	No	No	No	No	No	No	No	No
7	1	289	1	12	No	No	No	No	No	No	No	No	No	No
8	1	263	1	11	No	No	No	No	No	No	No	No	No	No
9	1	259	1	11	No	No	No	No	No	No	No	No	No	No
10	1	256	1	11	No	No	No	No	No	No	No	No	No	No
11	1	222	1	9	No	No	No	No	No	No	No	No	No	No
12	1	207	1	9	No	No	No	No	No	No	No	No	No	No
13	1	203	1	9	No	No	No	No	No	No	No	No	No	No
14	1	151	1	6	No	No	No	No	No	No	No	No	No	No
15	1	151	1	6	No	No	No	No	No	No	No	No	No	No
16	1	106	1	4	No	No	No	No	No	No	No	No	No	No
17	1	60	1	3	No	No	No	No	No	No	No	No	No	No
18	1	60	1	3	No	No	No	No	No	No	No	No	No	No
19	1	34	1	1	No	No	No	No	No	No	No	No	No	No
20	1	19	1	1	No	No	No	No	No	No	No	No	No	No
21	1	11	1	0	No	No	No	No	No	No	No	No	No	No
22	1	3	1	0	No	No	No	No	No	No	No	No	No	No
23	1	3	1	0	No	No	No	No	No	No	No	No	No	No
24	1	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	16
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	392
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	846	439	7
2	821	426	7
3	804	417	7
4	753	391	6
5	668	347	6
6	660	342	5
7	651	338	5
8	592	307	5
9	584	303	5
10	575	299	5
11	499	259	4
12	465	241	4
13	457	237	4
14	338	176	3
15	338	176	3
16	237	123	2
17	135	70	1
18	135	70	1
19	76	40	1
20	42	22	0
21	25	13	0
22	8	4	0
23	8	4	0
24	8	4	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1285	1	7	No	No	No	No	No	No	No	No	No	No
2	3	1247	1	7	No	No	No	No	No	No	No	No	No	No
3	3	1221	1	7	No	No	No	No	No	No	No	No	No	No
4	3	1144	1	6	No	No	No	No	No	No	No	No	No	No
5	3	1015	1	6	No	No	No	No	No	No	No	No	No	No
6	3	1002	1	5	No	No	No	No	No	No	No	No	No	No
7	3	989	1	5	No	No	No	No	No	No	No	No	No	No
8	3	899	1	5	No	No	No	No	No	No	No	No	No	No
9	3	887	1	5	No	No	No	No	No	No	No	No	No	No
10	3	874	1	5	No	No	No	No	No	No	No	No	No	No
11	3	758	1	4	No	No	No	No	No	No	No	No	No	No
12	3	706	1	4	No	No	No	No	No	No	No	No	No	No
13	3	694	1	4	No	No	No	No	No	No	No	No	No	No
14	3	514	1	3	No	No	No	No	No	No	No	No	No	No
15	3	514	1	3	No	No	No	No	No	No	No	No	No	No
16	3	360	1	2	No	No	No	No	No	No	No	No	No	No
17	3	205	1	1	No	No	No	No	No	No	No	No	No	No
18	3	205	1	1	No	No	No	No	No	No	No	No	No	No
19	3	116	1	1	No	No	No	No	No	No	No	No	No	No
20	3	64	1	0	No	No	No	No	No	No	No	No	No	No
21	3	38	1	0	No	No	No	No	No	No	No	No	No	No
22	3	12	1	0	No	No	No	No	No	No	No	No	No	No
23	3	12	1	0	No	No	No	No	No	No	No	No	No	No
24	3	12	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	7
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1292
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	930	646	33	30
2	902	627	32	29
3	884	614	31	29
4	828	575	29	27
5	735	510	26	24
6	725	504	26	23
7	716	497	25	23
8	651	452	23	21
9	642	446	23	21
10	632	439	22	20
11	549	381	19	18
12	512	355	18	17
13	502	349	18	16
14	372	258	13	12
15	372	258	13	12
16	260	181	9	8
17	149	103	5	5
18	149	103	5	5
19	84	58	3	3
20	47	32	2	2
21	28	19	1	1
22	9	6	0	0
23	9	6	0	0
24	9	6	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1576	1	33	No	No	No	No	No	No	No	No	No	No
2	3	1529	1	32	No	No	No	No	No	No	No	No	No	No
3	3	1498	1	31	No	No	No	No	No	No	No	No	No	No
4	3	1403	1	29	No	No	No	No	No	No	No	No	No	No
5	3	1245	1	26	No	No	No	No	No	No	No	No	No	No
6	3	1229	1	26	No	No	No	No	No	No	No	No	No	No
7	3	1213	1	25	No	No	No	No	No	No	No	No	No	No
8	3	1103	1	23	No	No	No	No	No	No	No	No	No	No
9	3	1088	1	23	No	No	No	No	No	No	No	No	No	No
10	3	1071	1	22	No	No	No	No	No	No	No	No	No	No
11	3	930	1	19	No	No	No	No	No	No	No	No	No	No
12	3	867	1	18	No	No	No	No	No	No	No	No	No	No
13	3	851	1	18	No	No	No	No	No	No	No	No	No	No
14	3	630	1	13	No	No	No	No	No	No	No	No	No	No
15	3	630	1	13	No	No	No	No	No	No	No	No	No	No
16	3	441	1	9	No	No	No	No	No	No	No	No	No	No
17	3	252	1	5	No	No	No	No	No	No	No	No	No	No
18	3	252	1	5	No	No	No	No	No	No	No	No	No	No
19	3	142	1	3	No	No	No	No	No	No	No	No	No	No
20	3	79	1	2	No	No	No	No	No	No	No	No	No	No
21	3	47	1	1	No	No	No	No	No	No	No	No	No	No
22	3	15	1	0	No	No	No	No	No	No	No	No	No	No
23	3	15	1	0	No	No	No	No	No	No	No	No	No	No
24	3	15	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.4	20.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06	0:10
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	33	30
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1639	1639
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	899	621	17	14
2	872	602	16	14
3	854	590	16	13
4	800	553	15	12
5	710	491	13	11
6	701	484	13	11
7	692	478	13	11
8	629	435	12	10
9	620	428	12	10
10	611	422	12	10
11	530	366	10	8
12	494	342	9	8
13	485	335	9	8
14	360	248	7	6
15	360	248	7	6
16	252	174	5	4
17	144	99	3	2
18	144	99	3	2
19	81	56	2	1
20	45	31	1	1
21	27	19	1	0
22	9	6	0	0
23	9	6	0	0
24	9	6	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1520	1	17	No	No	No	No	No	No	No	No	No	No
2	3	1474	1	16	No	No	No	No	No	No	No	No	No	No
3	3	1444	1	16	No	No	No	No	No	No	No	No	No	No
4	3	1353	1	15	No	No	No	No	No	No	No	No	No	No
5	3	1201	1	13	No	No	No	No	No	No	No	No	No	No
6	3	1185	1	13	No	No	No	No	No	No	No	No	No	No
7	3	1170	1	13	No	No	No	No	No	No	No	No	No	No
8	3	1064	1	12	No	No	No	No	No	No	No	No	No	No
9	3	1048	1	12	No	No	No	No	No	No	No	No	No	No
10	3	1033	1	12	No	No	No	No	No	No	No	No	No	No
11	3	896	1	10	No	No	No	No	No	No	No	No	No	No
12	3	836	1	9	No	No	No	No	No	No	No	No	No	No
13	3	820	1	9	No	No	No	No	No	No	No	No	No	No
14	3	608	1	7	No	No	No	No	No	No	No	No	No	No
15	3	608	1	7	No	No	No	No	No	No	No	No	No	No
16	3	426	1	5	No	No	No	No	No	No	No	No	No	No
17	3	243	1	3	No	No	No	No	No	No	No	No	No	No
18	3	243	1	3	No	No	No	No	No	No	No	No	No	No
19	3	137	1	2	No	No	No	No	No	No	No	No	No	No
20	3	76	1	1	No	No	No	No	No	No	No	No	No	No
21	3	46	1	1	No	No	No	No	No	No	No	No	No	No
22	3	15	1	0	No	No	No	No	No	No	No	No	No	No
23	3	15	1	0	No	No	No	No	No	No	No	No	No	No
24	3	15	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.7	12.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	17	14
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1551	1551
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	822	592	34	26
2	797	574	33	25
3	781	562	32	25
4	732	527	30	23
5	649	468	27	21
6	641	462	27	20
7	633	456	26	20
8	575	414	24	18
9	567	408	23	18
10	559	403	23	18
11	485	349	20	15
12	452	326	19	14
13	444	320	18	14
14	329	237	14	10
15	329	237	14	10
16	230	166	10	7
17	132	95	5	4
18	132	95	5	4
19	74	53	3	2
20	41	30	2	1
21	25	18	1	1
22	8	6	0	0
23	8	6	0	0
24	8	6	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1414	1	34	No	No	No	No	No	No	No	No	No	No
2	3	1371	1	33	No	No	No	No	No	No	No	No	No	No
3	3	1343	1	32	No	No	No	No	No	No	No	No	No	No
4	3	1259	1	30	No	No	No	No	No	No	No	No	No	No
5	3	1117	1	27	No	No	No	No	No	No	No	No	No	No
6	3	1103	1	27	No	No	No	No	No	No	No	No	No	No
7	3	1089	1	26	No	No	No	No	No	No	No	No	No	No
8	3	989	1	24	No	No	No	No	No	No	No	No	No	No
9	3	975	1	23	No	No	No	No	No	No	No	No	No	No
10	3	962	1	23	No	No	No	No	No	No	No	No	No	No
11	3	834	1	20	No	No	No	No	No	No	No	No	No	No
12	3	778	1	19	No	No	No	No	No	No	No	No	No	No
13	3	764	1	18	No	No	No	No	No	No	No	No	No	No
14	3	566	1	14	No	No	No	No	No	No	No	No	No	No
15	3	566	1	14	No	No	No	No	No	No	No	No	No	No
16	3	396	1	10	No	No	No	No	No	No	No	No	No	No
17	3	227	1	5	No	No	No	No	No	No	No	No	No	No
18	3	227	1	5	No	No	No	No	No	No	No	No	No	No
19	3	127	1	3	No	No	No	No	No	No	No	No	No	No
20	3	71	1	2	No	No	No	No	No	No	No	No	No	No
21	3	43	1	1	No	No	No	No	No	No	No	No	No	No
22	3	14	1	0	No	No	No	No	No	No	No	No	No	No
23	3	14	1	0	No	No	No	No	No	No	No	No	No	No
24	3	14	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	29.1	36
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:16	0:15
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	34	26
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1474	1474
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	615	701	38	13
2	597	680	37	13
3	584	666	36	12
4	547	624	34	12
5	486	554	30	10
6	480	547	30	10
7	474	540	29	10
8	431	491	27	9
9	424	484	26	9
10	418	477	26	9
11	363	414	22	8
12	338	386	21	7
13	332	379	21	7
14	246	280	15	5
15	246	280	15	5
16	172	196	11	4
17	98	112	6	2
18	98	112	6	2
19	55	63	3	1
20	31	35	2	1
21	18	21	1	0
22	6	7	0	0
23	6	7	0	0
24	6	7	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1316	1	38	No	No	No	No	No	No	No	No	No	No
2	3	1277	1	37	No	No	No	No	No	No	No	No	No	No
3	3	1250	1	36	No	No	No	No	No	No	No	No	No	No
4	3	1171	1	34	No	No	No	No	No	No	No	No	No	No
5	3	1040	1	30	No	No	No	No	No	No	No	No	No	No
6	3	1027	1	30	No	No	No	No	No	No	No	No	No	No
7	3	1014	1	29	No	No	No	No	No	No	No	No	No	No
8	3	922	1	27	No	No	No	No	No	No	No	No	No	No
9	3	908	1	26	No	No	No	No	No	No	No	No	No	No
10	3	895	1	26	No	No	No	No	No	No	No	No	No	No
11	3	777	1	22	No	No	No	No	No	No	No	No	No	No
12	3	724	1	21	No	No	No	No	No	No	No	No	No	No
13	3	711	1	21	No	No	No	No	No	No	No	No	No	No
14	3	526	1	15	No	No	No	No	No	No	No	No	No	No
15	3	526	1	15	No	No	No	No	No	No	No	No	No	No
16	3	368	1	11	No	No	No	No	No	No	No	No	No	No
17	3	210	1	6	No	No	No	No	No	No	No	No	No	No
18	3	210	1	6	No	No	No	No	No	No	No	No	No	No
19	3	118	1	3	No	No	No	No	No	No	No	No	No	No
20	3	66	1	2	No	No	No	No	No	No	No	No	No	No
21	3	39	1	1	No	No	No	No	No	No	No	No	No	No
22	3	13	1	0	No	No	No	No	No	No	No	No	No	No
23	3	13	1	0	No	No	No	No	No	No	No	No	No	No
24	3	13	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	21.8	22
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13	0:04
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	38	13
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1367	1367
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	82	65	3
2	80	63	3
3	78	62	3
4	73	58	3
5	65	51	2
6	64	51	2
7	63	50	2
8	57	46	2
9	57	45	2
10	56	44	2
11	48	38	2
12	45	36	2
13	44	35	2
14	33	26	1
15	33	26	1
16	23	18	1
17	13	10	0
18	13	10	0
19	7	6	0
20	4	3	0
21	2	2	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	147	1	3	No	No	No	No	No	No	No	No	No	No
2	2	143	1	3	No	No	No	No	No	No	No	No	No	No
3	2	140	1	3	No	No	No	No	No	No	No	No	No	No
4	2	131	1	3	No	No	No	No	No	No	No	No	No	No
5	2	116	1	2	No	No	No	No	No	No	No	No	No	No
6	2	115	1	2	No	No	No	No	No	No	No	No	No	No
7	2	113	1	2	No	No	No	No	No	No	No	No	No	No
8	2	103	1	2	No	No	No	No	No	No	No	No	No	No
9	2	102	1	2	No	No	No	No	No	No	No	No	No	No
10	2	100	1	2	No	No	No	No	No	No	No	No	No	No
11	2	86	1	2	No	No	No	No	No	No	No	No	No	No
12	2	81	1	2	No	No	No	No	No	No	No	No	No	No
13	2	79	1	2	No	No	No	No	No	No	No	No	No	No
14	2	59	1	1	No	No	No	No	No	No	No	No	No	No
15	2	59	1	1	No	No	No	No	No	No	No	No	No	No
16	2	41	1	1	No	No	No	No	No	No	No	No	No	No
17	2	23	1	0	No	No	No	No	No	No	No	No	No	No
18	2	23	1	0	No	No	No	No	No	No	No	No	No	No
19	2	13	1	0	No	No	No	No	No	No	No	No	No	No
20	2	7	1	0	No	No	No	No	No	No	No	No	No	No
21	2	4	1	0	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	3
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	150
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	76	26	114	96
2	74	25	111	93
3	72	25	108	91
4	68	23	101	85
5	60	21	90	76
6	59	20	89	75
7	59	20	88	74
8	53	18	80	67
9	52	18	79	66
10	52	18	78	65
11	45	15	67	57
12	42	14	63	53
13	41	14	62	52
14	30	10	46	38
15	30	10	46	38
16	21	7	32	27
17	12	4	18	15
18	12	4	18	15
19	7	2	10	9
20	4	1	6	5
21	2	1	3	3
22	1	0	1	1
23	1	0	1	1
24	1	0	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	102	1	114	No	No	No	No	No	No	No	No	No	No
2	2	99	1	111	No	No	No	No	No	No	No	No	No	No
3	2	97	1	108	No	No	No	No	No	No	No	No	No	No
4	2	91	1	101	No	No	No	No	No	No	No	No	No	No
5	2	81	1	90	No	No	No	No	No	No	No	No	No	No
6	2	79	1	89	No	No	No	No	No	No	No	No	No	No
7	2	79	1	88	No	No	No	No	No	No	No	No	No	No
8	2	71	1	80	No	No	No	No	No	No	No	No	No	No
9	2	70	1	79	No	No	No	No	No	No	No	No	No	No
10	2	70	1	78	No	No	No	No	No	No	No	No	No	No
11	2	60	1	67	No	No	No	No	No	No	No	No	No	No
12	2	56	1	63	No	No	No	No	No	No	No	No	No	No
13	2	55	1	62	No	No	No	No	No	No	No	No	No	No
14	2	40	1	46	No	No	No	No	No	No	No	No	No	No
15	2	40	1	46	No	No	No	No	No	No	No	No	No	No
16	2	28	1	32	No	No	No	No	No	No	No	No	No	No
17	2	16	1	18	No	No	No	No	No	No	No	No	No	No
18	2	16	1	18	No	No	No	No	No	No	No	No	No	No
19	2	9	1	10	No	No	No	No	No	No	No	No	No	No
20	2	5	1	6	No	No	No	No	No	No	No	No	No	No
21	2	3	1	3	No	No	No	No	No	No	No	No	No	No
22	2	1	1	1	No	No	No	No	No	No	No	No	No	No
23	2	1	1	1	No	No	No	No	No	No	No	No	No	No
24	2	1	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.1	8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:15	0:12
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	114	96
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	312	312
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	62	38	33	38
2	60	37	32	37
3	59	36	31	36
4	55	34	29	34
5	49	30	26	30
6	48	30	26	30
7	48	29	25	29
8	43	27	23	27
9	43	26	23	26
10	42	26	22	26
11	37	22	19	22
12	34	21	18	21
13	33	21	18	21
14	25	15	13	15
15	25	15	13	15
16	17	11	9	11
17	10	6	5	6
18	10	6	5	6
19	6	3	3	3
20	3	2	2	2
21	2	1	1	1
22	1	0	0	0
23	1	0	0	0
24	1	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	100	1	38	No	No	No	No	No	No	No	No	No	No
2	3	97	1	37	No	No	No	No	No	No	No	No	No	No
3	3	95	1	36	No	No	No	No	No	No	No	No	No	No
4	3	89	1	34	No	No	No	No	No	No	No	No	No	No
5	3	79	1	30	No	No	No	No	No	No	No	No	No	No
6	3	78	1	30	No	No	No	No	No	No	No	No	No	No
7	3	77	1	29	No	No	No	No	No	No	No	No	No	No
8	3	70	1	27	No	No	No	No	No	No	No	No	No	No
9	3	69	1	26	No	No	No	No	No	No	No	No	No	No
10	3	68	1	26	No	No	No	No	No	No	No	No	No	No
11	3	59	1	22	No	No	No	No	No	No	No	No	No	No
12	3	55	1	21	No	No	No	No	No	No	No	No	No	No
13	3	54	1	21	No	No	No	No	No	No	No	No	No	No
14	3	40	1	15	No	No	No	No	No	No	No	No	No	No
15	3	40	1	15	No	No	No	No	No	No	No	No	No	No
16	3	28	1	11	No	No	No	No	No	No	No	No	No	No
17	3	16	1	6	No	No	No	No	No	No	No	No	No	No
18	3	16	1	6	No	No	No	No	No	No	No	No	No	No
19	3	9	1	3	No	No	No	No	No	No	No	No	No	No
20	3	5	1	2	No	No	No	No	No	No	No	No	No	No
21	3	3	1	1	No	No	No	No	No	No	No	No	No	No
22	3	1	1	0	No	No	No	No	No	No	No	No	No	No
23	3	1	1	0	No	No	No	No	No	No	No	No	No	No
24	3	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	7.9	8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	33	38
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	171	171
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	156	168	7	9
2	151	163	7	9
3	148	160	7	9
4	139	150	6	8
5	123	133	6	7
6	122	131	5	7
7	120	129	5	7
8	109	118	5	6
9	108	116	5	6
10	106	114	5	6
11	92	99	4	5
12	86	92	4	5
13	84	91	4	5
14	62	67	3	4
15	62	67	3	4
16	44	47	2	3
17	25	27	1	1
18	25	27	1	1
19	14	15	1	1
20	8	8	0	0
21	5	5	0	0
22	2	2	0	0
23	2	2	0	0
24	2	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	324	1	9	No	No	No	No	No	No	No	No	No	No
2	2	314	1	9	No	No	No	No	No	No	No	No	No	No
3	2	308	1	9	No	No	No	No	No	No	No	No	No	No
4	2	289	1	8	No	No	No	No	No	No	No	No	No	No
5	2	256	1	7	No	No	No	No	No	No	No	No	No	No
6	2	253	1	7	No	No	No	No	No	No	No	No	No	No
7	2	249	1	7	No	No	No	No	No	No	No	No	No	No
8	2	227	1	6	No	No	No	No	No	No	No	No	No	No
9	2	224	1	6	No	No	No	No	No	No	No	No	No	No
10	2	220	1	6	No	No	No	No	No	No	No	No	No	No
11	2	191	1	5	No	No	No	No	No	No	No	No	No	No
12	2	178	1	5	No	No	No	No	No	No	No	No	No	No
13	2	175	1	5	No	No	No	No	No	No	No	No	No	No
14	2	129	1	4	No	No	No	No	No	No	No	No	No	No
15	2	129	1	4	No	No	No	No	No	No	No	No	No	No
16	2	91	1	3	No	No	No	No	No	No	No	No	No	No
17	2	52	1	1	No	No	No	No	No	No	No	No	No	No
18	2	52	1	1	No	No	No	No	No	No	No	No	No	No
19	2	29	1	1	No	No	No	No	No	No	No	No	No	No
20	2	16	1	0	No	No	No	No	No	No	No	No	No	No
21	2	10	1	0	No	No	No	No	No	No	No	No	No	No
22	2	4	1	0	No	No	No	No	No	No	No	No	No	No
23	2	4	1	0	No	No	No	No	No	No	No	No	No	No
24	2	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.1	8.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01	0:01
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	7	9
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	340	340
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	168	250	20	54
2	163	243	19	52
3	160	238	19	51
4	150	223	18	48
5	133	198	16	43
6	131	195	16	42
7	129	193	15	42
8	118	175	14	38
9	116	173	14	37
10	114	170	14	37
11	99	148	12	32
12	92	138	11	30
13	91	135	11	29
14	67	100	8	22
15	67	100	8	22
16	47	70	6	15
17	27	40	3	9
18	27	40	3	9
19	15	23	2	5
20	8	13	1	3
21	5	8	1	2
22	2	3	0	1
23	2	3	0	1
24	2	3	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	418	1	54	No	No	No	No	No	No	No	No	No	No
2	1	406	1	52	No	No	No	No	No	No	No	No	No	No
3	1	398	1	51	No	No	No	No	No	No	No	No	No	No
4	1	373	1	48	No	No	No	No	No	No	No	No	No	No
5	1	331	1	43	No	No	No	No	No	No	No	No	No	No
6	1	326	1	42	No	No	No	No	No	No	No	No	No	No
7	1	322	1	42	No	No	No	No	No	No	No	No	No	No
8	1	293	1	38	No	No	No	No	No	No	No	No	No	No
9	1	289	1	37	No	No	No	No	No	No	No	No	No	No
10	1	284	1	37	No	No	No	No	No	No	No	No	No	No
11	1	247	1	32	No	No	No	No	No	No	No	No	No	No
12	1	230	1	30	No	No	No	No	No	No	No	No	No	No
13	1	226	1	29	No	No	No	No	No	No	No	No	No	No
14	1	167	1	22	No	No	No	No	No	No	No	No	No	No
15	1	167	1	22	No	No	No	No	No	No	No	No	No	No
16	1	117	1	15	No	No	No	No	No	No	No	No	No	No
17	1	67	1	9	No	No	No	No	No	No	No	No	No	No
18	1	67	1	9	No	No	No	No	No	No	No	No	No	No
19	1	38	1	5	No	No	No	No	No	No	No	No	No	No
20	1	21	1	3	No	No	No	No	No	No	No	No	No	No
21	1	13	1	2	No	No	No	No	No	No	No	No	No	No
22	1	5	1	1	No	No	No	No	No	No	No	No	No	No
23	1	5	1	1	No	No	No	No	No	No	No	No	No	No
24	1	5	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15	10.6
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	0:09
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	20	54
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	492	492
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	515	409	17
2	500	397	16
3	489	389	16
4	458	364	15
5	407	323	13
6	402	319	13
7	397	315	13
8	361	286	12
9	355	282	12
10	350	278	12
11	304	241	10
12	283	225	9
13	278	221	9
14	206	164	7
15	206	164	7
16	144	115	5
17	82	65	3
18	82	65	3
19	46	37	2
20	26	20	1
21	15	12	1
22	5	4	0
23	5	4	0
24	5	4	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	924	1	17	No	No	No	No	No	No	No	No	No	No
2	1	897	1	16	No	No	No	No	No	No	No	No	No	No
3	1	878	1	16	No	No	No	No	No	No	No	No	No	No
4	1	822	1	15	No	No	No	No	No	No	No	No	No	No
5	1	730	1	13	No	No	No	No	No	No	No	No	No	No
6	1	721	1	13	No	No	No	No	No	No	No	No	No	No
7	1	712	1	13	No	No	No	No	No	No	No	No	No	No
8	1	647	1	12	No	No	No	No	No	No	No	No	No	No
9	1	637	1	12	No	No	No	No	No	No	No	No	No	No
10	1	628	1	12	No	No	No	No	No	No	No	No	No	No
11	1	545	1	10	No	No	No	No	No	No	No	No	No	No
12	1	508	1	9	No	No	No	No	No	No	No	No	No	No
13	1	499	1	9	No	No	No	No	No	No	No	No	No	No
14	1	370	1	7	No	No	No	No	No	No	No	No	No	No
15	1	370	1	7	No	No	No	No	No	No	No	No	No	No
16	1	259	1	5	No	No	No	No	No	No	No	No	No	No
17	1	147	1	3	No	No	No	No	No	No	No	No	No	No
18	1	147	1	3	No	No	No	No	No	No	No	No	No	No
19	1	83	1	2	No	No	No	No	No	No	No	No	No	No
20	1	46	1	1	No	No	No	No	No	No	No	No	No	No
21	1	27	1	1	No	No	No	No	No	No	No	No	No	No
22	1	9	1	0	No	No	No	No	No	No	No	No	No	No
23	1	9	1	0	No	No	No	No	No	No	No	No	No	No
24	1	9	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	16.4
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	17
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	941
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	1227	838	17
2	1190	813	16
3	1166	796	16
4	1092	746	15
5	969	662	13
6	957	654	13
7	945	645	13
8	859	587	12
9	847	578	12
10	834	570	12
11	724	494	10
12	675	461	9
13	663	453	9
14	491	335	7
15	491	335	7
16	344	235	5
17	196	134	3
18	196	134	3
19	110	75	2
20	61	42	1
21	37	25	1
22	12	8	0
23	12	8	0
24	12	8	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2065	1	17	No	No	No	No	No	No	No	No	No	No
2	3	2003	1	16	No	No	No	No	No	No	No	No	No	No
3	3	1962	1	16	No	No	No	No	No	No	No	No	No	No
4	3	1838	1	15	No	No	No	No	No	No	No	No	No	No
5	3	1631	1	13	No	No	No	No	No	No	No	No	No	No
6	3	1611	1	13	No	No	No	No	No	No	No	No	No	No
7	3	1590	1	13	No	No	No	No	No	No	No	No	No	No
8	3	1446	1	12	No	No	No	No	No	No	No	No	No	No
9	3	1425	1	12	No	No	No	No	No	No	No	No	No	No
10	3	1404	1	12	No	No	No	No	No	No	No	No	No	No
11	3	1218	1	10	No	No	No	No	No	No	No	No	No	No
12	3	1136	1	9	No	No	No	No	No	No	No	No	No	No
13	3	1116	1	9	No	No	No	No	No	No	No	No	No	No
14	3	826	1	7	No	No	No	No	No	No	No	No	No	No
15	3	826	1	7	No	No	No	No	No	No	No	No	No	No
16	3	579	1	5	No	No	No	No	No	No	No	No	No	No
17	3	330	1	3	No	No	No	No	No	No	No	No	No	No
18	3	330	1	3	No	No	No	No	No	No	No	No	No	No
19	3	185	1	2	No	No	No	No	No	No	No	No	No	No
20	3	103	1	1	No	No	No	No	No	No	No	No	No	No
21	3	62	1	1	No	No	No	No	No	No	No	No	No	No
22	3	20	1	0	No	No	No	No	No	No	No	No	No	No
23	3	20	1	0	No	No	No	No	No	No	No	No	No	No
24	3	20	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	23.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	17
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	2082
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	933	1063	17	26
2	905	1031	16	25
3	886	1010	16	25
4	830	946	15	23
5	737	840	13	21
6	728	829	13	20
7	718	819	13	20
8	653	744	12	18
9	644	733	12	18
10	634	723	12	18
11	550	627	10	15
12	513	585	9	14
13	504	574	9	14
14	373	425	7	10
15	373	425	7	10
16	261	298	5	7
17	149	170	3	4
18	149	170	3	4
19	84	96	2	2
20	47	53	1	1
21	28	32	1	1
22	9	11	0	0
23	9	11	0	0
24	9	11	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1996	1	26	No	No	No	No	No	No	No	No	No	No
2	3	1936	1	25	No	No	No	No	No	No	No	No	No	No
3	3	1896	1	25	No	No	No	No	No	No	No	No	No	No
4	3	1776	1	23	No	No	No	No	No	No	No	No	No	No
5	3	1577	1	21	No	No	No	No	No	No	No	No	No	No
6	3	1557	1	20	No	No	No	No	No	No	No	No	No	No
7	3	1537	1	20	No	No	No	No	No	No	No	No	No	No
8	3	1397	1	18	No	No	No	No	No	No	No	No	No	No
9	3	1377	1	18	No	No	No	No	No	No	No	No	No	No
10	3	1357	1	18	No	No	No	No	No	No	No	No	No	No
11	3	1177	1	15	No	No	No	No	No	No	No	No	No	No
12	3	1098	1	14	No	No	No	No	No	No	No	No	No	No
13	3	1078	1	14	No	No	No	No	No	No	No	No	No	No
14	3	798	1	10	No	No	No	No	No	No	No	No	No	No
15	3	798	1	10	No	No	No	No	No	No	No	No	No	No
16	3	559	1	7	No	No	No	No	No	No	No	No	No	No
17	3	319	1	4	No	No	No	No	No	No	No	No	No	No
18	3	319	1	4	No	No	No	No	No	No	No	No	No	No
19	3	180	1	2	No	No	No	No	No	No	No	No	No	No
20	3	100	1	1	No	No	No	No	No	No	No	No	No	No
21	3	60	1	1	No	No	No	No	No	No	No	No	No	No
22	3	20	1	0	No	No	No	No	No	No	No	No	No	No
23	3	20	1	0	No	No	No	No	No	No	No	No	No	No
24	3	20	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.7	18.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03	0:08
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	17	26
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2039	2039
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	877	1051	57	58
2	851	1019	55	56
3	833	998	54	55
4	781	935	51	52
5	693	830	45	46
6	684	820	44	45
7	675	809	44	45
8	614	736	40	41
9	605	725	39	40
10	596	715	39	39
11	517	620	34	34
12	482	578	31	32
13	474	568	31	31
14	351	420	23	23
15	351	420	23	23
16	246	294	16	16
17	140	168	9	9
18	140	168	9	9
19	79	95	5	5
20	44	53	3	3
21	26	32	2	2
22	9	11	1	1
23	9	11	1	1
24	9	11	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1928	1	58	No	No	No	No	No	No	Yes	Yes	No	No
2	3	1870	1	56	No	No	No	No	No	No	Yes	Yes	No	No
3	3	1831	1	55	No	No	No	No	No	No	Yes	Yes	No	No
4	3	1716	1	52	No	No	No	No	No	No	Yes	Yes	No	No
5	3	1523	1	46	No	No	No	No	No	No	No	Yes	No	No
6	3	1504	1	45	No	No	No	No	No	No	No	Yes	No	No
7	3	1484	1	45	No	No	No	No	No	No	No	Yes	No	No
8	3	1350	1	41	No	No	No	No	No	No	No	No	No	No
9	3	1330	1	40	No	No	No	No	No	No	No	No	No	No
10	3	1311	1	39	No	No	No	No	No	No	No	No	No	No
11	3	1137	1	34	No	No	No	No	No	No	No	No	No	No
12	3	1060	1	32	No	No	No	No	No	No	No	No	No	No
13	3	1042	1	31	No	No	No	No	No	No	No	No	No	No
14	3	771	1	23	No	No	No	No	No	No	No	No	No	No
15	3	771	1	23	No	No	No	No	No	No	No	No	No	No
16	3	540	1	16	No	No	No	No	No	No	No	No	No	No
17	3	308	1	9	No	No	No	No	No	No	No	No	No	No
18	3	308	1	9	No	No	No	No	No	No	No	No	No	No
19	3	174	1	5	No	No	No	No	No	No	No	No	No	No
20	3	97	1	3	No	No	No	No	No	No	No	No	No	No
21	3	58	1	2	No	No	No	No	No	No	No	No	No	No
22	3	20	1	1	No	No	No	No	No	No	No	No	No	No
23	3	20	1	1	No	No	No	No	No	No	No	No	No	No
24	3	20	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	4	7	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.4	12.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:12	0:11
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	57	58
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2043	2043
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	836	882	29	55
2	811	856	28	53
3	794	838	28	52
4	744	785	26	49
5	660	697	23	43
6	652	688	23	43
7	644	679	22	42
8	585	617	20	39
9	577	609	20	38
10	568	600	20	37
11	493	520	17	32
12	460	485	16	30
13	451	476	16	30
14	334	353	12	22
15	334	353	12	22
16	234	247	8	15
17	134	141	5	9
18	134	141	5	9
19	75	79	3	5
20	42	44	1	3
21	25	26	1	2
22	8	9	0	1
23	8	9	0	1
24	8	9	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1718	1	55	No	No	No	No	No	No	Yes	Yes	No	No
2	3	1667	1	53	No	No	No	No	No	No	Yes	Yes	No	No
3	3	1632	1	52	No	No	No	No	No	No	Yes	Yes	No	No
4	3	1529	1	49	No	No	No	No	No	No	No	Yes	No	No
5	3	1357	1	43	No	No	No	No	No	No	No	Yes	No	No
6	3	1340	1	43	No	No	No	No	No	No	No	Yes	No	No
7	3	1323	1	42	No	No	No	No	No	No	No	Yes	No	No
8	3	1202	1	39	No	No	No	No	No	No	No	No	No	No
9	3	1186	1	38	No	No	No	No	No	No	No	No	No	No
10	3	1168	1	37	No	No	No	No	No	No	No	No	No	No
11	3	1013	1	32	No	No	No	No	No	No	No	No	No	No
12	3	945	1	30	No	No	No	No	No	No	No	No	No	No
13	3	927	1	30	No	No	No	No	No	No	No	No	No	No
14	3	687	1	22	No	No	No	No	No	No	No	No	No	No
15	3	687	1	22	No	No	No	No	No	No	No	No	No	No
16	3	481	1	15	No	No	No	No	No	No	No	No	No	No
17	3	275	1	9	No	No	No	No	No	No	No	No	No	No
18	3	275	1	9	No	No	No	No	No	No	No	No	No	No
19	3	154	1	5	No	No	No	No	No	No	No	No	No	No
20	3	86	1	3	No	No	No	No	No	No	No	No	No	No
21	3	51	1	2	No	No	No	No	No	No	No	No	No	No
22	3	17	1	1	No	No	No	No	No	No	No	No	No	No
23	3	17	1	1	No	No	No	No	No	No	No	No	No	No
24	3	17	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	3	7	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	19.1	19.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09	0:17
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	29	55
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1802	1802
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	917	736	67	78
2	889	714	65	76
3	871	699	64	74
4	816	655	60	69
5	724	581	53	62
6	715	574	52	61
7	706	567	52	60
8	642	515	47	55
9	633	508	46	54
10	624	500	46	53
11	541	434	40	46
12	504	405	37	43
13	495	397	36	42
14	367	294	27	31
15	367	294	27	31
16	257	206	19	22
17	147	118	11	12
18	147	118	11	12
19	83	66	6	7
20	46	37	3	4
21	28	22	2	2
22	9	7	1	1
23	9	7	1	1
24	9	7	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1653	1	78	No	No	No	No	Yes	Yes	Yes	Yes	No	No
2	3	1603	1	76	No	No	No	No	Yes	Yes	Yes	Yes	No	No
3	3	1570	1	74	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	1471	1	69	No	No	No	No	No	Yes	Yes	Yes	No	No
5	3	1305	1	62	No	No	No	No	No	Yes	Yes	Yes	No	No
6	3	1289	1	61	No	No	No	No	No	Yes	Yes	Yes	No	No
7	3	1273	1	60	No	No	No	No	No	Yes	Yes	Yes	No	No
8	3	1157	1	55	No	No	No	No	No	No	Yes	Yes	No	No
9	3	1141	1	54	No	No	No	No	No	No	Yes	Yes	No	No
10	3	1124	1	53	No	No	No	No	No	No	Yes	Yes	No	No
11	3	975	1	46	No	No	No	No	No	No	No	Yes	No	No
12	3	909	1	43	No	No	No	No	No	No	No	Yes	No	No
13	3	892	1	42	No	No	No	No	No	No	No	Yes	No	No
14	3	661	1	31	No	No	No	No	No	No	No	No	No	No
15	3	661	1	31	No	No	No	No	No	No	No	No	No	No
16	3	463	1	22	No	No	No	No	No	No	No	No	No	No
17	3	265	1	12	No	No	No	No	No	No	No	No	No	No
18	3	265	1	12	No	No	No	No	No	No	No	No	No	No
19	3	149	1	7	No	No	No	No	No	No	No	No	No	No
20	3	83	1	4	No	No	No	No	No	No	No	No	No	No
21	3	50	1	2	No	No	No	No	No	No	No	No	No	No
22	3	16	1	1	No	No	No	No	No	No	No	No	No	No
23	3	16	1	1	No	No	No	No	No	No	No	No	No	No
24	3	16	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	2	7	10	13	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	19.1	31.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:21	0:40
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	67	78
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1798	1798
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	69	121	15
2	67	117	15
3	66	115	14
4	61	108	13
5	55	96	12
6	54	94	12
7	53	93	12
8	48	85	11
9	48	83	10
10	47	82	10
11	41	71	9
12	38	67	8
13	37	65	8
14	28	48	6
15	28	48	6
16	19	34	4
17	11	19	2
18	11	19	2
19	6	11	1
20	3	6	1
21	2	4	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	190	1	15	No	No	No	No	No	No	No	No	No	No
2	2	184	1	15	No	No	No	No	No	No	No	No	No	No
3	2	181	1	14	No	No	No	No	No	No	No	No	No	No
4	2	169	1	13	No	No	No	No	No	No	No	No	No	No
5	2	151	1	12	No	No	No	No	No	No	No	No	No	No
6	2	148	1	12	No	No	No	No	No	No	No	No	No	No
7	2	146	1	12	No	No	No	No	No	No	No	No	No	No
8	2	133	1	11	No	No	No	No	No	No	No	No	No	No
9	2	131	1	10	No	No	No	No	No	No	No	No	No	No
10	2	129	1	10	No	No	No	No	No	No	No	No	No	No
11	2	112	1	9	No	No	No	No	No	No	No	No	No	No
12	2	105	1	8	No	No	No	No	No	No	No	No	No	No
13	2	102	1	8	No	No	No	No	No	No	No	No	No	No
14	2	76	1	6	No	No	No	No	No	No	No	No	No	No
15	2	76	1	6	No	No	No	No	No	No	No	No	No	No
16	2	53	1	4	No	No	No	No	No	No	No	No	No	No
17	2	30	1	2	No	No	No	No	No	No	No	No	No	No
18	2	30	1	2	No	No	No	No	No	No	No	No	No	No
19	2	17	1	1	No	No	No	No	No	No	No	No	No	No
20	2	9	1	1	No	No	No	No	No	No	No	No	No	No
21	2	6	1	0	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	15
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	205
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	68	63	92	173
2	66	61	89	168
3	65	60	87	164
4	61	56	82	154
5	54	50	73	137
6	53	49	72	135
7	52	49	71	133
8	48	44	64	121
9	47	43	63	119
10	46	43	63	118
11	40	37	54	102
12	37	35	51	95
13	37	34	50	93
14	27	25	37	69
15	27	25	37	69
16	19	18	26	48
17	11	10	15	28
18	11	10	15	28
19	6	6	8	16
20	3	3	5	9
21	2	2	3	5
22	1	1	1	2
23	1	1	1	2
24	1	1	1	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	131	1	173	No	No	No	No	No	No	No	No	No	No
2	2	127	1	168	No	No	No	No	No	No	No	No	No	No
3	2	125	1	164	No	No	No	No	No	No	No	No	No	No
4	2	117	1	154	No	No	No	No	No	No	No	No	No	No
5	2	104	1	137	No	No	No	No	No	No	No	No	No	No
6	2	102	1	135	No	No	No	No	No	No	No	No	No	No
7	2	101	1	133	No	No	No	No	No	No	No	No	No	No
8	2	92	1	121	No	No	No	No	No	No	No	No	No	No
9	2	90	1	119	No	No	No	No	No	No	No	No	No	No
10	2	89	1	118	No	No	No	No	No	No	No	No	No	No
11	2	77	1	102	No	No	No	No	No	No	No	No	No	No
12	2	72	1	95	No	No	No	No	No	No	No	No	No	No
13	2	71	1	93	No	No	No	No	No	No	No	No	No	No
14	2	52	1	69	No	No	No	No	No	No	No	No	No	No
15	2	52	1	69	No	No	No	No	No	No	No	No	No	No
16	2	37	1	48	No	No	No	No	No	No	No	No	No	No
17	2	21	1	28	No	No	No	No	No	No	No	No	No	No
18	2	21	1	28	No	No	No	No	No	No	No	No	No	No
19	2	12	1	16	No	No	No	No	No	No	No	No	No	No
20	2	6	1	9	No	No	No	No	No	No	No	No	No	No
21	2	4	1	5	No	No	No	No	No	No	No	No	No	No
22	2	2	1	2	No	No	No	No	No	No	No	No	No	No
23	2	2	1	2	No	No	No	No	No	No	No	No	No	No
24	2	2	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.2	8.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:12	0:25
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	92	173
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	396	396
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	92	117	48	88
2	89	113	47	85
3	87	111	46	84
4	82	104	43	78
5	73	92	38	70
6	72	91	37	69
7	71	90	37	68
8	64	82	34	62
9	63	81	33	61
10	63	80	33	60
11	54	69	28	52
12	51	64	26	48
13	50	63	26	48
14	37	47	19	35
15	37	47	19	35
16	26	33	13	25
17	15	19	8	14
18	15	19	8	14
19	8	11	4	8
20	5	6	2	4
21	3	4	1	3
22	1	1	0	1
23	1	1	0	1
24	1	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	209	1	88	No	No	No	No	No	No	No	No	No	No
2	3	202	1	85	No	No	No	No	No	No	No	No	No	No
3	3	198	1	84	No	No	No	No	No	No	No	No	No	No
4	3	186	1	78	No	No	No	No	No	No	No	No	No	No
5	3	165	1	70	No	No	No	No	No	No	No	No	No	No
6	3	163	1	69	No	No	No	No	No	No	No	No	No	No
7	3	161	1	68	No	No	No	No	No	No	No	No	No	No
8	3	146	1	62	No	No	No	No	No	No	No	No	No	No
9	3	144	1	61	No	No	No	No	No	No	No	No	No	No
10	3	143	1	60	No	No	No	No	No	No	No	No	No	No
11	3	123	1	52	No	No	No	No	No	No	No	No	No	No
12	3	115	1	48	No	No	No	No	No	No	No	No	No	No
13	3	113	1	48	No	No	No	No	No	No	No	No	No	No
14	3	84	1	35	No	No	No	No	No	No	No	No	No	No
15	3	84	1	35	No	No	No	No	No	No	No	No	No	No
16	3	59	1	25	No	No	No	No	No	No	No	No	No	No
17	3	34	1	14	No	No	No	No	No	No	No	No	No	No
18	3	34	1	14	No	No	No	No	No	No	No	No	No	No
19	3	19	1	8	No	No	No	No	No	No	No	No	No	No
20	3	11	1	4	No	No	No	No	No	No	No	No	No	No
21	3	7	1	3	No	No	No	No	No	No	No	No	No	No
22	3	2	1	1	No	No	No	No	No	No	No	No	No	No
23	3	2	1	1	No	No	No	No	No	No	No	No	No	No
24	3	2	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6	8.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06	0:12
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	48	88
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	345	345
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	208	267	6	19
2	202	259	6	18
3	198	254	6	18
4	185	238	5	17
5	164	211	5	15
6	162	208	5	15
7	160	206	5	15
8	146	187	4	13
9	144	184	4	13
10	141	182	4	13
11	123	158	4	11
12	114	147	3	10
13	112	144	3	10
14	83	107	2	8
15	83	107	2	8
16	58	75	2	5
17	33	43	1	3
18	33	43	1	3
19	19	24	1	2
20	10	13	0	1
21	6	8	0	1
22	2	3	0	0
23	2	3	0	0
24	2	3	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	475	1	19	No	No	No	No	No	No	No	No	No	No
2	2	461	1	18	No	No	No	No	No	No	No	No	No	No
3	2	452	1	18	No	No	No	No	No	No	No	No	No	No
4	2	423	1	17	No	No	No	No	No	No	No	No	No	No
5	2	375	1	15	No	No	No	No	No	No	No	No	No	No
6	2	370	1	15	No	No	No	No	No	No	No	No	No	No
7	2	366	1	15	No	No	No	No	No	No	No	No	No	No
8	2	333	1	13	No	No	No	No	No	No	No	No	No	No
9	2	328	1	13	No	No	No	No	No	No	No	No	No	No
10	2	323	1	13	No	No	No	No	No	No	No	No	No	No
11	2	281	1	11	No	No	No	No	No	No	No	No	No	No
12	2	261	1	10	No	No	No	No	No	No	No	No	No	No
13	2	256	1	10	No	No	No	No	No	No	No	No	No	No
14	2	190	1	8	No	No	No	No	No	No	No	No	No	No
15	2	190	1	8	No	No	No	No	No	No	No	No	No	No
16	2	133	1	5	No	No	No	No	No	No	No	No	No	No
17	2	76	1	3	No	No	No	No	No	No	No	No	No	No
18	2	76	1	3	No	No	No	No	No	No	No	No	No	No
19	2	43	1	2	No	No	No	No	No	No	No	No	No	No
20	2	23	1	1	No	No	No	No	No	No	No	No	No	No
21	2	14	1	1	No	No	No	No	No	No	No	No	No	No
22	2	5	1	0	No	No	No	No	No	No	No	No	No	No
23	2	5	1	0	No	No	No	No	No	No	No	No	No	No
24	2	5	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.2	9.6
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01	0:03
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	6	19
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	500	500
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	224	274	56	82
2	217	266	54	80
3	213	260	53	78
4	199	244	50	73
5	177	216	44	65
6	175	214	44	64
7	172	211	43	63
8	157	192	39	57
9	155	189	39	57
10	152	186	38	56
11	132	162	33	48
12	123	151	31	45
13	121	148	30	44
14	90	110	22	33
15	90	110	22	33
16	63	77	16	23
17	36	44	9	13
18	36	44	9	13
19	20	25	5	7
20	11	14	3	4
21	7	8	2	2
22	2	3	1	1
23	2	3	1	1
24	2	3	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	498	1	82	No	No	No	No	No	No	No	Yes	No	No
2	1	483	1	80	No	No	No	No	No	No	No	Yes	No	No
3	1	473	1	78	No	No	No	No	No	No	No	Yes	No	No
4	1	443	1	73	No	No	No	No	No	No	No	Yes	No	No
5	1	393	1	65	No	No	No	No	No	No	No	No	No	No
6	1	389	1	64	No	No	No	No	No	No	No	No	No	No
7	1	383	1	63	No	No	No	No	No	No	No	No	No	No
8	1	349	1	57	No	No	No	No	No	No	No	No	No	No
9	1	344	1	57	No	No	No	No	No	No	No	No	No	No
10	1	338	1	56	No	No	No	No	No	No	No	No	No	No
11	1	294	1	48	No	No	No	No	No	No	No	No	No	No
12	1	274	1	45	No	No	No	No	No	No	No	No	No	No
13	1	269	1	44	No	No	No	No	No	No	No	No	No	No
14	1	200	1	33	No	No	No	No	No	No	No	No	No	No
15	1	200	1	33	No	No	No	No	No	No	No	No	No	No
16	1	140	1	23	No	No	No	No	No	No	No	No	No	No
17	1	80	1	13	No	No	No	No	No	No	No	No	No	No
18	1	80	1	13	No	No	No	No	No	No	No	No	No	No
19	1	45	1	7	No	No	No	No	No	No	No	No	No	No
20	1	25	1	4	No	No	No	No	No	No	No	No	No	No
21	1	15	1	2	No	No	No	No	No	No	No	No	No	No
22	1	5	1	1	No	No	No	No	No	No	No	No	No	No
23	1	5	1	1	No	No	No	No	No	No	No	No	No	No
24	1	5	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.4	11
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13	0:15
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	56	82
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	636	636
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Appendix H-5

Cumulative Conditions + Project

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	460	139	16
2	446	135	16
3	437	132	15
4	409	124	14
5	363	110	13
6	359	108	12
7	354	107	12
8	322	97	11
9	317	96	11
10	313	95	11
11	271	82	9
12	253	76	9
13	248	75	9
14	184	56	6
15	184	56	6
16	129	39	4
17	74	22	3
18	74	22	3
19	41	13	1
20	23	7	1
21	14	4	0
22	5	1	0
23	5	1	0
24	5	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	599	1	16	No	No	No	No	No	No	No	No	No	No
2	1	581	1	16	No	No	No	No	No	No	No	No	No	No
3	1	569	1	15	No	No	No	No	No	No	No	No	No	No
4	1	533	1	14	No	No	No	No	No	No	No	No	No	No
5	1	473	1	13	No	No	No	No	No	No	No	No	No	No
6	1	467	1	12	No	No	No	No	No	No	No	No	No	No
7	1	461	1	12	No	No	No	No	No	No	No	No	No	No
8	1	419	1	11	No	No	No	No	No	No	No	No	No	No
9	1	413	1	11	No	No	No	No	No	No	No	No	No	No
10	1	408	1	11	No	No	No	No	No	No	No	No	No	No
11	1	353	1	9	No	No	No	No	No	No	No	No	No	No
12	1	329	1	9	No	No	No	No	No	No	No	No	No	No
13	1	323	1	9	No	No	No	No	No	No	No	No	No	No
14	1	240	1	6	No	No	No	No	No	No	No	No	No	No
15	1	240	1	6	No	No	No	No	No	No	No	No	No	No
16	1	168	1	4	No	No	No	No	No	No	No	No	No	No
17	1	96	1	3	No	No	No	No	No	No	No	No	No	No
18	1	96	1	3	No	No	No	No	No	No	No	No	No	No
19	1	54	1	1	No	No	No	No	No	No	No	No	No	No
20	1	30	1	1	No	No	No	No	No	No	No	No	No	No
21	1	18	1	0	No	No	No	No	No	No	No	No	No	No
22	1	6	1	0	No	No	No	No	No	No	No	No	No	No
23	1	6	1	0	No	No	No	No	No	No	No	No	No	No
24	1	6	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	16
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	615
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	863	454	7
2	837	440	7
3	820	431	7
4	768	404	6
5	682	359	6
6	673	354	5
7	665	350	5
8	604	318	5
9	595	313	5
10	587	309	5
11	509	268	4
12	475	250	4
13	466	245	4
14	345	182	3
15	345	182	3
16	242	127	2
17	138	73	1
18	138	73	1
19	78	41	1
20	43	23	0
21	26	14	0
22	9	5	0
23	9	5	0
24	9	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1317	1	7	No	No	No	No	No	No	No	No	No	No
2	3	1277	1	7	No	No	No	No	No	No	No	No	No	No
3	3	1251	1	7	No	No	No	No	No	No	No	No	No	No
4	3	1172	1	6	No	No	No	No	No	No	No	No	No	No
5	3	1041	1	6	No	No	No	No	No	No	No	No	No	No
6	3	1027	1	5	No	No	No	No	No	No	No	No	No	No
7	3	1015	1	5	No	No	No	No	No	No	No	No	No	No
8	3	922	1	5	No	No	No	No	No	No	No	No	No	No
9	3	908	1	5	No	No	No	No	No	No	No	No	No	No
10	3	896	1	5	No	No	No	No	No	No	No	No	No	No
11	3	777	1	4	No	No	No	No	No	No	No	No	No	No
12	3	725	1	4	No	No	No	No	No	No	No	No	No	No
13	3	711	1	4	No	No	No	No	No	No	No	No	No	No
14	3	527	1	3	No	No	No	No	No	No	No	No	No	No
15	3	527	1	3	No	No	No	No	No	No	No	No	No	No
16	3	369	1	2	No	No	No	No	No	No	No	No	No	No
17	3	211	1	1	No	No	No	No	No	No	No	No	No	No
18	3	211	1	1	No	No	No	No	No	No	No	No	No	No
19	3	119	1	1	No	No	No	No	No	No	No	No	No	No
20	3	66	1	0	No	No	No	No	No	No	No	No	No	No
21	3	40	1	0	No	No	No	No	No	No	No	No	No	No
22	3	14	1	0	No	No	No	No	No	No	No	No	No	No
23	3	14	1	0	No	No	No	No	No	No	No	No	No	No
24	3	14	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	7
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1324
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	985	654	149	30
2	955	634	145	29
3	936	621	142	29
4	877	582	133	27
5	778	517	118	24
6	768	510	116	23
7	758	504	115	23
8	690	458	104	21
9	680	451	103	21
10	670	445	101	20
11	581	386	88	18
12	542	360	82	17
13	532	353	80	16
14	394	262	60	12
15	394	262	60	12
16	276	183	42	8
17	158	105	24	5
18	158	105	24	5
19	89	59	13	3
20	49	33	7	2
21	30	20	4	1
22	10	7	1	0
23	10	7	1	0
24	10	7	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1639	1	149	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	1589	1	145	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	1557	1	142	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	1459	1	133	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
5	3	1295	1	118	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
6	3	1278	1	116	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
7	3	1262	1	115	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
8	3	1148	1	104	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
9	3	1131	1	103	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
10	3	1115	1	101	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
11	3	967	1	88	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
12	3	902	1	82	No	No	No	No	Yes	Yes	Yes	Yes	No	No
13	3	885	1	80	No	No	No	No	No	Yes	Yes	Yes	No	No
14	3	656	1	60	No	No	No	No	No	No	Yes	Yes	No	No
15	3	656	1	60	No	No	No	No	No	No	Yes	Yes	No	No
16	3	459	1	42	No	No	No	No	No	No	No	No	No	No
17	3	263	1	24	No	No	No	No	No	No	No	No	No	No
18	3	263	1	24	No	No	No	No	No	No	No	No	No	No
19	3	148	1	13	No	No	No	No	No	No	No	No	No	No
20	3	82	1	7	No	No	No	No	No	No	No	No	No	No
21	3	50	1	4	No	No	No	No	No	No	No	No	No	No
22	3	17	1	1	No	No	No	No	No	No	No	No	No	No
23	3	17	1	1	No	No	No	No	No	No	No	No	No	No
24	3	17	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	4	7	11	12	13	15	15	7	3

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.6	25.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:33	0:12
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	149	30
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	1818	1818
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	995	729	17	14
2	965	707	16	14
3	945	693	16	13
4	886	649	15	12
5	786	576	13	11
6	776	569	13	11
7	766	561	13	11
8	697	510	12	10
9	687	503	12	10
10	677	496	12	10
11	587	430	10	8
12	547	401	9	8
13	537	394	9	8
14	398	292	7	6
15	398	292	7	6
16	279	204	5	4
17	159	117	3	2
18	159	117	3	2
19	90	66	2	1
20	50	36	1	1
21	30	22	1	0
22	10	7	0	0
23	10	7	0	0
24	10	7	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1724	1	17	No	No	No	No	No	No	No	No	No	No
2	3	1672	1	16	No	No	No	No	No	No	No	No	No	No
3	3	1638	1	16	No	No	No	No	No	No	No	No	No	No
4	3	1535	1	15	No	No	No	No	No	No	No	No	No	No
5	3	1362	1	13	No	No	No	No	No	No	No	No	No	No
6	3	1345	1	13	No	No	No	No	No	No	No	No	No	No
7	3	1327	1	13	No	No	No	No	No	No	No	No	No	No
8	3	1207	1	12	No	No	No	No	No	No	No	No	No	No
9	3	1190	1	12	No	No	No	No	No	No	No	No	No	No
10	3	1173	1	12	No	No	No	No	No	No	No	No	No	No
11	3	1017	1	10	No	No	No	No	No	No	No	No	No	No
12	3	948	1	9	No	No	No	No	No	No	No	No	No	No
13	3	931	1	9	No	No	No	No	No	No	No	No	No	No
14	3	690	1	7	No	No	No	No	No	No	No	No	No	No
15	3	690	1	7	No	No	No	No	No	No	No	No	No	No
16	3	483	1	5	No	No	No	No	No	No	No	No	No	No
17	3	276	1	3	No	No	No	No	No	No	No	No	No	No
18	3	276	1	3	No	No	No	No	No	No	No	No	No	No
19	3	156	1	2	No	No	No	No	No	No	No	No	No	No
20	3	86	1	1	No	No	No	No	No	No	No	No	No	No
21	3	52	1	1	No	No	No	No	No	No	No	No	No	No
22	3	17	1	0	No	No	No	No	No	No	No	No	No	No
23	3	17	1	0	No	No	No	No	No	No	No	No	No	No
24	3	17	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.2	12.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	17	14
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1755	1755
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	882	660	34	26
2	856	640	33	25
3	838	627	32	25
4	785	587	30	23
5	697	521	27	21
6	688	515	27	20
7	679	508	26	20
8	617	462	24	18
9	609	455	23	18
10	600	449	23	18
11	520	389	20	15
12	485	363	19	14
13	476	356	18	14
14	353	264	14	10
15	353	264	14	10
16	247	185	10	7
17	141	106	5	4
18	141	106	5	4
19	79	59	3	2
20	44	33	2	1
21	26	20	1	1
22	9	7	0	0
23	9	7	0	0
24	9	7	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1542	1	34	No	No	No	No	No	No	No	No	No	No
2	3	1496	1	33	No	No	No	No	No	No	No	No	No	No
3	3	1465	1	32	No	No	No	No	No	No	No	No	No	No
4	3	1372	1	30	No	No	No	No	No	No	No	No	No	No
5	3	1218	1	27	No	No	No	No	No	No	No	No	No	No
6	3	1203	1	27	No	No	No	No	No	No	No	No	No	No
7	3	1187	1	26	No	No	No	No	No	No	No	No	No	No
8	3	1079	1	24	No	No	No	No	No	No	No	No	No	No
9	3	1064	1	23	No	No	No	No	No	No	No	No	No	No
10	3	1049	1	23	No	No	No	No	No	No	No	No	No	No
11	3	909	1	20	No	No	No	No	No	No	No	No	No	No
12	3	848	1	19	No	No	No	No	No	No	No	No	No	No
13	3	832	1	18	No	No	No	No	No	No	No	No	No	No
14	3	617	1	14	No	No	No	No	No	No	No	No	No	No
15	3	617	1	14	No	No	No	No	No	No	No	No	No	No
16	3	432	1	10	No	No	No	No	No	No	No	No	No	No
17	3	247	1	5	No	No	No	No	No	No	No	No	No	No
18	3	247	1	5	No	No	No	No	No	No	No	No	No	No
19	3	138	1	3	No	No	No	No	No	No	No	No	No	No
20	3	77	1	2	No	No	No	No	No	No	No	No	No	No
21	3	46	1	1	No	No	No	No	No	No	No	No	No	No
22	3	16	1	0	No	No	No	No	No	No	No	No	No	No
23	3	16	1	0	No	No	No	No	No	No	No	No	No	No
24	3	16	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	36.5	45.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:20	0:19
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	34	26
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1602	1602
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	665	757	38	13
2	645	734	37	13
3	632	719	36	12
4	592	674	34	12
5	525	598	30	10
6	519	590	30	10
7	512	583	29	10
8	465	530	27	9
9	459	522	26	9
10	452	515	26	9
11	392	447	22	8
12	366	416	21	7
13	359	409	21	7
14	266	303	15	5
15	266	303	15	5
16	186	212	11	4
17	106	121	6	2
18	106	121	6	2
19	60	68	3	1
20	33	38	2	1
21	20	23	1	0
22	7	8	0	0
23	7	8	0	0
24	7	8	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1422	1	38	No	No	No	No	No	No	No	No	No	No
2	3	1379	1	37	No	No	No	No	No	No	No	No	No	No
3	3	1351	1	36	No	No	No	No	No	No	No	No	No	No
4	3	1266	1	34	No	No	No	No	No	No	No	No	No	No
5	3	1123	1	30	No	No	No	No	No	No	No	No	No	No
6	3	1109	1	30	No	No	No	No	No	No	No	No	No	No
7	3	1095	1	29	No	No	No	No	No	No	No	No	No	No
8	3	995	1	27	No	No	No	No	No	No	No	No	No	No
9	3	981	1	26	No	No	No	No	No	No	No	No	No	No
10	3	967	1	26	No	No	No	No	No	No	No	No	No	No
11	3	839	1	22	No	No	No	No	No	No	No	No	No	No
12	3	782	1	21	No	No	No	No	No	No	No	No	No	No
13	3	768	1	21	No	No	No	No	No	No	No	No	No	No
14	3	569	1	15	No	No	No	No	No	No	No	No	No	No
15	3	569	1	15	No	No	No	No	No	No	No	No	No	No
16	3	398	1	11	No	No	No	No	No	No	No	No	No	No
17	3	227	1	6	No	No	No	No	No	No	No	No	No	No
18	3	227	1	6	No	No	No	No	No	No	No	No	No	No
19	3	128	1	3	No	No	No	No	No	No	No	No	No	No
20	3	71	1	2	No	No	No	No	No	No	No	No	No	No
21	3	43	1	1	No	No	No	No	No	No	No	No	No	No
22	3	15	1	0	No	No	No	No	No	No	No	No	No	No
23	3	15	1	0	No	No	No	No	No	No	No	No	No	No
24	3	15	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	25.1	25.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:15	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	38	13
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1473	1473
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	184	96	3
2	178	93	3
3	175	91	3
4	164	85	3
5	145	76	2
6	144	75	2
7	142	74	2
8	129	67	2
9	127	66	2
10	125	65	2
11	109	57	2
12	101	53	2
13	99	52	2
14	74	38	1
15	74	38	1
16	52	27	1
17	29	15	0
18	29	15	0
19	17	9	0
20	9	5	0
21	6	3	0
22	2	1	0
23	2	1	0
24	2	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	280	1	3	No	No	No	No	No	No	No	No	No	No
2	2	271	1	3	No	No	No	No	No	No	No	No	No	No
3	2	266	1	3	No	No	No	No	No	No	No	No	No	No
4	2	249	1	3	No	No	No	No	No	No	No	No	No	No
5	2	221	1	2	No	No	No	No	No	No	No	No	No	No
6	2	219	1	2	No	No	No	No	No	No	No	No	No	No
7	2	216	1	2	No	No	No	No	No	No	No	No	No	No
8	2	196	1	2	No	No	No	No	No	No	No	No	No	No
9	2	193	1	2	No	No	No	No	No	No	No	No	No	No
10	2	190	1	2	No	No	No	No	No	No	No	No	No	No
11	2	166	1	2	No	No	No	No	No	No	No	No	No	No
12	2	154	1	2	No	No	No	No	No	No	No	No	No	No
13	2	151	1	2	No	No	No	No	No	No	No	No	No	No
14	2	112	1	1	No	No	No	No	No	No	No	No	No	No
15	2	112	1	1	No	No	No	No	No	No	No	No	No	No
16	2	79	1	1	No	No	No	No	No	No	No	No	No	No
17	2	44	1	0	No	No	No	No	No	No	No	No	No	No
18	2	44	1	0	No	No	No	No	No	No	No	No	No	No
19	2	26	1	0	No	No	No	No	No	No	No	No	No	No
20	2	14	1	0	No	No	No	No	No	No	No	No	No	No
21	2	9	1	0	No	No	No	No	No	No	No	No	No	No
22	2	3	1	0	No	No	No	No	No	No	No	No	No	No
23	2	3	1	0	No	No	No	No	No	No	No	No	No	No
24	2	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	3
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	283
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	212	245	165	271
2	206	238	160	263
3	201	233	157	257
4	189	218	147	241
5	167	194	130	214
6	165	191	129	211
7	163	189	127	209
8	148	172	115	190
9	146	169	114	187
10	144	167	112	184
11	125	145	97	160
12	117	135	91	149
13	114	132	89	146
14	85	98	66	108
15	85	98	66	108
16	59	69	46	76
17	34	39	26	43
18	34	39	26	43
19	19	22	15	24
20	11	12	8	14
21	6	7	5	8
22	2	2	2	3
23	2	2	2	3
24	2	2	2	3

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	457	1	271	No	No	Yes	Yes	No	No	No	No	No	No
2	2	444	1	263	No	No	Yes	Yes	No	No	No	No	No	No
3	2	434	1	257	No	No	Yes	Yes	No	No	No	No	No	No
4	2	407	1	241	No	No	No	Yes	No	No	No	No	No	No
5	2	361	1	214	No	No	No	Yes	No	No	No	No	No	No
6	2	356	1	211	No	No	No	Yes	No	No	No	No	No	No
7	2	352	1	209	No	No	No	Yes	No	No	No	No	No	No
8	2	320	1	190	No	No	No	No	No	No	No	No	No	No
9	2	315	1	187	No	No	No	No	No	No	No	No	No	No
10	2	311	1	184	No	No	No	No	No	No	No	No	No	No
11	2	270	1	160	No	No	No	No	No	No	No	No	No	No
12	2	252	1	149	No	No	No	No	No	No	No	No	No	No
13	2	246	1	146	No	No	No	No	No	No	No	No	No	No
14	2	183	1	108	No	No	No	No	No	No	No	No	No	No
15	2	183	1	108	No	No	No	No	No	No	No	No	No	No
16	2	128	1	76	No	No	No	No	No	No	No	No	No	No
17	2	73	1	43	No	No	No	No	No	No	No	No	No	No
18	2	73	1	43	No	No	No	No	No	No	No	No	No	No
19	2	41	1	24	No	No	No	No	No	No	No	No	No	No
20	2	23	1	14	No	No	No	No	No	No	No	No	No	No
21	2	13	1	8	No	No	No	No	No	No	No	No	No	No
22	2	4	1	3	No	No	No	No	No	No	No	No	No	No
23	2	4	1	3	No	No	No	No	No	No	No	No	No	No
24	2	4	1	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	7	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.7	13.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:32	1:00
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	165	271
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	893	893
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	256	256	33	38
2	248	248	32	37
3	243	243	31	36
4	228	228	29	34
5	202	202	26	30
6	200	200	26	30
7	197	197	25	29
8	179	179	23	27
9	177	177	23	26
10	174	174	22	26
11	151	151	19	22
12	141	141	18	21
13	138	138	18	21
14	102	102	13	15
15	102	102	13	15
16	72	72	9	11
17	41	41	5	6
18	41	41	5	6
19	23	23	3	3
20	13	13	2	2
21	8	8	1	1
22	3	3	0	0
23	3	3	0	0
24	3	3	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	512	1	38	No	No	No	No	No	No	No	No	No	No
2	3	496	1	37	No	No	No	No	No	No	No	No	No	No
3	3	486	1	36	No	No	No	No	No	No	No	No	No	No
4	3	456	1	34	No	No	No	No	No	No	No	No	No	No
5	3	404	1	30	No	No	No	No	No	No	No	No	No	No
6	3	400	1	30	No	No	No	No	No	No	No	No	No	No
7	3	394	1	29	No	No	No	No	No	No	No	No	No	No
8	3	358	1	27	No	No	No	No	No	No	No	No	No	No
9	3	354	1	26	No	No	No	No	No	No	No	No	No	No
10	3	348	1	26	No	No	No	No	No	No	No	No	No	No
11	3	302	1	22	No	No	No	No	No	No	No	No	No	No
12	3	282	1	21	No	No	No	No	No	No	No	No	No	No
13	3	276	1	21	No	No	No	No	No	No	No	No	No	No
14	3	204	1	15	No	No	No	No	No	No	No	No	No	No
15	3	204	1	15	No	No	No	No	No	No	No	No	No	No
16	3	144	1	11	No	No	No	No	No	No	No	No	No	No
17	3	82	1	6	No	No	No	No	No	No	No	No	No	No
18	3	82	1	6	No	No	No	No	No	No	No	No	No	No
19	3	46	1	3	No	No	No	No	No	No	No	No	No	No
20	3	26	1	2	No	No	No	No	No	No	No	No	No	No
21	3	16	1	1	No	No	No	No	No	No	No	No	No	No
22	3	6	1	0	No	No	No	No	No	No	No	No	No	No
23	3	6	1	0	No	No	No	No	No	No	No	No	No	No
24	3	6	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.2	9.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	33	38
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	583	583
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	156	168	7	9
2	151	163	7	9
3	148	160	7	9
4	139	150	6	8
5	123	133	6	7
6	122	131	5	7
7	120	129	5	7
8	109	118	5	6
9	108	116	5	6
10	106	114	5	6
11	92	99	4	5
12	86	92	4	5
13	84	91	4	5
14	62	67	3	4
15	62	67	3	4
16	44	47	2	3
17	25	27	1	1
18	25	27	1	1
19	14	15	1	1
20	8	8	0	0
21	5	5	0	0
22	2	2	0	0
23	2	2	0	0
24	2	2	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	324	1	9	No	No	No	No	No	No	No	No	No	No
2	2	314	1	9	No	No	No	No	No	No	No	No	No	No
3	2	308	1	9	No	No	No	No	No	No	No	No	No	No
4	2	289	1	8	No	No	No	No	No	No	No	No	No	No
5	2	256	1	7	No	No	No	No	No	No	No	No	No	No
6	2	253	1	7	No	No	No	No	No	No	No	No	No	No
7	2	249	1	7	No	No	No	No	No	No	No	No	No	No
8	2	227	1	6	No	No	No	No	No	No	No	No	No	No
9	2	224	1	6	No	No	No	No	No	No	No	No	No	No
10	2	220	1	6	No	No	No	No	No	No	No	No	No	No
11	2	191	1	5	No	No	No	No	No	No	No	No	No	No
12	2	178	1	5	No	No	No	No	No	No	No	No	No	No
13	2	175	1	5	No	No	No	No	No	No	No	No	No	No
14	2	129	1	4	No	No	No	No	No	No	No	No	No	No
15	2	129	1	4	No	No	No	No	No	No	No	No	No	No
16	2	91	1	3	No	No	No	No	No	No	No	No	No	No
17	2	52	1	1	No	No	No	No	No	No	No	No	No	No
18	2	52	1	1	No	No	No	No	No	No	No	No	No	No
19	2	29	1	1	No	No	No	No	No	No	No	No	No	No
20	2	16	1	0	No	No	No	No	No	No	No	No	No	No
21	2	10	1	0	No	No	No	No	No	No	No	No	No	No
22	2	4	1	0	No	No	No	No	No	No	No	No	No	No
23	2	4	1	0	No	No	No	No	No	No	No	No	No	No
24	2	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.1	8.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01	0:01
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	7	9
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	340	340
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	168	301	20	100
2	163	292	19	97
3	160	286	19	95
4	150	268	18	89
5	133	238	16	79
6	131	235	16	78
7	129	232	15	77
8	118	211	14	70
9	116	208	14	69
10	114	205	14	68
11	99	178	12	59
12	92	166	11	55
13	91	163	11	54
14	67	120	8	40
15	67	120	8	40
16	47	84	6	28
17	27	48	3	16
18	27	48	3	16
19	15	27	2	9
20	8	15	1	5
21	5	9	1	3
22	2	3	0	1
23	2	3	0	1
24	2	3	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	469	1	100	No	No	No	Yes	No	No	No	Yes	No	No
2	1	455	1	97	No	No	No	Yes	No	No	No	Yes	No	No
3	1	446	1	95	No	No	No	Yes	No	No	No	Yes	No	No
4	1	418	1	89	No	No	No	Yes	No	No	No	No	No	No
5	1	371	1	79	No	No	No	No	No	No	No	No	No	No
6	1	366	1	78	No	No	No	No	No	No	No	No	No	No
7	1	361	1	77	No	No	No	No	No	No	No	No	No	No
8	1	329	1	70	No	No	No	No	No	No	No	No	No	No
9	1	324	1	69	No	No	No	No	No	No	No	No	No	No
10	1	319	1	68	No	No	No	No	No	No	No	No	No	No
11	1	277	1	59	No	No	No	No	No	No	No	No	No	No
12	1	258	1	55	No	No	No	No	No	No	No	No	No	No
13	1	254	1	54	No	No	No	No	No	No	No	No	No	No
14	1	187	1	40	No	No	No	No	No	No	No	No	No	No
15	1	187	1	40	No	No	No	No	No	No	No	No	No	No
16	1	131	1	28	No	No	No	No	No	No	No	No	No	No
17	1	75	1	16	No	No	No	No	No	No	No	No	No	No
18	1	75	1	16	No	No	No	No	No	No	No	No	No	No
19	1	42	1	9	No	No	No	No	No	No	No	No	No	No
20	1	23	1	5	No	No	No	No	No	No	No	No	No	No
21	1	14	1	3	No	No	No	No	No	No	No	No	No	No
22	1	5	1	1	No	No	No	No	No	No	No	No	No	No
23	1	5	1	1	No	No	No	No	No	No	No	No	No	No
24	1	5	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	4	0	0	0	3	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	19.4	10.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06	0:18
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	20	100
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	589	589
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 5: Main St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	591	525	17
2	573	509	16
3	561	499	16
4	526	467	15
5	467	415	13
6	461	410	13
7	455	404	13
8	414	368	12
9	408	362	12
10	402	357	12
11	349	310	10
12	325	289	9
13	319	284	9
14	236	210	7
15	236	210	7
16	165	147	5
17	95	84	3
18	95	84	3
19	53	47	2
20	30	26	1
21	18	16	1
22	6	5	0
23	6	5	0
24	6	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	1116	1	17	No	No	No	No	No	No	No	No	No	No
2	1	1082	1	16	No	No	No	No	No	No	No	No	No	No
3	1	1060	1	16	No	No	No	No	No	No	No	No	No	No
4	1	993	1	15	No	No	No	No	No	No	No	No	No	No
5	1	882	1	13	No	No	No	No	No	No	No	No	No	No
6	1	871	1	13	No	No	No	No	No	No	No	No	No	No
7	1	859	1	13	No	No	No	No	No	No	No	No	No	No
8	1	782	1	12	No	No	No	No	No	No	No	No	No	No
9	1	770	1	12	No	No	No	No	No	No	No	No	No	No
10	1	759	1	12	No	No	No	No	No	No	No	No	No	No
11	1	659	1	10	No	No	No	No	No	No	No	No	No	No
12	1	614	1	9	No	No	No	No	No	No	No	No	No	No
13	1	603	1	9	No	No	No	No	No	No	No	No	No	No
14	1	446	1	7	No	No	No	No	No	No	No	No	No	No
15	1	446	1	7	No	No	No	No	No	No	No	No	No	No
16	1	312	1	5	No	No	No	No	No	No	No	No	No	No
17	1	179	1	3	No	No	No	No	No	No	No	No	No	No
18	1	179	1	3	No	No	No	No	No	No	No	No	No	No
19	1	100	1	2	No	No	No	No	No	No	No	No	No	No
20	1	56	1	1	No	No	No	No	No	No	No	No	No	No
21	1	34	1	1	No	No	No	No	No	No	No	No	No	No
22	1	11	1	0	No	No	No	No	No	No	No	No	No	No
23	1	11	1	0	No	No	No	No	No	No	No	No	No	No
24	1	11	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	20.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	17
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1133
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Market St @ Second St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	1238	855	17
2	1201	829	16
3	1176	812	16
4	1102	761	15
5	978	675	13
6	966	667	13
7	953	658	13
8	867	599	12
9	854	590	12
10	842	581	12
11	730	504	10
12	681	470	9
13	669	462	9
14	495	342	7
15	495	342	7
16	347	239	5
17	198	137	3
18	198	137	3
19	111	77	2
20	62	43	1
21	37	26	1
22	12	9	0
23	12	9	0
24	12	9	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2093	1	17	No	No	No	No	No	No	No	No	No	No
2	3	2030	1	16	No	No	No	No	No	No	No	No	No	No
3	3	1988	1	16	No	No	No	No	No	No	No	No	No	No
4	3	1863	1	15	No	No	No	No	No	No	No	No	No	No
5	3	1653	1	13	No	No	No	No	No	No	No	No	No	No
6	3	1633	1	13	No	No	No	No	No	No	No	No	No	No
7	3	1611	1	13	No	No	No	No	No	No	No	No	No	No
8	3	1466	1	12	No	No	No	No	No	No	No	No	No	No
9	3	1444	1	12	No	No	No	No	No	No	No	No	No	No
10	3	1423	1	12	No	No	No	No	No	No	No	No	No	No
11	3	1234	1	10	No	No	No	No	No	No	No	No	No	No
12	3	1151	1	9	No	No	No	No	No	No	No	No	No	No
13	3	1131	1	9	No	No	No	No	No	No	No	No	No	No
14	3	837	1	7	No	No	No	No	No	No	No	No	No	No
15	3	837	1	7	No	No	No	No	No	No	No	No	No	No
16	3	586	1	5	No	No	No	No	No	No	No	No	No	No
17	3	335	1	3	No	No	No	No	No	No	No	No	No	No
18	3	335	1	3	No	No	No	No	No	No	No	No	No	No
19	3	188	1	2	No	No	No	No	No	No	No	No	No	No
20	3	105	1	1	No	No	No	No	No	No	No	No	No	No
21	3	63	1	1	No	No	No	No	No	No	No	No	No	No
22	3	21	1	0	No	No	No	No	No	No	No	No	No	No
23	3	21	1	0	No	No	No	No	No	No	No	No	No	No
24	3	21	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	23.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	17
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	2110
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Market St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	968	1068	145	26
2	939	1036	141	25
3	920	1015	138	25
4	862	951	129	23
5	765	844	115	21
6	755	833	113	20
7	745	822	112	20
8	678	748	102	18
9	668	737	100	18
10	658	726	99	18
11	571	630	86	15
12	532	587	80	14
13	523	577	78	14
14	387	427	58	10
15	387	427	58	10
16	271	299	41	7
17	155	171	23	4
18	155	171	23	4
19	87	96	13	2
20	48	53	7	1
21	29	32	4	1
22	10	11	1	0
23	10	11	1	0
24	10	11	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2036	1	145	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	1975	1	141	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	1935	1	138	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	1813	1	129	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	3	1609	1	115	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
6	3	1588	1	113	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
7	3	1567	1	112	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
8	3	1426	1	102	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
9	3	1405	1	100	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
10	3	1384	1	99	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
11	3	1201	1	86	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
12	3	1119	1	80	No	No	No	No	Yes	Yes	Yes	Yes	No	No
13	3	1100	1	78	No	No	No	No	Yes	Yes	Yes	Yes	No	No
14	3	814	1	58	No	No	No	No	No	No	Yes	Yes	No	No
15	3	814	1	58	No	No	No	No	No	No	Yes	Yes	No	No
16	3	570	1	41	No	No	No	No	No	No	No	No	No	No
17	3	326	1	23	No	No	No	No	No	No	No	No	No	No
18	3	326	1	23	No	No	No	No	No	No	No	No	No	No
19	3	183	1	13	No	No	No	No	No	No	No	No	No	No
20	3	101	1	7	No	No	No	No	No	No	No	No	No	No
21	3	61	1	4	No	No	No	No	No	No	No	No	No	No
22	3	21	1	1	No	No	No	No	No	No	No	No	No	No
23	3	21	1	1	No	No	No	No	No	No	No	No	No	No
24	3	21	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	4	7	11	13	13	15	15	10	4

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	17.8	22.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:43	0:09
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	145	26
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	2207	2207
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 12: Market St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	983	1120	57	58
2	954	1086	55	56
3	934	1064	54	55
4	875	997	51	52
5	777	885	45	46
6	767	874	44	45
7	757	862	44	45
8	688	784	40	41
9	678	773	39	40
10	668	762	39	39
11	580	661	34	34
12	541	616	31	32
13	531	605	31	31
14	393	448	23	23
15	393	448	23	23
16	275	314	16	16
17	157	179	9	9
18	157	179	9	9
19	88	101	5	5
20	49	56	3	3
21	29	34	2	2
22	10	11	1	1
23	10	11	1	1
24	10	11	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2103	1	58	No	No	No	No	No	No	Yes	Yes	No	No
2	3	2040	1	56	No	No	No	No	No	No	Yes	Yes	No	No
3	3	1998	1	55	No	No	No	No	No	No	Yes	Yes	No	No
4	3	1872	1	52	No	No	No	No	No	No	Yes	Yes	No	No
5	3	1662	1	46	No	No	No	No	No	No	No	Yes	No	No
6	3	1641	1	45	No	No	No	No	No	No	No	Yes	No	No
7	3	1619	1	45	No	No	No	No	No	No	No	Yes	No	No
8	3	1472	1	41	No	No	No	No	No	No	No	No	No	No
9	3	1451	1	40	No	No	No	No	No	No	No	No	No	No
10	3	1430	1	39	No	No	No	No	No	No	No	No	No	No
11	3	1241	1	34	No	No	No	No	No	No	No	No	No	No
12	3	1157	1	32	No	No	No	No	No	No	No	No	No	No
13	3	1136	1	31	No	No	No	No	No	No	No	No	No	No
14	3	841	1	23	No	No	No	No	No	No	No	No	No	No
15	3	841	1	23	No	No	No	No	No	No	No	No	No	No
16	3	589	1	16	No	No	No	No	No	No	No	No	No	No
17	3	336	1	9	No	No	No	No	No	No	No	No	No	No
18	3	336	1	9	No	No	No	No	No	No	No	No	No	No
19	3	189	1	5	No	No	No	No	No	No	No	No	No	No
20	3	105	1	3	No	No	No	No	No	No	No	No	No	No
21	3	63	1	2	No	No	No	No	No	No	No	No	No	No
22	3	21	1	1	No	No	No	No	No	No	No	No	No	No
23	3	21	1	1	No	No	No	No	No	No	No	No	No	No
24	3	21	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	4	7	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.9	13
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13	0:12
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	57	58
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2218	2218
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 17: Market St @ 11th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	902	925	29	55
2	875	897	28	53
3	857	879	28	52
4	803	823	26	49
5	713	731	23	43
6	704	722	23	43
7	695	712	22	42
8	631	648	20	39
9	622	638	20	38
10	613	629	20	37
11	532	546	17	32
12	496	509	16	30
13	487	500	16	30
14	361	370	12	22
15	361	370	12	22
16	253	259	8	15
17	144	148	5	9
18	144	148	5	9
19	81	83	3	5
20	45	46	1	3
21	27	28	1	2
22	9	9	0	1
23	9	9	0	1
24	9	9	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1827	1	55	No	No	No	No	No	No	Yes	Yes	No	No
2	3	1772	1	53	No	No	No	No	No	No	Yes	Yes	No	No
3	3	1736	1	52	No	No	No	No	No	No	Yes	Yes	No	No
4	3	1626	1	49	No	No	No	No	No	No	No	Yes	No	No
5	3	1444	1	43	No	No	No	No	No	No	No	Yes	No	No
6	3	1426	1	43	No	No	No	No	No	No	No	Yes	No	No
7	3	1407	1	42	No	No	No	No	No	No	No	Yes	No	No
8	3	1279	1	39	No	No	No	No	No	No	No	No	No	No
9	3	1260	1	38	No	No	No	No	No	No	No	No	No	No
10	3	1242	1	37	No	No	No	No	No	No	No	No	No	No
11	3	1078	1	32	No	No	No	No	No	No	No	No	No	No
12	3	1005	1	30	No	No	No	No	No	No	No	No	No	No
13	3	987	1	30	No	No	No	No	No	No	No	No	No	No
14	3	731	1	22	No	No	No	No	No	No	No	No	No	No
15	3	731	1	22	No	No	No	No	No	No	No	No	No	No
16	3	512	1	15	No	No	No	No	No	No	No	No	No	No
17	3	292	1	9	No	No	No	No	No	No	No	No	No	No
18	3	292	1	9	No	No	No	No	No	No	No	No	No	No
19	3	164	1	5	No	No	No	No	No	No	No	No	No	No
20	3	91	1	3	No	No	No	No	No	No	No	No	No	No
21	3	55	1	2	No	No	No	No	No	No	No	No	No	No
22	3	18	1	1	No	No	No	No	No	No	No	No	No	No
23	3	18	1	1	No	No	No	No	No	No	No	No	No	No
24	3	18	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	3	7	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	20.8	21.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10	0:19
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	29	55
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1911	1911
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Market St @ 13th St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	972	772	67	78
2	943	749	65	76
3	923	733	64	74
4	865	687	60	69
5	768	610	53	62
6	758	602	52	61
7	748	594	52	60
8	680	540	47	55
9	671	533	46	54
10	661	525	46	53
11	573	455	40	46
12	535	425	37	43
13	525	417	36	42
14	389	309	27	31
15	389	309	27	31
16	272	216	19	22
17	156	124	11	12
18	156	124	11	12
19	87	69	6	7
20	49	39	3	4
21	29	23	2	2
22	10	8	1	1
23	10	8	1	1
24	10	8	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1744	1	78	No	No	No	No	Yes	Yes	Yes	Yes	No	No
2	3	1692	1	76	No	No	No	No	Yes	Yes	Yes	Yes	No	No
3	3	1656	1	74	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	1552	1	69	No	No	No	No	No	Yes	Yes	Yes	No	No
5	3	1378	1	62	No	No	No	No	No	Yes	Yes	Yes	No	No
6	3	1360	1	61	No	No	No	No	No	Yes	Yes	Yes	No	No
7	3	1342	1	60	No	No	No	No	No	Yes	Yes	Yes	No	No
8	3	1220	1	55	No	No	No	No	No	No	Yes	Yes	No	No
9	3	1204	1	54	No	No	No	No	No	No	Yes	Yes	No	No
10	3	1186	1	53	No	No	No	No	No	No	Yes	Yes	No	No
11	3	1028	1	46	No	No	No	No	No	No	No	Yes	No	No
12	3	960	1	43	No	No	No	No	No	No	No	Yes	No	No
13	3	942	1	42	No	No	No	No	No	No	No	Yes	No	No
14	3	698	1	31	No	No	No	No	No	No	No	No	No	No
15	3	698	1	31	No	No	No	No	No	No	No	No	No	No
16	3	488	1	22	No	No	No	No	No	No	No	No	No	No
17	3	280	1	12	No	No	No	No	No	No	No	No	No	No
18	3	280	1	12	No	No	No	No	No	No	No	No	No	No
19	3	156	1	7	No	No	No	No	No	No	No	No	No	No
20	3	88	1	4	No	No	No	No	No	No	No	No	No	No
21	3	52	1	2	No	No	No	No	No	No	No	No	No	No
22	3	18	1	1	No	No	No	No	No	No	No	No	No	No
23	3	18	1	1	No	No	No	No	No	No	No	No	No	No
24	3	18	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	2	7	10	13	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	20.9	36.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:23	0:47
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	67	78
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1889	1889
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 24: Orange St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	134	155	15
2	130	150	15
3	127	147	14
4	119	138	13
5	106	122	12
6	105	121	12
7	103	119	12
8	94	109	11
9	92	107	10
10	91	105	10
11	79	91	9
12	74	85	8
13	72	84	8
14	54	62	6
15	54	62	6
16	38	43	4
17	21	25	2
18	21	25	2
19	12	14	1
20	7	8	1
21	4	5	0
22	1	2	0
23	1	2	0
24	1	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	289	1	15	No	No	No	No	No	No	No	No	No	No
2	2	280	1	15	No	No	No	No	No	No	No	No	No	No
3	2	274	1	14	No	No	No	No	No	No	No	No	No	No
4	2	257	1	13	No	No	No	No	No	No	No	No	No	No
5	2	228	1	12	No	No	No	No	No	No	No	No	No	No
6	2	226	1	12	No	No	No	No	No	No	No	No	No	No
7	2	222	1	12	No	No	No	No	No	No	No	No	No	No
8	2	203	1	11	No	No	No	No	No	No	No	No	No	No
9	2	199	1	10	No	No	No	No	No	No	No	No	No	No
10	2	196	1	10	No	No	No	No	No	No	No	No	No	No
11	2	170	1	9	No	No	No	No	No	No	No	No	No	No
12	2	159	1	8	No	No	No	No	No	No	No	No	No	No
13	2	156	1	8	No	No	No	No	No	No	No	No	No	No
14	2	116	1	6	No	No	No	No	No	No	No	No	No	No
15	2	116	1	6	No	No	No	No	No	No	No	No	No	No
16	2	81	1	4	No	No	No	No	No	No	No	No	No	No
17	2	46	1	2	No	No	No	No	No	No	No	No	No	No
18	2	46	1	2	No	No	No	No	No	No	No	No	No	No
19	2	26	1	1	No	No	No	No	No	No	No	No	No	No
20	2	15	1	1	No	No	No	No	No	No	No	No	No	No
21	2	9	1	0	No	No	No	No	No	No	No	No	No	No
22	2	3	1	0	No	No	No	No	No	No	No	No	No	No
23	2	3	1	0	No	No	No	No	No	No	No	No	No	No
24	2	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	10
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	15
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	304
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 25: Orange St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	187	202	125	364
2	181	196	121	353
3	178	192	119	346
4	166	180	111	324
5	148	160	99	288
6	146	158	98	284
7	144	156	96	280
8	131	141	88	255
9	129	139	86	251
10	127	137	85	248
11	110	119	74	215
12	103	111	69	200
13	101	109	68	197
14	75	81	50	146
15	75	81	50	146
16	52	57	35	102
17	30	32	20	58
18	30	32	20	58
19	17	18	11	33
20	9	10	6	18
21	6	6	4	11
22	2	2	1	4
23	2	2	1	4
24	2	2	1	4

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	389	1	364	No	No	No	Yes	No	No	No	No	No	No
2	2	377	1	353	No	No	No	Yes	No	No	No	No	No	No
3	2	370	1	346	No	No	No	Yes	No	No	No	No	No	No
4	2	346	1	324	No	No	No	Yes	No	No	No	No	No	No
5	2	308	1	288	No	No	No	No	No	No	No	No	No	No
6	2	304	1	284	No	No	No	No	No	No	No	No	No	No
7	2	300	1	280	No	No	No	No	No	No	No	No	No	No
8	2	272	1	255	No	No	No	No	No	No	No	No	No	No
9	2	268	1	251	No	No	No	No	No	No	No	No	No	No
10	2	264	1	248	No	No	No	No	No	No	No	No	No	No
11	2	229	1	215	No	No	No	No	No	No	No	No	No	No
12	2	214	1	200	No	No	No	No	No	No	No	No	No	No
13	2	210	1	197	No	No	No	No	No	No	No	No	No	No
14	2	156	1	146	No	No	No	No	No	No	No	No	No	No
15	2	156	1	146	No	No	No	No	No	No	No	No	No	No
16	2	109	1	102	No	No	No	No	No	No	No	No	No	No
17	2	62	1	58	No	No	No	No	No	No	No	No	No	No
18	2	62	1	58	No	No	No	No	No	No	No	No	No	No
19	2	35	1	33	No	No	No	No	No	No	No	No	No	No
20	2	19	1	18	No	No	No	No	No	No	No	No	No	No
21	2	12	1	11	No	No	No	No	No	No	No	No	No	No
22	2	4	1	4	No	No	No	No	No	No	No	No	No	No
23	2	4	1	4	No	No	No	No	No	No	No	No	No	No
24	2	4	1	4	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	4	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.3	18.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:23	1:53
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	125	364
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	878	878
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 26: Orange St @ Sixth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	306	257	48	88
2	297	249	47	85
3	291	244	46	84
4	272	229	43	78
5	242	203	38	70
6	239	200	37	69
7	236	198	37	68
8	214	180	34	62
9	211	177	33	61
10	208	175	33	60
11	181	152	28	52
12	168	141	26	48
13	165	139	26	48
14	122	103	19	35
15	122	103	19	35
16	86	72	13	25
17	49	41	8	14
18	49	41	8	14
19	28	23	4	8
20	15	13	2	4
21	9	8	1	3
22	3	3	0	1
23	3	3	0	1
24	3	3	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	563	1	88	No	No	No	Yes	No	No	No	Yes	No	No
2	3	546	1	85	No	No	No	Yes	No	No	No	Yes	No	No
3	3	535	1	84	No	No	No	Yes	No	No	No	Yes	No	No
4	3	501	1	78	No	No	No	No	No	No	No	No	No	No
5	3	445	1	70	No	No	No	No	No	No	No	No	No	No
6	3	439	1	69	No	No	No	No	No	No	No	No	No	No
7	3	434	1	68	No	No	No	No	No	No	No	No	No	No
8	3	394	1	62	No	No	No	No	No	No	No	No	No	No
9	3	388	1	61	No	No	No	No	No	No	No	No	No	No
10	3	383	1	60	No	No	No	No	No	No	No	No	No	No
11	3	333	1	52	No	No	No	No	No	No	No	No	No	No
12	3	309	1	48	No	No	No	No	No	No	No	No	No	No
13	3	304	1	48	No	No	No	No	No	No	No	No	No	No
14	3	225	1	35	No	No	No	No	No	No	No	No	No	No
15	3	225	1	35	No	No	No	No	No	No	No	No	No	No
16	3	158	1	25	No	No	No	No	No	No	No	No	No	No
17	3	90	1	14	No	No	No	No	No	No	No	No	No	No
18	3	90	1	14	No	No	No	No	No	No	No	No	No	No
19	3	51	1	8	No	No	No	No	No	No	No	No	No	No
20	3	28	1	4	No	No	No	No	No	No	No	No	No	No
21	3	17	1	3	No	No	No	No	No	No	No	No	No	No
22	3	6	1	1	No	No	No	No	No	No	No	No	No	No
23	3	6	1	1	No	No	No	No	No	No	No	No	No	No
24	3	6	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	3	0	0	0	3	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.8	10.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07	0:14
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	48	88
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	699	699
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 31: Lime St @ Fourth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	208	267	6	19
2	202	259	6	18
3	198	254	6	18
4	185	238	5	17
5	164	211	5	15
6	162	208	5	15
7	160	206	5	15
8	146	187	4	13
9	144	184	4	13
10	141	182	4	13
11	123	158	4	11
12	114	147	3	10
13	112	144	3	10
14	83	107	2	8
15	83	107	2	8
16	58	75	2	5
17	33	43	1	3
18	33	43	1	3
19	19	24	1	2
20	10	13	0	1
21	6	8	0	1
22	2	3	0	0
23	2	3	0	0
24	2	3	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	475	1	19	No	No	No	No	No	No	No	No	No	No
2	2	461	1	18	No	No	No	No	No	No	No	No	No	No
3	2	452	1	18	No	No	No	No	No	No	No	No	No	No
4	2	423	1	17	No	No	No	No	No	No	No	No	No	No
5	2	375	1	15	No	No	No	No	No	No	No	No	No	No
6	2	370	1	15	No	No	No	No	No	No	No	No	No	No
7	2	366	1	15	No	No	No	No	No	No	No	No	No	No
8	2	333	1	13	No	No	No	No	No	No	No	No	No	No
9	2	328	1	13	No	No	No	No	No	No	No	No	No	No
10	2	323	1	13	No	No	No	No	No	No	No	No	No	No
11	2	281	1	11	No	No	No	No	No	No	No	No	No	No
12	2	261	1	10	No	No	No	No	No	No	No	No	No	No
13	2	256	1	10	No	No	No	No	No	No	No	No	No	No
14	2	190	1	8	No	No	No	No	No	No	No	No	No	No
15	2	190	1	8	No	No	No	No	No	No	No	No	No	No
16	2	133	1	5	No	No	No	No	No	No	No	No	No	No
17	2	76	1	3	No	No	No	No	No	No	No	No	No	No
18	2	76	1	3	No	No	No	No	No	No	No	No	No	No
19	2	43	1	2	No	No	No	No	No	No	No	No	No	No
20	2	23	1	1	No	No	No	No	No	No	No	No	No	No
21	2	14	1	1	No	No	No	No	No	No	No	No	No	No
22	2	5	1	0	No	No	No	No	No	No	No	No	No	No
23	2	5	1	0	No	No	No	No	No	No	No	No	No	No
24	2	5	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.2	9.6
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01	0:03
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	6	19
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	500	500
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 32: Lime St @ Fifth St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	224	307	56	132
2	217	298	54	128
3	213	292	53	125
4	199	273	50	117
5	177	243	44	104
6	175	239	44	103
7	172	236	43	102
8	157	215	39	92
9	155	212	39	91
10	152	209	38	90
11	132	181	33	78
12	123	169	31	73
13	121	166	30	71
14	90	123	22	53
15	90	123	22	53
16	63	86	16	37
17	36	49	9	21
18	36	49	9	21
19	20	28	5	12
20	11	15	3	7
21	7	9	2	4
22	2	3	1	1
23	2	3	1	1
24	2	3	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	531	1	132	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
2	1	515	1	128	No	Yes	Yes	Yes	No	No	No	Yes	No	No
3	1	505	1	125	No	Yes	Yes	Yes	No	No	No	Yes	No	No
4	1	472	1	117	No	No	Yes	Yes	No	No	No	Yes	No	No
5	1	420	1	104	No	No	No	Yes	No	No	No	Yes	No	No
6	1	414	1	103	No	No	No	Yes	No	No	No	No	No	No
7	1	408	1	102	No	No	No	Yes	No	No	No	No	No	No
8	1	372	1	92	No	No	No	Yes	No	No	No	No	No	No
9	1	367	1	91	No	No	No	Yes	No	No	No	No	No	No
10	1	361	1	90	No	No	No	Yes	No	No	No	No	No	No
11	1	313	1	78	No	No	No	No	No	No	No	No	No	No
12	1	292	1	73	No	No	No	No	No	No	No	No	No	No
13	1	287	1	71	No	No	No	No	No	No	No	No	No	No
14	1	213	1	53	No	No	No	No	No	No	No	No	No	No
15	1	213	1	53	No	No	No	No	No	No	No	No	No	No
16	1	149	1	37	No	No	No	No	No	No	No	No	No	No
17	1	85	1	21	No	No	No	No	No	No	No	No	No	No
18	1	85	1	21	No	No	No	No	No	No	No	No	No	No
19	1	48	1	12	No	No	No	No	No	No	No	No	No	No
20	1	26	1	7	No	No	No	No	No	No	No	No	No	No
21	1	16	1	4	No	No	No	No	No	No	No	No	No	No
22	1	5	1	1	No	No	No	No	No	No	No	No	No	No
23	1	5	1	1	No	No	No	No	No	No	No	No	No	No
24	1	5	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	3	4	10	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	16.9	11.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:15	0:25
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	56	132
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	719	719
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	