MIDWAY RISING

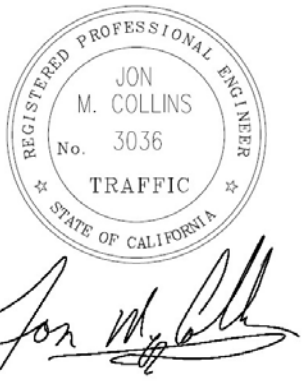
Community Plan Amendment

PRJ #: 1106734



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Prepared By:



Kimley»Horn

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1 INTRODUCTION

The Midway Rising Project proposes to modify the transportation network that was modeled in the 2018 Midway Pacific Highway Community Plan (September 2018). Therefore, a Community Plan Amendment (CPA) and analysis to evaluate any potential operational effects within the study area in the Horizon Year (2050) due to the Project's proposed modifications in addition to those identified in the Community Plan transportation analyses was prepared. This document was prepared as the transportation analysis that evaluates the Midway Rising project's proposed changes to the Community Plan with respect to the roadway network.

1.1 PROJECT DESCRIPTION

The proposed Midway Rising development is located at 3220, 3240, 3250, and 3500 Sports Arena Boulevard and 3467, 3487, and 3495 Kurtz Street (privately-owned parcels), in the City of San Diego, CA. The approximately 47.8-acre (52.07 acres total including privately-owned parcels) Midway Rising project site is located within the Midway-Pacific Highway community of the City of San Diego, and is bordered by Kurtz Street to the northeast, Sports Arena Boulevard to the southwest, Hancock Street to the northwest, and commercial development to the southeast.

LAND USES

The project proposes to demolish the existing 16,000-seat San Diego Sports Arena and all commercial buildings on site, and construct the following uses:

- **Entertainment**
  - New 16,000-seat Entertainment Center
  - 3,500-seat theater (to be located within the privately-owned parcels area)
- **Residential**
  - 4,627 multi-family dwelling units, including:
    - 2,627 market-rate units
    - 2,000 affordable units, including:
      - 1,538 units ≤ 50% Area Median Income (AMI)
      - 462 units between 50%-80% AMI
- **Commercial**
  - 140,000 square-feet of commercial, including
    - 60,000 square-feet retail
    - 40,000 square-feet quality restaurant
    - 40,000 square-feet high-turnover sit-down restaurant

Construction of the project is proposed to occur in two phases:

- Phase 1 consists of the project site east of Frontier Drive with the exception of the privately-owned parcels, including construction of the proposed Frontier Drive, to be completed in 2030. During the construction of Phase 1, the existing San Diego Sports Arena and existing commercial uses west of Frontier Drive will remain operational.
- Phase 2 construction includes the remainder of the project site west of Frontier Drive plus the privately-owned parcels, to be completed by 2035.

SITE ACCESS

The proposed project site will provide vehicle access via 11 access points, including four along Sports Arena Boulevard and seven on Kurtz Street. Four access points will be intersections formed with the proposed Kemper Street and Frontier Drive roadways, and the remaining seven access points will be driveways into parking structures. The project will provide multimodal facilities within the project study area that will improve mobility within the site and to and from the Old Town Transit Center.

1.2 ANALYSIS SCENARIOS

The CPA analyzed the following scenarios:

- ***Existing (2023):*** Represents the traffic conditions of the existing street network, lane geometry, and signal timing, as of December 2023, and traffic volumes observed on a weekday, event day in 2023.
- ***Horizon Year (2050) Baseline (CP Scenario):*** The CP scenario represents the Horizon Year (2050) Baseline scenario per the Midway-Pacific Highway Community Plan. The roadway network is based on the Midway-Pacific Highway Community Plan Baseline scenario land use inputs for 2035, which is not anticipated to change by Year 2050. The traffic volumes were developed using the 2050 SANDAG (ABM2+ version 14.3.0) travel demand model, which includes the buildout scenario based on the Midway-Pacific Highway Community Plan EIR transportation analysis. Note that the Community Plan buildout scenario does not include the continuation of the San Diego Sports Arena and therefore reflects a non-event day scenario.
- ***Horizon Year (2050) Plus Full Project Buildout (CPA Scenario):*** The CPA scenario represents the Horizon Year (2050) Plus Project Buildout scenario. The roadway network includes the roadway changes proposed for the Midway Rising project. Traffic volumes were developed using the 2050 SANDAG (ABM2+ version 14.3.0) travel demand model, including the Midway Rising Project Buildout land use inputs. The CPA scenario includes the Midway Rising Project Buildout land use inputs for the proposed Entertainment Center under an event-day and non-event day.

1.3 STUDY PERIODS

The CPA analyzed the following two study periods, which are consistent with the 2018 Community Plan:

- Commuter AM Peak: 7:00 AM to 10:00 AM (reflective of the existing study area weekday commuter peak period)
- Commuter PM Peak: 4:00 PM to 6:00 PM

The two peak periods above were analyzed for all proposed land uses under the three analysis scenarios defined in the previous section.

The Horizon Year (2050) Baseline (CP Scenario) reflects the Midway Pacific Highway Community Plan buildout, which assumes the highest density land use alternative, and assumes the demolition of the existing San Diego Sports Arena. Therefore, the CP Scenario weekday analysis is reflective of a 'non-event day'. However, the project will include the Entertainment Center and theater uses; therefore, analysis was run for event day and non-event day under the Horizon Year (2050) Plus Full Project Buildout (CPA Scenario).

2 MIDWAY-PACIFIC HIGHWAY COMMUNITY PLAN

2.1 CP RECOMMENDATIONS

The CP includes a network of planned roadways and associated pedestrian facilities, multi-use paths, and bicycle facilities. Three new north-south running roadways within the site between Sports Arena Boulevard and Kurtz Street were planned in the CP street network:

- Kemper Street (extended north from its current terminus with Sports Arena Boulevard)
- Frontier Drive
- Greenwood Street (extended south from its current terminus with Kurtz Street)

The CP also provides conceptual intersection design for improvements at the following four intersections located within the study area:

- Hancock Street and Sports Arena Boulevard (*CP Figure 3-8*)
- Kemper Street and Sports Arena Boulevard (*CP Figure 3-8*)
- Midway Drive and Sports Arena Boulevard / West Point Loma Boulevard (*CP Figure 3-14*)
- Camino del Rio West / Rosecrans Street and Sports Arena Boulevard (*CP Figure 3-15)*

Excerpts from the Midway Pacific-Highway Community Plan referenced above are provided in **Appendix A**.

2.2 PROJECT RECOMMENDATIONS FOR THE CPA

The following modifications to the Midway-Pacific Highway Community Plan were analyzed for the 2050 Midway Rising Project Buildout (CPA scenario):

Roadway Segments:

- **Kurtz Street** (between Hancock Street and Sherman Street): Convert from a 2-lane one-way (southeast-bound) collector to a 2-lane (two-way) collector with one lane in each direction.
- **Rosecrans Street** (between Midway Drive and Pacific Highway): Dedicate one lane in each direction for Business Access and Transit ("BAT") lane. Proposed BAT lane will be accessible for passenger vehicles making a right turn at an intersection or driveway.
- **Sports Arena Boulevard** (between Midway Drive / W Point Loma Boulevard and Rosecrans St): Dedicate one lane in each direction for BAT lane. Proposed BAT lane will be accessible for passenger vehicles making a right turn at an intersection or driveway.
- **Greenwood Street** (between Kurtz Street and Sports Arena Boulevard): The project does not propose to construct this segment as planned in the Community Plan. Note that bicycles and pedestrians will still be able to connect between Kurtz Street and Sports Arena Boulevard as an "extension" of Sherman Street.

Intersections:

- **Intersection #2 – Midway Drive and Sports Arena Boulevard / West Point Loma Boulevard**: In addition to the improvements identified in *Figure 3-14* of the CP, the Midway Rising project proposes removal of the small channelized portions to accommodate an additional left-turn lane on the southeastbound and northwestbound approaches of Sports Arena Boulevard and Midway Drive, as well as removal of 174 feet of the existing median on W. Point Loma Boulevard to accommodate an additional through lane on the eastbound approach.
- **Intersection #4 – Kemper Street and Sports Arena Boulevard**: *Figure 3-8* of the CP proposes an exclusive left turn and right turn lane on the southbound approach of Kemper Street at Sports Arena Boulevard. The Midway Rising project proposes only a through lane and an exclusive right turn lane.
- **Intersection #11 – Hancock and Kurtz Street**: Construct a single-lane roundabout at this intersection instead of a traffic signal.
- **Intersection #18 – Kurtz Street and Camino del Rio West**: Elimination of eastbound exclusive right turn lane to accommodate a proposed multi-use path along Kurtz Street.
- **Intersection #19 – Camino del Rio West / Rosecrans Street and Sports Arena Boulevard**: In addition to the improvements identified in *Figure 3-15* of the CP, the Midway Rising project proposes the following modifications to the southeastbound approach as compared to the CP design concept:
  - Convert through lane to shared through-left turn lane
  - Replace second through lane to a bus-only through movement lane
  - Separate shared through-right lane to an exclusive through lane and right turn lane

Table 2-1 summarizes the recommended CP street classification modifications versus the project proposed modifications

Figure 2-1 illustrates the proposed CPA modifications for the Midway Rising project and **Figure 2-2** the proposed cross-sections for the roadways adjacent to the project site.

Table 2-1. Existing and Planned (CP and CPA) Vehicular System

Road Name	Extents	Existing Street Classification[1]	Community Plan Ultimate Street Classification[2]	Community Plan Amendment Ultimate Street Classification	Midway Rising Project Recommendation
Sports Arena Boulevard	I-8 WB Off-Ramp to I-8 EB On Ramp	6-lane prime arterial	6-lane prime arterial	No change from CP	6-lane prime arterial
	I-8 EB On Ramp to Midway Drive	5-lane major arterial	6-lane major arterial	No change from CP	No change from Existing Classification Project does not trigger improvements
	Midway Drive to Hancock Street	5-lane collector with a center left turn lane	6-lane major arterial	4-lane major arterial (with two bus only lanes)	No change from Existing Classification Project does not trigger improvements; project does not intend to implement CPA classification change
	Hancock Street to Kemper Street	5-lane collector with a center left turn lane	6-lane major arterial	4-lane major arterial (with two bus only lanes)	4-lane major arterial (with two bus only lanes)
	Kemper Street to West Drive	5-lane major arterial	6-lane major arterial	4-lane major arterial (with two bus only lanes)	4-lane major arterial (with two bus only lanes)
	West Drive to Rosecrans Street	6-lane major arterial	6-lane major arterial	4-lane major arterial (with two bus only lanes)	4-lane major arterial (with two bus only lanes)
	Rosecrans Street to Pacific Highway	2-lane collector	2-lane collector with a center left turn lane	No change from CP	No change from Existing Classification Project does not trigger improvements
Rosecrans Street	Camino Del Rio/Sports Arena Boulevard to Pacific Highway	4-lane collector with a center left turn lane	4-lane major arterial	2-lane major arterial (with two bus only lanes)	2-lane collector (with two bus only lanes) Project does not trigger improvements; project does not intend to implement CPA classification change
	Sports Arena Boulevard to Midway Drive	6-lane major arterial	6-lane prime arterial	No change from CP recommendation	No change from Existing Classification Project does not trigger improvements
Midway Drive	Kemper Street to Rosecrans Street	4-lane collector with a center left turn lane	4-lane collector with a center left turn lane	No change from CP recommendation	4-lane collector with a center left turn lane
Hancock Street	Sports Arena Boulevard to Channel Way	2-lane collector	4-lane collector	No change from CP recommendation	4-lane collector
	Channel Way to Kurtz Street	2-lane collector with a center left turn lane	4-lane collector	No change from CP recommendation	4-lane collector
	Kurtz Street to Greenwood Street	2-lane collector (one-way north-westbound)	3-lane major arterial (one-way)	No change from CP recommendation	No change from Existing Classification Project does not trigger improvements
	Greenwood Street to Camino del Rio West	2-lane collector (one-way north-westbound)	3-lane major arterial (one-way)	No change from CP recommendation	2-lane collector (one-way north-westbound) Project does not trigger improvements
Kurtz Street	Hancock Street to Frontier Drive	2-lane collector (one-way south-eastbound)	2-lane collector (one-way southeast-bound)	2-lane collector	2-lane collector
	Frontier Drive to Sherman Street	2-lane collector (one-way south-eastbound)	2-lane collector (one-way southeast-bound)	2-lane collector	2-lane collector
	Sherman Street to Camino del Rio West	2-lane collector (one-way south-eastbound)	2-lane collector (one-way south-eastbound)	No change from CP recommendation	2-lane collector (one-way south-eastbound)
Camino Del Rio W	Greenwood Street to Kurtz Street	6-lane prime arterial	6-lane prime arterial	No change from CP recommendation	6-lane prime arterial
Greenwood Street	Kurtz Street to Sports Arena Boulevard	Does not exist	2-lane collector	Segment of Greenwood Street would not be constructed	*(No new roadway)*
Kemper Street	Sports Arena Boulevard to Kurtz Street	Does not exist	2-lane collector with a center left turn lane	No change from CP recommendation	2-lane collector with a center left turn lane
Frontier Drive	Sports Arena Boulevard to Kurtz Street	Does not exist	2-lane collector with a center left turn lane	No change from CP recommendation	2-lane collector with a center left turn lane

Notes:

[1]Based on Figure 3-5 Existing (2017) Street Classifications in the Midway Pacific Highway Community Plan, except at the following location:

- Hancock St b/w Sports Arena Blvd & Channel Wy – Lane geometry changes since adoption of Community Plan

[2]Based on Figure 3-6 Planned Street Classifications in the Midway Pacific Highway Community Plan.

Figure 2-1. Community Plan Amendment - Ultimate Roadway Classifications

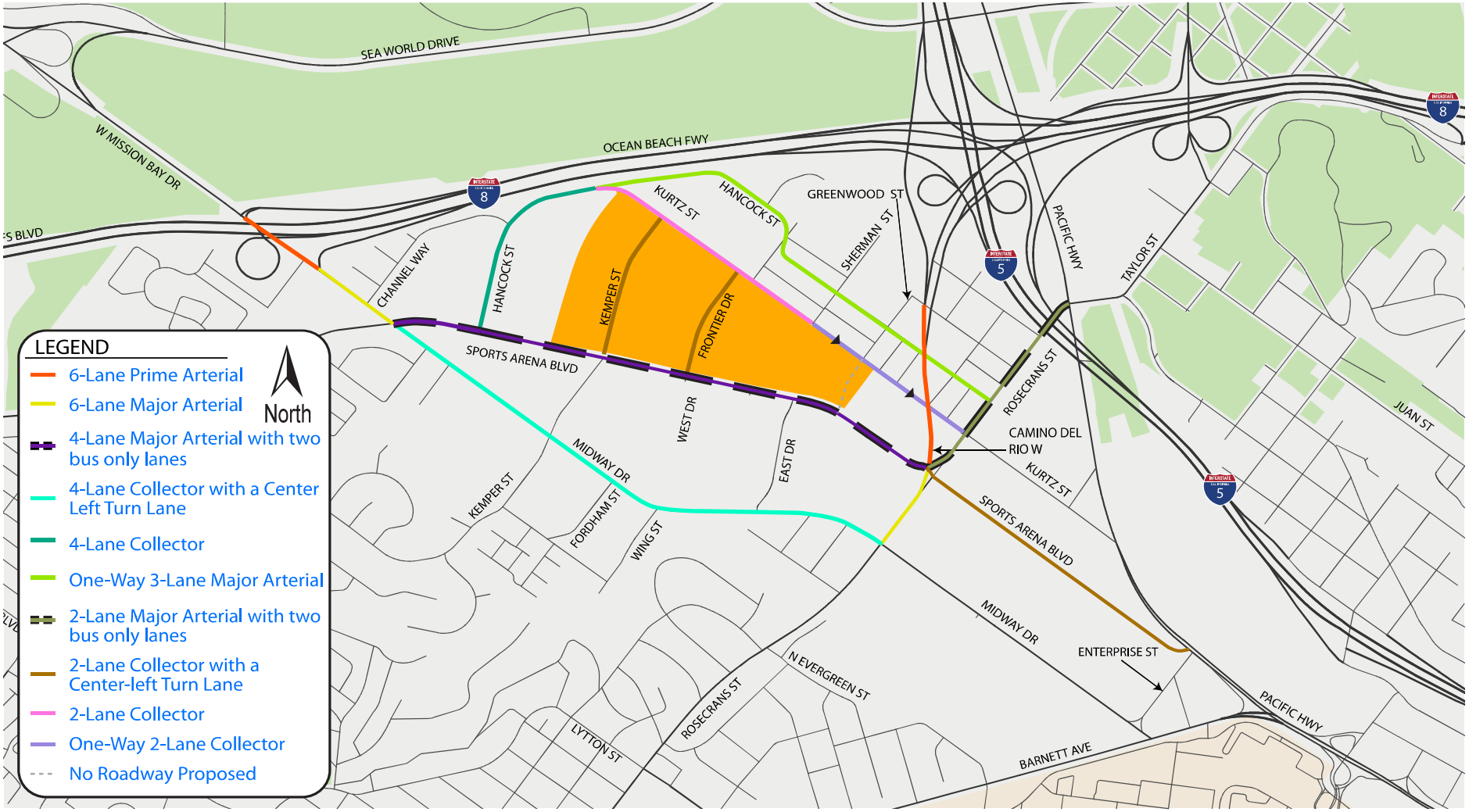


Figure 2-2. Project Frontage Roadways - Proposed Cross Sections (Cross Section A - Sports Arena Boulevard)



EXISTING

(A) Sports Arena Boulevard



PROPOSED

PROJECT SITE



Figure 2-2. Project Frontage Roadways - Proposed Cross Sections (Cross Section B - Kurtz St)



(B) Kurtz Street 1

EXISTING



PROPOSED



Figure 2-2. Project Frontage Roadways - Proposed Cross Sections (Cross Section C - Kurtz St)



EXISTING

(C) Kurtz Street 2



PROPOSED



Figure 2-2. Project Frontage Roadways - Proposed Cross Sections (Cross Section D - Kurtz St)



(D) Kurtz Street 3

EXISTING



PROPOSED



Figure 2-2. Project Frontage Roadways - Proposed Cross Sections (Cross Section E - Frontier Drive)



(E) Frontier Drive



Sidewalk **Travel Lanes** **Multi-Use Path**

PROPOSED

Figure 2-2. Project Frontage Roadways - Proposed Cross Sections (Cross Section F - Kemper Street)



(F) Kemper Street



PROPOSED

3 METHODOLOGY

The following section describes the methodology used to identify the study area and analyze study area conditions, and determine any potential project effects.

3.1 STUDY AREA

The study area for the CPA transportation analysis was determined based on the roadway volumes and travel patterns that would be expected to be modified as a result of the proposed roadway changes. The modifications are not anticipated to change the number of vehicles accessing the site from a regional perspective. Instead, the modifications are anticipated to change local travel behavior in how vehicular traffic will access the site. Therefore, intersections were selected along corridors with roadway modifications, except for Midway Drive, where it is anticipated that vehicles may choose to use Midway Drive instead of Sports Arena Boulevard due to the reduction in general purpose travel lanes on Sports Arena Boulevard. Additionally, the West Mission Bay Drive and I-8 Westbound Off-Ramp intersection and the Pacific Highway and Rosecrans Street / Taylor Street intersections were included. All study roadway segments analyzed in the LMA were included for evaluation in the CPA.

The resulting study area includes 21 intersections shown in **Figure 3-1**. The intersections identified for evaluation are summarized in **Table 3-1**. The intersection numbers in **Table 3-1** are consistent with the LMA study area, which contains additional study intersections missing from the list below. The roadway segments identified for evaluation are summarized in **Table 3-2**.

Table 3-1. Study Intersections

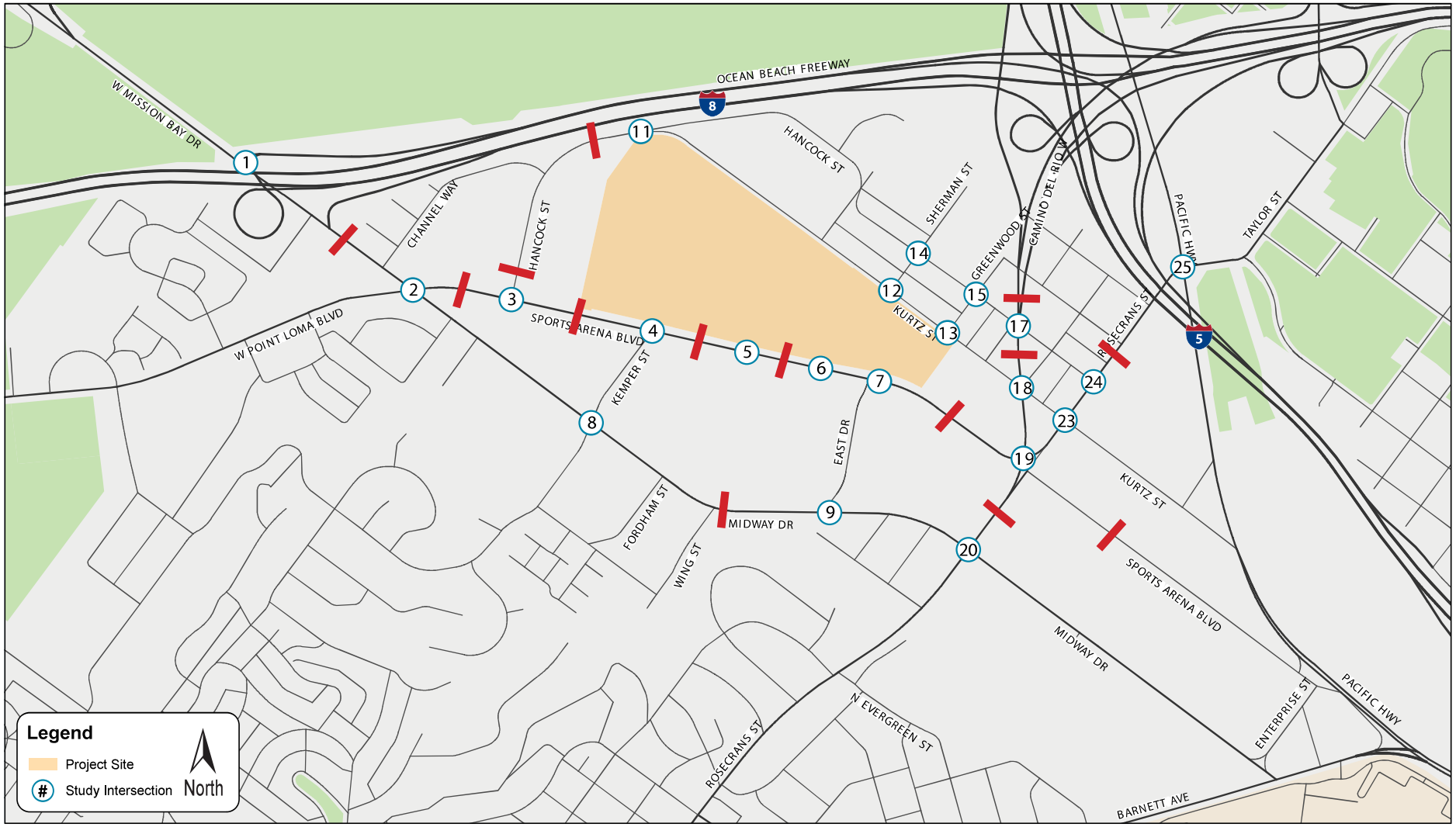
#	Location	Existing Control	Jurisdiction
1	West Mission Bay Drive / Sports Arena Boulevard & I-8 Westbound Off-Ramp	Signal	Caltrans
2	Sports Arena Boulevard & Midway Drive & West Point Loma Boulevard	Signal	City of San Diego
3	Sports Arena Boulevard & Hancock Street / Commercial Dwy 1	Signal	City of San Diego
4	Sports Arena Boulevard & Kemper Street	Signal	City of San Diego
5	Sports Arena Boulevard & West Drive / Proposed Frontier Drive	Signal	City of San Diego
6	Sports Arena Boulevard & Target Driveway	One-Way Stop	City of San Diego
7	Sports Arena Boulevard & East Drive	Signal	City of San Diego
8	Midway Drive & Kemper Street	Signal	City of San Diego
9	Midway Drive & East Drive / Commercial Dwy 2	Signal	City of San Diego
11	Kurtz Street & Hancock Street	One-Way Stop	City of San Diego
12	Kurtz Street & Sherman Street (& Future H1 Driveway 2)	All-Way Stop	City of San Diego
13	Kurtz Street & Greenwood Street	One-Way Stop	City of San Diego
14	Hancock Street & Sherman Street	All-Way Stop	City of San Diego
15	Hancock Street & Greenwood Street	Two-Way Stop	City of San Diego
17	Camino Del Rio West & Hancock Street	Signal	City of San Diego
18	Camino Del Rio West & Kurtz Street	Signal	City of San Diego
19	Camino Del Rio West & Sports Arena Boulevard / Rosecrans Street	Signal	City of San Diego
20	Rosecrans Street & Midway Drive	Signal	City of San Diego

#	Location	Existing Control	Jurisdiction
23	Rosecrans Street & Kurtz Street	Signal	City of San Diego
24	Rosecrans Street & Hancock Street	Uncontrolled	City of San Diego
25	Pacific Highway & Rosecrans Street / Taylor Street	Signal	City of San Diego

Table 3-2. Study Roadway Segments

ID	Roadway	Extents
1	Sports Arena Boulevard	I-8 WB Off Ramp to I-8 EB On-Ramp
2		I-8 EB On Ramp to W Point Loma Boulevard
3		W Point Loma Boulevard to Hancock Street
4		Hancock Street to Kemper Street
5		Kemper Street to Frontier Drive
6		Frontier Drive to East Drive
7		East Drive to Camino Del Rio West
8		Rosecrans Street to Pacific Highway
9	Camino Del Rio West	North of Greenwood Street
10		Greenwood Street to Hancock Street
11		Hancock Street to Kurtz Street
12	Rosecrans Street	Camino del Rio to Pacific Highway
13		Sports Arena Boulevard to Midway Drive
14	Midway Drive	Kemper Street to Rosecrans Street
15	Kurtz Street	Kemper Street to Frontier Drive
16		Frontier Drive to Greenwood Street
17		Greenwood Street to Camino del Rio West
18	Hancock Street	Sports Arena Boulevard to Channel Way
19		Channel Way to Kurtz St
20		Kurtz Street to Greenwood Street
21		Greenwood Street to Camino Del Rio West
22	*Frontier Drive (Plus Project scenario Only)	Sports Arena Boulevard to Kurtz Street
23	*Kemper Street (Plus Project scenario Only)	Sports Arena Boulevard to Kurtz Street
***Project will construct these roadways as planned in the Midway-Pacific Highway Community Plan (2018)**		

Figure 3-1. Community Plan Amendment Study Area



3.2 ANALYSIS PROCESS

Intersection operations were evaluated using Synchro 11 (Trafficware) and SIDRA software (for the proposed roundabout at Hancock Street/Kurtz Street). The Highway Capacity Manual (HCM), published by the Transportation Research Board, establishes procedures to evaluate facilities and rate their ability to process traffic volumes. The terminology "level of service" is used to provide a qualitative evaluation based on certain quantitative calculations, which are related to average delays.

LEVEL OF SERVICE ANALYSIS

3.2.1.1 Level of Service for Intersections

Level of service (LOS) for intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. The LOS reported for signalized intersections is the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay. LOS for unsignalized intersections is determined by the computed or measured control delay and is defined for each movement. At all-way stop-controlled intersections, the delay reported is the average control delay of all movements at the intersection. At one-way or two-way stop-controlled intersections, the delay reported represents the worst movement which is typically the left-turn from the minor street approach. **Table 3-3** describes the criteria for the various levels of service designations for signalized and unsignalized intersections.

Table 3-3. LOS Criteria for Intersections

LOS	Control Delay (sec/veh)		Description
	Signalized Intersections (a)	Unsignalized Intersections (b)	
A	≤10.0	≤10.0	Operations with very low delay and most vehicles do not stop.
B	>10.0 and ≤20.0	>10.0 and ≤15.0	Operations with good progression but with some restricted movement.
C	>20.0 and ≤35.0	>15.0 and ≤25.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35.0 and ≤55.0	>25.0 and ≤35.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines
E	>55.0 and ≤80.0	>35.0 and ≤50.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80.0	>50.0	Operations that is unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Source:
(a) 6th Edition Highway Capacity Manual, Chapter 19, Page 16, Exhibit 19-8; 2000 Edition Highway Capacity Manual, Chapter 16, Page 2
(b) 6th Edition Highway Capacity Manual, Chapter 20, Page 6, Exhibit 20-2; 2000 Edition Highway Capacity Manual, Chapter 17, Page 2 and 32

Synchro 11 software was used to analyze the intersection level of service operations for both signalized and unsignalized intersections. The intersection analysis uses the methodologies outlined in HCM 6th Edition except where limitations to HCM 6th edition methodology was present such as a fifth leg, clustered

intersections, custom phasing, or exclusive pedestrian phasing. For these intersections, HCM 2000 methodology was used.

- ***Peak-hour factor (PHF)*** – PHFs collected in field were assigned per approach under existing conditions, and default value of 0.92 PHF assigned at all approaches under future conditions per the City's Transportation Study Manual (TSM).
- ***Saturation flow rate*** – Typical saturation flow rate of 1,900 vehicles per hour per lane.
- ***Signal timing*** - Existing signal timings were modeled for the signalized intersection under the existing scenario. Signal timing was optimized for each future scenario, as is typical when analyzing horizon year conditions and when implementing roadway changes. Signal timing sheets for the signalized study intersections are provided in **Appendix B.**

3.2.1.2 Level of Service for Roundabouts (SIDRA)

Levels-of-service (LOS) for roundabouts in this evaluation were determined using methods defined in the *Highway Capacity Manual (HCM), 6th Edition* and SIDRA (Version 9.1) traffic analysis software. The HCM roundabout intersection procedures define LOS as a function of average control delay for the intersection as a whole. Roundabout control is analyzed using unsignalized criteria.

3.2.1.3 Thresholds for Project Effects at Intersections

Intersections were considered to exhibit project effects if the following changes to LOS were calculated in Plus Project scenarios when compared to LOS results in Base scenarios. **Table 3-4** defines transportation effects for City of San Diego intersections for when project improvements should be provided.

Table 3-4. Project Effect Criteria for Intersections

Intersection Control	Within ½ mile path of travel of a Major Transit Stop	Outside ½ mile path of travel of a Major Transit Stop
Signalized/All-Way Stop/Roundabout	Project causes intersection to degrade to LOS F, OR Project adds traffic to intersection already at LOS F	Project causes intersection to degrade to LOS E or F, OR Project adds traffic to intersection already at LOS E or F
Side-Street Stop	Project causes the worst movement to degrade to LOS F, OR Project adds traffic to the worst movement already at LOS F	Project causes the worst movement to degrade to LOS E or F, OR Project adds traffic to the worst movement already at LOS E or F

Source: City of San Diego Transportation Study Manual (2022)

3.2.1.4 Level of Service for Roadway Segments

Table 3-5 summarizes the roadway level of service criteria based on classification and average daily traffic (ADT) from the TSM.

Table 3-5. Roadway Segment Level of Service Thresholds for City of San Diego Roadway Segments

Street Classification	General Purpose Lanes	Level of Service				
		A	B	C	D	E
Expressway	8 lanes	40,000	56,000	80,000	93,500	107,000
Expressway	7 lanes	35,000	49,000	70,000	82,000	93,500
Expressway	6 lanes	30,000	42,000	60,000	70,000	80,000
Prime Arterial	8 lanes	35,000	50,000	70,000	75,000	80,000
Prime Arterial	7 lanes	30,000	42,500	60,000	65,000	70,000
Prime Arterial	6 lanes	25,000	35,000	50,000	55,000	60,000
Prime Arterial	5 lanes	20,000	28,000	40,000	45,000	50,000
Prime Arterial	4 lanes	17,500	24,500	35,000	40,000	45,000
Major Arterial	7 lanes	22,500	31,500	45,000	50,000	55,000
Major Arterial	6 lanes	20,000	28,000	40,000	45,000	50,000
Major Arterial	5 lanes	17,500	24,500	35,000	40,000	45,000
Major Arterial	4 lanes	15,000	21,000	30,000	35,000	40,000
Major Arterial** ***(with flex lanes)	4 lanes	15,000	21,000	30,000	35,000	40,000
Major Arterial	3 lanes	11,250	15,750	22,500	26,250	30,000
Major Arterial	2 lanes	7,500	10,500	15,000	17,500	20,000
Major Arterial** ***(with flex lanes)	2 lanes	7,500	10,500	15,000	17,500	20,000
Major Arterial ***(one-way)***	3 lanes	12,500	16,500	22,500	25,000	27,500
Major Arterial ***(one-way)***	2 lanes	10,000	13,000	17,500	20,000	22,500
Collector ***(with two-way left turn lane)***	5 lanes	12,500	17,500	25,000	30,750	37,500
Collector ***(with two-way left turn lane)***	4 lanes	10,000	14,000	20,000	25,000	30,000
Collector ***(with two-way left turn lane)***	3 lanes	7,500	10,500	15,000	18,750	22,500
Collector ***(with two-way left turn lane)***	2 lanes	5,000	7,000	10,000	13,000	15,000
Collector** ***(with flex lanes)	2 lanes	5,000	7,000	10,000	13,000	15,000
Collector ***(without two-way left turn lane)***	4 lanes	5,000	7,000	10,000	13,000	15,000
Collector ***(without two-way left turn lane)***	3 lanes	4,000	5,000	7,500	10,000	11,000
Collector ***(without two-way left turn lane)***	2 lanes	2,500	3,500	5,000	6,500	8,000
Collector ***(with no fronting property)***	2 lanes	4,000	5,500	7,500	9,000	10,000
Collector ***(one-way)***	3 lanes	11,000	14,000	19,000	22,500	26,000
Collector ***(one-way)***	2 lanes	7,500	9,500	12,500	15,000	17,500
Collector ***(one-way)***	1 lane	2,500	3,500	5,000	6,500	7,500
Sub-Collector ***(Single-family)***	2 lanes	--	--	2,200	--	--

Source: City of San Diego Transportation Study Manual (September 2022)
***LOS Criteria provided by City of San Diego Sustainability and Mobility Department staff**

3.2.1.5 Thresholds for Project Effects for Roadway Segments

Roadway segments were considered to exhibit project effects if the following LOS changes were observed in Plus Project scenarios when compared to results in Base scenarios. **Table 3-6** defines the criteria for project effects for roadway segments per the TSM and whether the project should implement the improvement or contribute a fair share towards the improvement.

Table 3-6. Project Effect Criteria for Roadway Segments

Roadway Type	Complete implementation of Improvement per the Community Plan	Fair Share of Improvement per the Community Plan
Roadways with improvements identified in the community plan	Project adds >50% of total daily vehicle trips on segment	Project adds ≤50% of total daily vehicle trips on segment
Planned new circulation element roadways	Project adds >50% of total daily vehicle trips on segment	Project adds ≤50% of total daily vehicle trips on segment

Source: City of San Diego Transportation Study Manual (2022)

QUEUE ANALYSIS

SimTraffic software included in Synchro 11 was used to analyze the 95th percentile queues at the turn lanes for signalized intersections. The 95th percentile queue is the maximum queue length under 95th percentile traffic volumes, and thus will rarely be exceeded. The 95th percentile queue lengths reported represent an average of five SimTraffic runs.

3.3 TRAVEL DEMAND MODELING

ROADWAY NETWORK

As part of the 2018 Midway Pacific Highway Community Plan, the roadway network was modeled using a previous version of the SANDAG traffic forecast model (SANDAG Series 12 Future Year Forecast model). This model was based on origin-destination travel forecasting. Since 2018, SANDAG has transitioned to an activity-based model (ABM) and is currently utilizing the Series 14, ABM2+, Base Year 2016, version 14.3.0.

Per the City's TSM, future traffic forecasts must utilize the latest available regional activity-based demand model (SANDAG Series 14 ABM2+ version 14.3.0—updated and released July 12, 2022). The Horizon Year (2050) Base (CP Scenario) and the Horizon Year (2050) Plus Full Project Buildout (CPA Scenario) utilized the SANDAG Series 14 ABM2+ version 14.3.0 and was run in-house by Kimley-Horn.

HORIZON YEAR (2050) TRAFFIC VOLUMES

The land use inputs from the Series 14, 2035 travel demand model, which includes the Midway Pacific Highway Community Plan buildout, were incorporated into the Series 14, 2050 travel demand model to develop Horizon Year (2050) CP scenario volumes. More detail is provided in Section 5.3 of this report.

The land use inputs were updated to reflect the proposed Midway Rising project land uses, and input into the 2050 travel demand model to develop Horizon Year (2050) CPA scenario volumes. More detail is provided in Section 6.2 of this report.

The VMT report for the Midway Rising project is provided in **Appendix C**, which includes more details on the model, and summarizes the land use inputs for each scenario.

The Horizon Year (2050) CP scenario forecasted roadway segment volumes were determined by calculating a growth rate between the 2016 Baseline and the 2050 Baseline SANDAG model volumes and applying that growth rate to the 2023 existing roadway segment counts taken on a non-event day. The Horizon Year (2050) CPA scenario forecasted roadway segment volumes were determined by calculating a growth rate between the 2016 Baseline and the 2050 With Project SANDAG model volumes and applying that growth rate to the 2023 existing roadway segment counts taken on an event day and a non-event day.

The Horizon Year (2050) turning movement counts were calculated using an iterative method (turn32) to measure growth between 2023 roadway segment ADT counts for a non-event day and 2050 roadway segment forecasted ADTs, and applying that growth to the existing 2023 turning movement counts for a non-event day. This methodology was used to develop turning movement volumes for the Horizon Year (2050) CP and CPA scenarios for a non-event day. The same methodology was used to develop turning movement volumes for the Horizon Year (2050) CPA scenario for an event-day but based on a growth rate between 2023 roadway segment ADT counts for an event day and 2050 roadway segment forecasted ADTs, and applying that growth to the existing 2023 turning movement counts for an event day.

4 EXISTING CONDITIONS

This section summarizes the existing roadway circulation network, daily and peak-hour traffic volumes, and operations at the study intersections and roadway segments.

4.1 ROADWAY NETWORK

The roadways along the project frontages include Sports Arena Boulevard to the south and Kurtz Street to the north. Surrounding roadways nearby the project site include Sports Arena Boulevard, Kurtz Street, Hancock Street, Kemper Street, Camino Del Rio West, Rosecrans Street, W Point Loma Boulevard, and Midway Drive.

Table 4-1 provides a description of existing roadway network of the study area, as of December 2023. The planned roadway classifications are provided in the Midway-Pacific Highway Community Plan (2018). **Figure 4-1** illustrates the existing study intersection geometrics under existing (2023) conditions.

4.2 TRAFFIC VOLUMES

Driveway and peak hour intersection counts were collected by National Data and Surveying Services (NDS) during a high-capacity concert at the San Diego Sports Arena to obtain event-day, existing (2023) traffic volumes. These counts were collected on Thursday, September 21, 2023, during the Luis Miguel concert during the commuter AM and PM peak periods. Additionally, 24-hour roadway segment counts were collected for eight days between Saturday, January 7, 2023 and Saturday, January 14, 2023 at the study segments. The weekday event day (San Diego Gulls) occurred on Wednesday, January 11th, 2023. These counts were used to analyze existing (2023) conditions in the study area and develop the existing site trip generation.

Appendix D contains the existing traffic count data.

4.3 INTERSECTION LEVEL OF SERVICE ANALYSIS

The existing (2023) intersection analysis was performed based on existing lane geometries and traffic controls observed, and data collected during the Commuter AM and Commuter PM peak hours on weekday event-day. **Figure 4-2** illustrates the existing traffic volumes at the study intersections.

Table 4-2 displays the LOS analysis results for the study intersections under existing conditions.

Under existing conditions, all study intersections operate at LOS D or better during the commuter AM and PM peak hours, except the following:

- Intersection #2 – Sports Arena Blvd / Midway Dr / W Point Loma Blvd (PM: LOS E)
- Intersection #6 – Sports Arena Blvd / Target Dwy / Existing VIP Access (PM: LOS E)
- Intersection #17 – Camino del Rio W / Hancock St (AM: LOS F; PM: LOS F)
- Intersection #20 – Rosecrans St / Midway Dr (AM: LOS E; PM: LOS E)

Appendix E contains the intersection LOS calculation worksheets for existing conditions.

Table 4-1. Existing Roadway Network

Roadway	From	To	No. Lanes	Median Type	Sidewalks	Bike Facilities	Transit Route	Posted Speed Limit	Existing Roadway Class.[1]	Planned Roadway Class.[2]
Sports Arena Boulevard	I-8 WB Off-Ramp	Rosecrans St	5-6 Lanes	Painted/ Raised	B/S (non-contiguous) 6 ft wide	Class II/ Class II Buffered	8 & 9	35 MPH	5-Lane Major Arterial	6-Lane Major Arterial
	Rosecrans St	Barnett Ave	2 Lanes	None	B/S (non-contiguous) 6 ft wide	None	None	25 MPH	2-Lane Collector	2-Lane Collector with CLTL
Kurtz Street	Hancock St	Camino Del Rio W.	2 Lanes (EB only)	None	B/S (non-contiguous) 5 ft wide	None	None	30 MPH	2-Lane Collector (one-way)	2-Lane Collector (one-way)
Hancock Street	Sports Arena Blvd	Kurtz St	2 Lanes	CLTL	B/S (non-contiguous) 5-6 ft wide	None	None	25-30 MPH	2-Lane Collector with CLTL	4-Lane Collector
	Kurtz St	Camino Del Rio W.	2 Lanes (WB only)	None	B/S (non-contiguous) 4-10 ft wide	None	None	25 MPH	2-Lane Collector (one-way)	3-Lane Major Arterial (one-way)
Kemper Street	Sports Arena Blvd	Leland St	2-4 Lanes	CLTL	B/S (both contiguous & non-contiguous) 4-10 ft wide	Class III	None	25 MPH	2-Lane Collector with CLTL	4-Lane Collector
Camino Del Rio West	I-8 WB/I-5 SB Off-Ramps	Sports Arena Blvd	3-4 SB / 3 NB	Raised	B/S (non-contiguous) 4.5-6 ft wide	None	None	35 MPH	6-Lane Prime Arterial	6-Lane Prime Arterial
Rosecrans Street	Pacific Hwy	Sports Arena Blvd	2 SB / 2-3 NB	Raised/ CLTL	B/S (both contiguous & non-contiguous) 5-9 ft wide	None	8, 9, 28, & 35	30 MPH	4-Lane Collector with CLTL	6-Lane Prime Arterial
	Sports Arena Blvd	Lytton St	3 SB / 3 NB	Raised	B/S (non-contiguous) 5-15 ft wide	Class II (SB Buffered) / Class III SB	28 & 35	40 MPH	6-Lane Major Arterial	6-Lane Prime Arterial

Notes:
[1]Existing roadway classifications based on Figure 3-5 in the Midway Pacific Highway Community Plan.
[2]Planned roadway classifications based on Figure 3-6 in the Midway Pacific Highway Community Plan.
CLTLL – Center Left-Turn Lane median.
W/O – West of
B/S – both sides

Figure 4-1. Existing Intersection Geometries

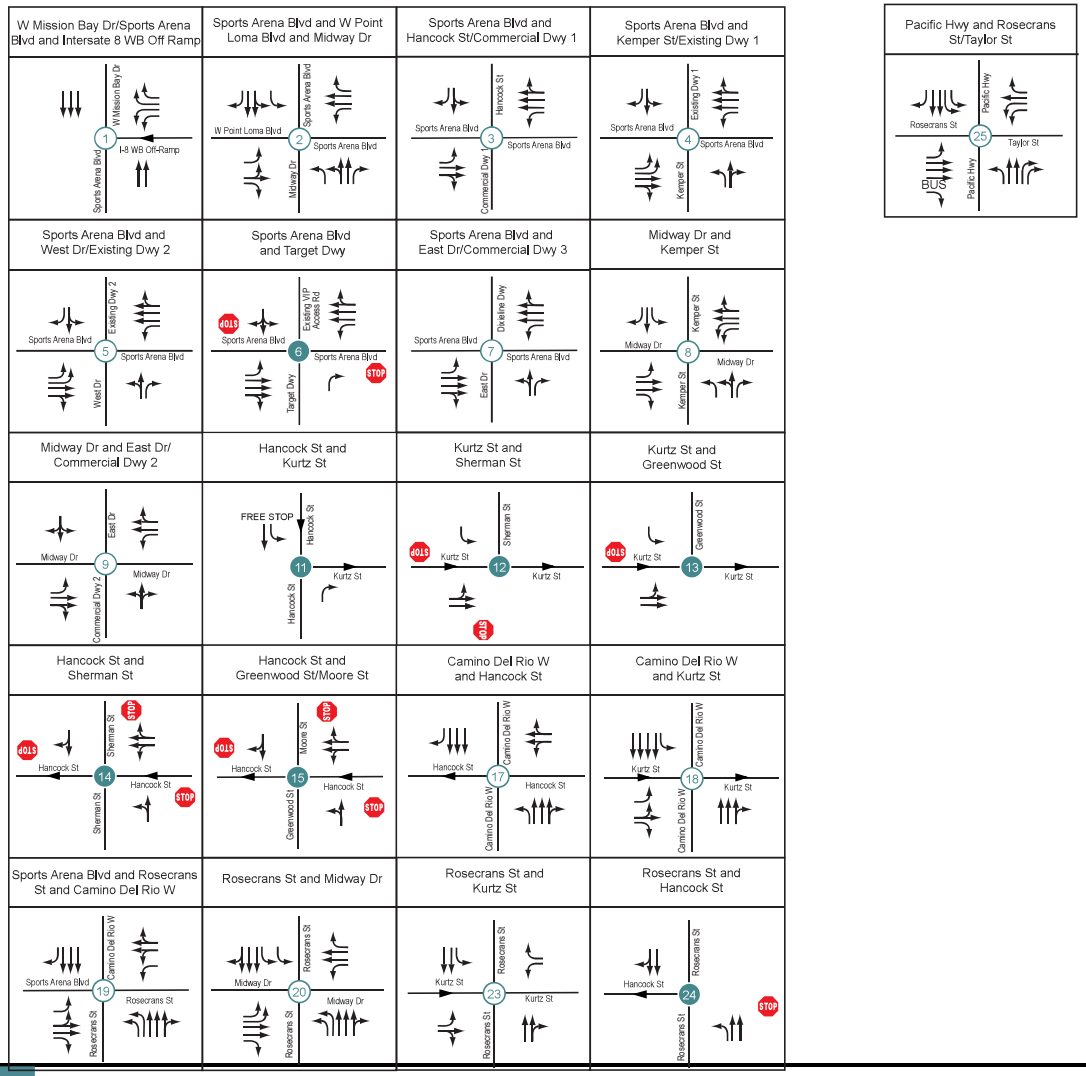


Figure 4-2a. Existing (2023) Conditions Traffic Volumes

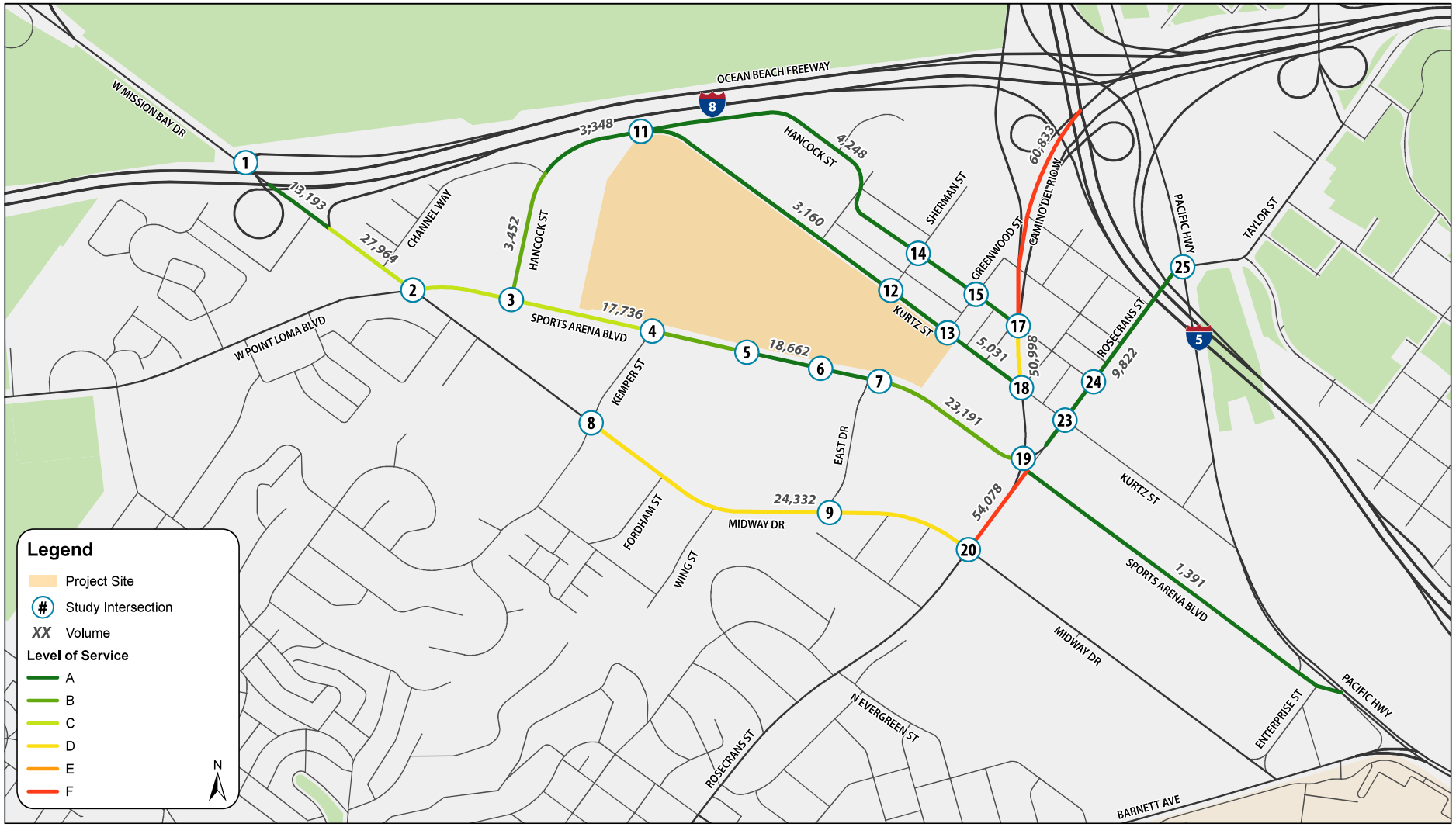


Figure 4-2b. Existing (2023) Conditions Traffic Volumes

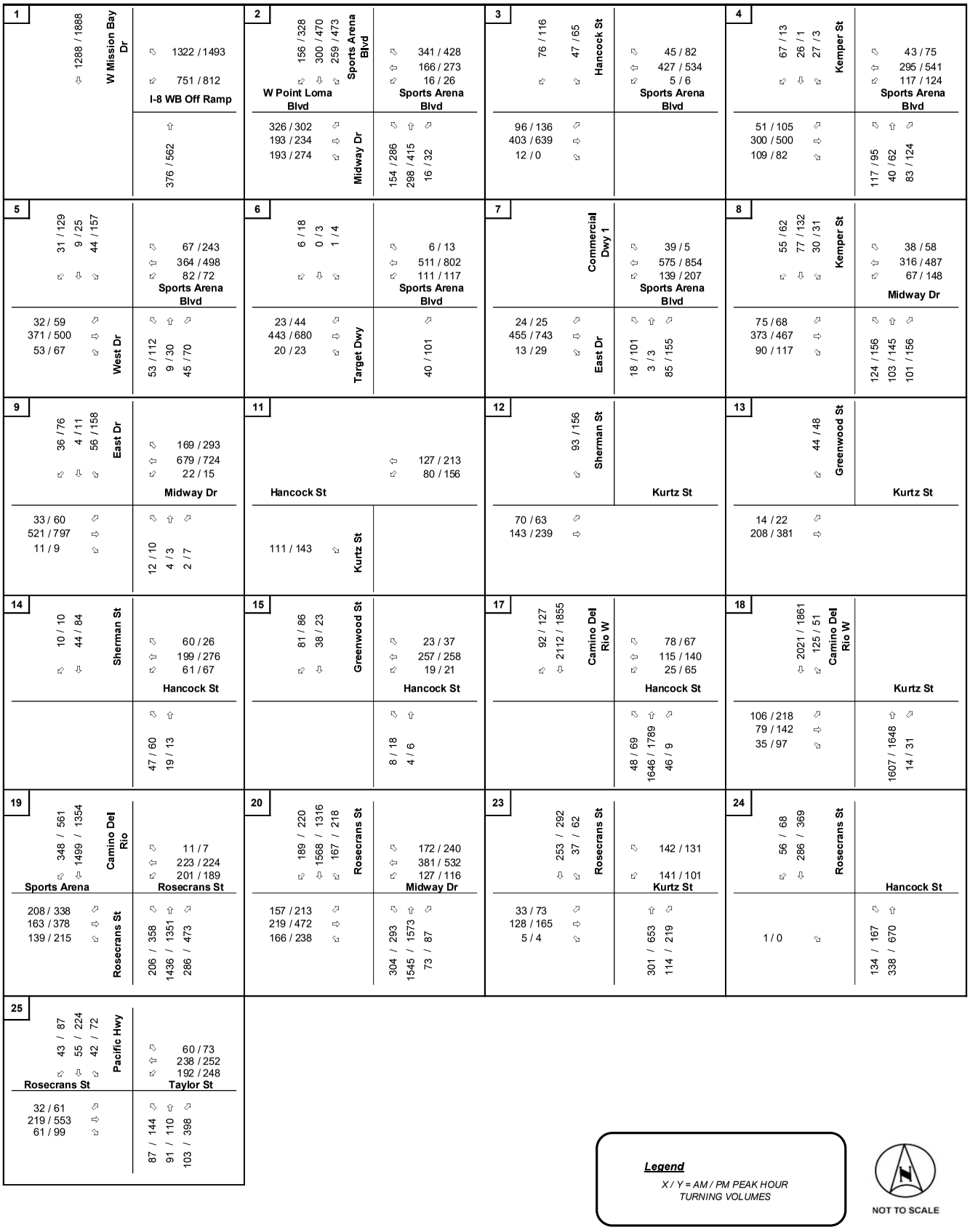


Table 4-2. Existing Conditions Intersection LOS Summary

#	INTERSECTION	TRAFFIC CONTROL	HCM EDITION	PEAK HOUR	Existing (2023) Conditions	
					DELAY (a)	LOS (b)
1	Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp	Signal	**HCM 2000**	Weekday AM	18.3	B
				Weekday Commuter PM	23.7	C
2	Midway Dr & W Point Loma Blvd & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	29.4	C
				Weekday Commuter PM	61.2	**E**
3	Commercial Dwy 1/Hancock St & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	8.6	A
				Weekday Commuter PM	16.7	B
4	Kemper St/Existing Dwy 1 & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	13.3	B
				Weekday Commuter PM	20.0	C
5	West Dr/Existing Dwy 2 & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	13.8	B
				Weekday Commuter PM	28.4	C
6	Target Dwy/Existing VIP Access Rd & Sports Arena Blvd	Two-Way Stop	HCM 6th	Weekday AM	13.3	B
				Worst Mvmt	*SB*	
				Weekday Commuter PM	45.3	**E**
				Worst Mvmt	*SB*	
7	East Dr/Commercial Dwy 3 & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	9.3	A
				Weekday Commuter PM	21.0	C
8	Kemper St & Midway Dr	Signal	HCM 6th	Weekday AM	19.6	B
				Weekday Commuter PM	37.4	D
9	Commercial Dwy 2/East Dr & Midway Dr	Signal	HCM 6th	Weekday AM	9.7	A
				Weekday Commuter PM	14.2	B
11	Kurtz St & Hancock St	Two-Way Stop	HCM 6th	Weekday AM	9.9	A
				Worst Mvmt	*SB*	
				Weekday Commuter PM	11.1	B
				Worst Mvmt	*SB*	
12	Kurtz St & Sherman St	All-Way Stop	HCM 6th	Weekday AM	8.8	A
				Weekday Commuter PM	9.8	A
13	Kurtz St & Greenwood St	Two-Way Stop	HCM 6th	Weekday AM	9.7	A
				Worst Mvmt	*SB*	
				Weekday Commuter PM	10.8	B
				Worst Mvmt	*SB*	
14	Sherman St & Hancock St	All-Way Stop	HCM 6th	Weekday AM	8.9	A
				Weekday Commuter PM	9.9	A
15	Greenwood St & Hancock St	All-Way Stop	HCM 6th	Weekday AM	8.8	A
				Weekday Commuter PM	8.7	A
17	Camino Del Rio W & Hancock St	Signal	HCM 6th	Weekday AM	149.7	**F**
				Weekday Commuter PM	ECL	**F**
18	Camino Del Rio W & Kurtz St	Signal	HCM 6th	Weekday AM	5.4	A
				Weekday Commuter PM	8.8	A
19	Rosecrans St & Sports Arena Blvd & Camino Del Rio W	Signal	**HCM 2000**	Weekday AM	32.6	C
				Weekday Commuter PM	43.1	D
20	Rosecrans St & Midway Dr	Signal	HCM 6th	Weekday AM	63.6	**E**
				Weekday Commuter PM	60.4	**E**
23	Rosecrans St & Kurtz St	Signal	**HCM 2000**	Weekday AM	18.0	B
				Weekday Commuter PM	21.4	C
24	Rosecrans St & Hancock St	One-Way Stop	HCM 6th	Weekday AM	9.5	A
				Worst Mvmt	*SE*	
				Weekday Commuter PM	10.1	B
				Worst Mvmt	*SE*	
25	Pacific Hwy & Rosecrans St/Taylor St	Signal	HCM 6th	Weekday AM	22.0	C
				Weekday Commuter PM	28.2	C

Notes:
Bold values indicate intersections operating at LOS E or F.
ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *Highway Capacity Manual 6th Edition* and *2000 Edition* and performed using Synchro 11.0

4.4 QUEUEING ANALYSIS

Table 4-3 summarizes the 95th percentile queues under existing conditions. The 95th percentile queue lengths reported represent an average of five SimTraffic runs.

Appendix F contains the 95th percentile queue worksheets for existing conditions. Under existing conditions, queues exceed the existing available storage length at:

- 4 intersections in the Commuter AM peak
- 10 intersections in the Commuter PM peak

4.5 ROADWAY SEGMENT ANALYSIS

The existing (2023) conditions roadway segment analysis was performed based on existing roadway geometries and 24-hour roadway segment counts collected on a weekday event day (Wednesday, January 11th, 2023).

Table 4-4Error! Reference source not found. summarizes the roadway segment LOS analysis at the study segments under existing conditions.

Under existing (2023) conditions, all roadway segments operate at LOS D or better on a weekday event day except the following:

- Camino del Rio West north of Greenwood Street (LOS F)
- Camino del Rio West between Greenwood Street and Hancock Street (LOS F)
- Rosecrans Street between Sports Arena Boulevard and Midway Drive (LOS F)

Table 4-3. Existing Conditions Queue Summary

#	Intersection	Movement	Storage Length/Link Distance (ft)	Peak Hour	95th Percentile Queue (ft)	Exceeds Storage Length?
1	West Mission Bay Drive & I-8 Westbound Off-Ramp	I-8 WB Off-Ramp	1800'	AM	276	No
				PM	2,835	**Yes**
2	Sports Arena Boulevard & Midway Drive & West Point Loma Boulevard	EBL	360'	AM	185	No
				PM	528	**Yes**
		WBL	150'	AM	<25	No
				PM	43	No
		NBL	230'	AM	80	No
				PM	102	No
3	Sports Arena Boulevard & Hancock Street	EBL	160'	AM	68	No
				PM	153	No
		WBL	100'	AM	<25	No
				PM	<25	No
4	Sports Arena Boulevard & Kemper Street	EBL	440'	AM	57	No
				PM	83	No
		WBL	175'	AM	90	No
				PM	145	No
		NBL	100'	AM	89	No
				PM	120	**Yes**
5	Sports Arena Boulevard & West Drive / Proposed Frontier Drive	EBL	330'	AM	30	No
				PM	56	No
		WBL	175'	AM	85	No
				PM	117	No
6	Sports Arena Boulevard & Target Driveway	EBL	150'	AM	29	No
				PM	46	No
		WBL	125'	AM	57	No
				PM	76	No
7	Sports Arena Boulevard & East Driveway	EBL	125'	AM	42	No
				PM	67	No
		WBL	125'	AM	110	No
				PM	210	**Yes**
		NBR	100'	AM	56	No
				PM	131	**Yes**
8	Midway Drive & Kemper Street	EBL	320'	AM	85	No
				PM	102	No
		EBR	150'	AM	52	No
				PM	66	No
		NBL	90'	AM	85	No
				PM	191	**Yes**
		SBL	100'	AM	46	No
				PM	87	No
		SBR	115'	AM	50	No
				PM	96	No
9	Midway Drive & East Drive	EBL	90'	AM	<25	No
				PM	72	No
		WBL	100'	AM	37	No
				PM	55	No
17	Camino Del Rio West & Hancock Street	NBL	100'	AM	65	No
				PM	153	**Yes**
		I-5 SB Off-Ramp	3500'	AM	486	No
				PM	459	No
		I-8 WB Off-Ramp	3700'	AM	732	No
				PM	619	No
		SBR	130'	AM	246	**Yes**
				PM	130	No

Table 4-3. Existing Conditions Queue Summary

#	Intersection	Movement	Storage Length/Link Distance (ft)	Peak Hour	95th Percentile Queue (ft)	Exceeds Storage Length?
18	Camino Del Rio West & Kurtz Street	EBR	200'	AM	39	No
				PM	320	**Yes**
		SBL	100'	AM	206	**Yes**
				PM	190	**Yes**
19	Camino Del Rio West & Sports Arena Boulevard	EBR	300'	AM	144	No
				PM	228	No
		WBL	-	AM	175	No
				PM	163	No
20	Rosecrans Street & Midway Drive	EBL	100'	AM	121	**Yes**
				PM	202	**Yes**
		EBR	240'	AM	128	No
				PM	203	No
		WBL	250'	AM	231	No
				PM	274	**Yes**
		WBR	180'	AM	162	No
				PM	315	**Yes**
		NBL	280'	AM	233	No
				PM	248	No
		SBL	320'	AM	225	No
				PM	219	No
23	Rosecrans Street & Kurtz Street	WBR	70'	AM	116	**Yes**
				PM	131	**Yes**
		SBL	100'	AM	50	No
				PM	63	No
24	Rosecrans Street & Hancock Street	NBL	120'	AM	55	No
				PM	117	No
25	Pacific Highway & Rosecrans Street	EBL	120'	AM	32	No
				PM	78	No
		EBR	100'	AM	47	No
				PM	102	**Yes**
		WBL	150'	AM	111	No
				PM	180	**Yes**
		NBL	150'	AM	96	No
				PM	171	**Yes**

Table 4-4. Existing Conditions Roadway Segment Analysis Summary

ID	Roadway Segment	Extents	Existing Conditions Volumes				
			Functional Classification[1]	Weekday Event-Day			
				LOS E Capacity[2]	ADT[3]	V/C Ratio[4]	LOS[5]
1	Sports Arena Boulevard	I-8 WB Off Ramp to I-8 EB On-Ramp	5 Lane Prime Arterial	50,000	13,193	0.264	A
2		I-8 EB On Ramp to W Point Loma Boulevard	5 Lane Major Arterial	45,000	27,964	0.621	C
3		W Point Loma Boulevard to Hancock Street	5 Lane Collector (with two-way left-turn Lane)	37,500	17,736	0.473	C
4		Hancock Street to Kemper Street	5 Lane Collector (with two-way left-turn Lane)	37,500	17,736	0.473	C
5		Kemper Street to Frontier Drive	5 Lane Major Arterial	45,000	17,736	0.394	B
6		Frontier Drive to East Drive	6 Lane Major Arterial	50,000	18,662	0.373	A
7		East Drive to Camino Del Rio West	6 Lane Major Arterial	50,000	23,191	0.464	B
8		Rosecrans Street to Pacific Highway	2 Lane Collector (without two-way left-turn lane)	8,000	1,391	0.174	A
9	Camino Del Rio West	North of Greenwood Street	6 Lane Prime Arterial	60,000	60,833	1.014	**F**
10		Greenwood Street to Hancock Street	6 Lane Prime Arterial	60,000	60,833	1.014	**F**
11		Hancock Street to Kurtz Street	6 Lane Prime Arterial	60,000	50,998	0.850	D
12	Rosecrans Street	Camino del Rio to Pacific Highway	4 Lane Collector (with two-way left-turn Lane)	30,000	9,822	0.327	A
13		Sports Arena Boulevard to Midway Drive	6 Lane Major Arterial	50,000	54,078	1.082	**F**
14	Midway Drive	Kemper Street to Rosecrans Street	4 Lane Collector (with two-way left-turn Lane)	30,000	24,332	0.811	D
15	Kurtz Street	Kemper Street to Frontier Drive	2 Lane Collector (one-way)	17,500	3,160	0.181	A
16	Kurtz Street	Frontier Drive to Sherman Street	2 Lane Collector (one-way)	17,500	3,160	0.181	A
17	Kurtz Street	Sherman Street to Camino del Rio West	2 Lane Collector (one-way)	17,500	5,031	0.287	A
18	Hancock Street	Sports Arena Boulevard to Channel Way	2 Lane Collector (without two-way left-turn lane)	8,000	3,452	0.432	B
19	Hancock Street	Channel Way to Kurtz St	2 Lane Collector (with two-way left-turn Lane)	15,000	3,348	0.223	A
20	Hancock Street	Kurtz Street to Greenwood Street	2 Lane Collector (one-way)	17,500	4,248	0.243	A
21	Hancock Street	Greenwood Street to Camino Del Rio West	2 Lane Collector (one-way)	17,500	4,248	0.243	A
Future Roadway Segments							
22	*Frontier Drive (Future Conditions Only)	Greenwood Street to Camino Del Rio West	-	-	-	-	-
23	*Kemper Street (Future Conditions Only)	Sports Arena Boulevard to Kurtz Street	-	-	-	-	-

Notes:

[1]Functional Classification based on the Midway Pacific Highway Community Plan.

[2]LOS E Capacity provided by City of San Diego staff.

[3]ADT - Average Daily Traffic.

[4]V/C Ratio - Volume-to-capacity ratio.

[5]LOS - Level of Service.

5 2050 MIDWAY PACIFIC HIGHWAY COMMUNITY PLAN BASELINE

This section summarizes the Horizon Year (2050) Baseline (CP) scenario per the Midway Pacific Highway Community Plan. This scenario establishes a baseline to compare against the Horizon Year (2050) Plus Full Project Buildout (CPA) scenario. Year 2050 was selected as it is the current horizon year of the SANDAG Series 14 ABM2+ model.

5.1 SIGNAL OPTIMIZATION

It is assumed that signal optimization will occur at all signalized intersections within the study area due to the increase in vehicle volumes and new travel patterns that will require signal optimization to properly serve each approach. Optimization would include:

- Optimized cycle lengths
- Optimized phase splits
- Optimized corridor offsets for coordinated corridors (Sports Arena Blvd, Rosecrans Street, Camino del Rio West)
- Optimized lead/lag left turn phasing

5.2 ROADWAY NETWORK CHANGES

The roadway network in the Horizon Year (2050) Baseline (CP) scenario is based on the planned street classifications in the Midway-Pacific Highway Community Plan (2018), included in **Appendix G**. **Figure 5-1** illustrates the Horizon Year (2050) Baseline (CP) scenario intersection geometries.

5.3 TRAFFIC VOLUMES

Intersection volumes were developed for the Horizon Year (2050) Baseline (CP) using 2023 roadway segment volumes and 2050 forecasted roadway segment volumes as described in Section 3.3 of this report. The SANDAG 2050 Baseline model used for forecasting volumes includes the land uses associated with the CP buildout, which does not include the continuation of the San Diego Sports Arena. It is important to note that the SANDAG model is not able to incorporate a few minor roadway segments (Greenwood Street extension, Kemper Street extension, and Frontier Drive) that are proposed in the CPU or that will be modified by the CPA (Greenwood Street). Thus, ADTs for these roadway segments were supplemented by 2035 daily roadway segment traffic volumes from the CP Preferred Plan scenario (Figure 6-2 of the Midway-Pacific Highway and Old Town Mobility Report).

Figure 5-2 illustrates the resulting Horizon Year (2050) Baseline (CP) scenario traffic volumes.

Figure 5-1. Horizon Year (2050) Baseline (CP) Scenario Intersection Geometries

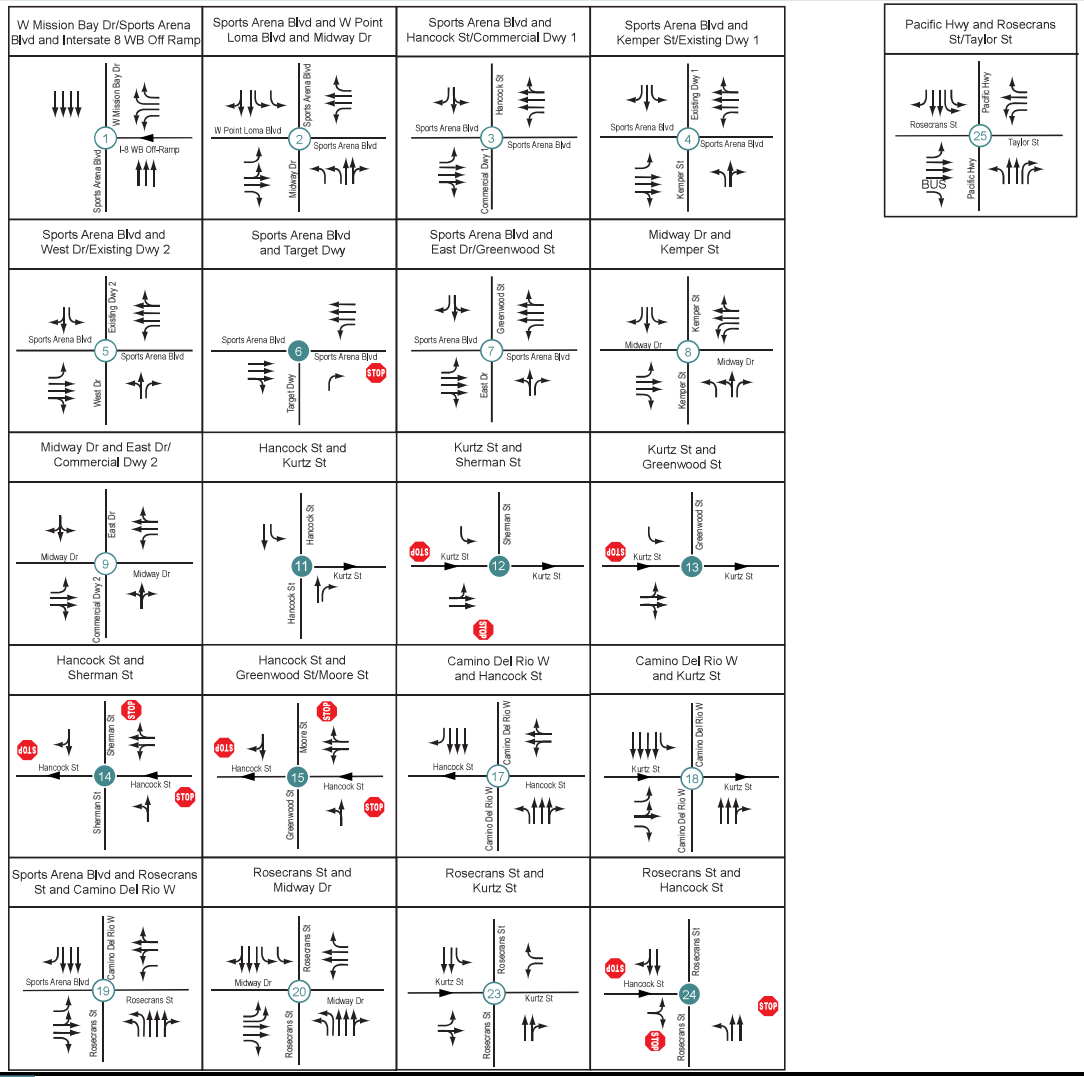


Figure 5-2a. Horizon Year (2050) Baseline (CP) Scenario Traffic Volumes

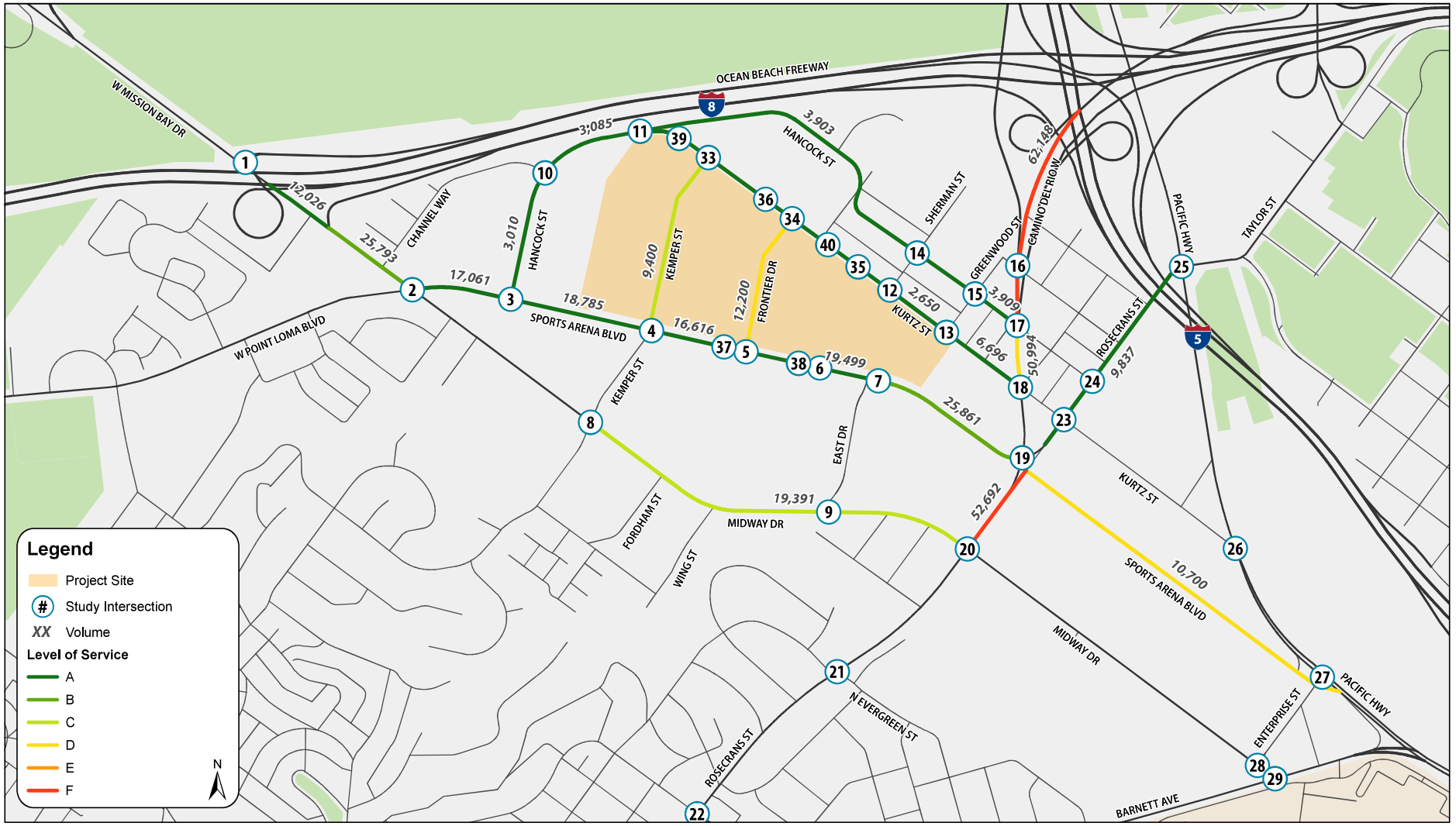
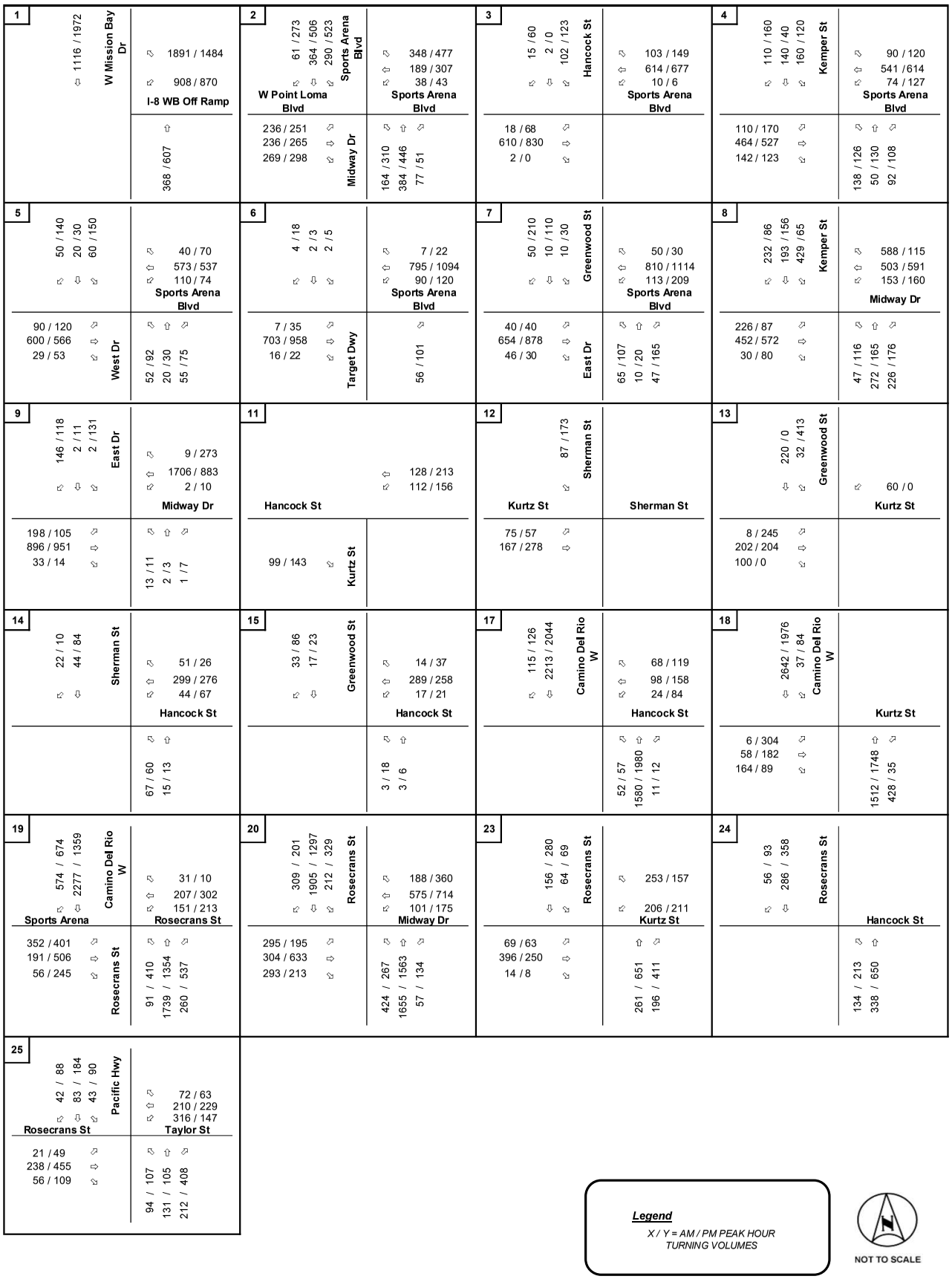


Figure 5-2b. Horizon Year (2050) Baseline (CP) Scenario Traffic Volumes



5.4 INTERSECTION ANALYSIS

Table 5-1 displays the LOS analysis results for the study intersections under the Horizon Year (2050) Baseline (CP) scenario.

Under the Horizon Year (2050) Baseline (CP) scenario, all study intersections are anticipated to operate at LOS D or better during the commuter AM and PM peak hours except the following:

- Intersection #2 – Sports Arena Blvd / Midway Dr / W Point Loma Blvd (PM: LOS E)
- Intersection #4 – Sports Arena Blvd / Kemper St (PM: LOS E)
- Intersection #13 – Greenwood St / Kurtz St (PM: LOS F)
- Intersection #19 – Rosecrans St / Sports Arena Blvd / Camino Del Rio W (PM: LOS E)
- Intersection #20 – Rosecrans St / Midway Dr (PM: LOS E)

Appendix H contains the intersection LOS calculation worksheets for the CP scenario.

5.5 QUEUEING ANALYSIS

Table 5-2 displays the 95th percentile queues for the study intersections under the Horizon Year (2050) Baseline (CP) scenario. The 95th percentile queue lengths reported represent an average of five SimTraffic runs. **Appendix I** contains the 95th percentile queue worksheets from SimTraffic for this scenario. Under the CP scenario, queues are anticipated to exceed the existing available storage length at:

- 10 intersections in the Commuter AM peak hour
- 6 intersections in the Commuter PM peak hour

5.6 ROADWAY SEGMENT ANALYSIS

The Horizon Year (2050) Baseline (CP) scenario roadway segment analysis was performed based on planned roadway geometries from the Midway Pacific Highway Community Plan Base for 2035, and expected roadway segment counts for year 2050 on a typical weekday. **Table 5-3** summarizes the roadway volumes LOS analysis at the study segments under Horizon Year (2050) Baseline (CP) scenario.

Under the Horizon Year (2050) Baseline (CP) scenario, all roadway segments are anticipated to operate at LOS D or better on a typical weekday except the following:

- Camino del Rio West north of Greenwood Street (LOS F)
- Camino del Rio West between Greenwood Street and Hancock Street (LOS F)
- Rosecrans Street between Sports Arena Boulevard and Midway Drive (LOS F)

Table 5-1. Horizon Year (2050) Baseline (CP) Scenario Intersection LOS Summary

#	INTERSECTION	TRAFFIC CONTROL	HCM EDITION	PEAK HOUR	Horizon Year (2050) Midway-Pacific Highway Communuity Plan Baseline (CP) Scenario	
					DELAY (a)	LOS (b)
1	Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp	Signal	**HCM 2000**	Weekday AM	17.6	B
				Weekday Commuter PM	24.4	C
2	Midway Dr & W Point Loma Blvd & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	43.0	D
				Weekday Commuter PM	80.8	**F**
3	Commercial Dwy 1/Hancock St & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	26.1	C
				Weekday Commuter PM	20.5	C
4	4: Kemper St & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	50.8	D
				Weekday Commuter PM	75.0	**E**
5	5: West Dr/Frontier Dr & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	30.7	C
				Weekday Commuter PM	39.0	D
6	6: Target Dwy & Sports Arena Blvd	One-Way Stop	HCM 6th	Weekday AM	13.3	B
				Worst Mvmt	*WBL*	
				Weekday Commuter PM	17.6	C
				Worst Mvmt	*WBL*	
7	7: East Dr/Greenwood St & Sports Arena Blvd	Signal	HCM 6th	Weekday AM	14.1	B
				Weekday Commuter PM	24.5	C
8	Kemper St & Midway Dr	Signal	HCM 6th	Weekday AM	24.2	C
				Weekday Commuter PM	46.1	D
9	Commercial Dwy 2/East Dr & Midway Dr	Signal	HCM 6th	Weekday AM	14.2	B
				Weekday Commuter PM	31.1	C
11	Kurtz St & Hancock St	Signal	HCM 6th	Weekday AM	0.3	A
				Weekday Commuter PM	0.5	A
		Roundabout	SIDRA	Weekday AM	3.7	A
				Weekday Commuter PM	4.0	A
12	Sherman St & Kurtz St	All-Way Stop	HCM 6th	Weekday AM	8.5	A
				Weekday Commuter PM	9.3	A
13	Greenwood St & Kurtz St	All-Way Stop	HCM 6th	Weekday AM	10.4	B
				Weekday Commuter PM	108.7	**F**
14	Sherman St & Hancock St	All-Way Stop	HCM 6th	Weekday AM	8.8	A
				Weekday Commuter PM	9.5	A
15	Greenwood St & Hancock St	All-Way Stop	HCM 6th	Weekday AM	8.7	A
				Weekday Commuter PM	8.6	A
17	Camino Del Rio W & Hancock St	Signal	HCM 6th	Weekday AM	22.5	C
				Weekday Commuter PM	14.0	B
18	Camino Del Rio W & Kurtz St	Signal	HCM 6th	Weekday AM	8.1	A
				Weekday Commuter PM	17.2	B
19	Rosecrans St & Sports Arena Blvd & Camino Del Rio W	Signal	**HCM 2000**	Weekday AM	28.8	C
				Weekday Commuter PM	78.4	**E**
20	Rosecrans St & Midway Dr	Signal	HCM 6th	Weekday AM	38.6	D
				Weekday Commuter PM	62.6	**E**
23	Rosecrans St & Kurtz St	Signal	**HCM 2000**	Weekday AM	29.0	C
				Weekday Commuter PM	54.9	D
24	Rosecrans St & Hancock St	One-Way Stop	HCM 6th	Weekday AM	9.6	A
				Worst Mvmt	*SE*	
				Weekday Commuter PM	10.0	B
				Worst Mvmt	*SE*	
25	Pacific Hwy & Rosecrans St/Taylor St	Signal	HCM 6th	Weekday AM	26.0	C
				Weekday Commuter PM	29.1	C

Notes:

Bold values indicate intersections operating at LOS E or F.

ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *Highway Capacity Manual 6th Edition* and *2000 Edition* and performed using Synchro 11.0

Table 5-2. Horizon Year (2050) Baseline (CP) Scenario Queue Summary

#	Intersection	Movement	Storage Length/Link Distance (ft)	Peak Hour	95th Percentile Queue (ft)	Exceeds Storage Length?
1	West Mission Bay Drive & I-8 Westbound Off-Ramp	I-8 WB Off-Ramp	1800	AM	694	No
				PM	318	No
2	Sports Arena Boulevard & Midway Drive & West Point Loma Boulevard	EBL	360	AM	209	No
				PM	189	No
		WBL	150	AM	38	No
				PM	<25	No
		NBL	230	AM	184	No
				PM	93	No
3	Sports Arena Boulevard & Hancock Street	EBL	160	AM	146	No
				PM	108	No
		WBL	100	AM	<25	No
				PM	26	No
4	Sports Arena Boulevard & Kemper Street	EBL	440	AM	439	No
				PM	144	No
		WBL	175	AM	139	No
				PM	149	No
		NBL	100	AM	124	**Yes**
				PM	118	**Yes**
5	Sports Arena Boulevard & West Drive / Proposed Frontier Drive	EBL	330	AM	158	No
				PM	126	No
		WBL	175	AM	104	No
				PM	104	No
6	Sports Arena Boulevard & Target Driveway	EBL	-	AM	<25	No
				PM	<25	No
		WBL	125	AM	44	No
				PM	56	No
7	Sports Arena Boulevard & East Driveway	EBL	125	AM	78	No
				PM	58	No
		WBL	125	AM	231	**Yes**
				PM	142	**Yes**
		NBR	100	AM	99	No
				PM	61	No
8	Midway Drive & Kemper Street	EBL	320	AM	440	**Yes**
				PM	104	No
		EBR	150	AM	138	No
				PM	56	No
		NBL	90	AM	204	**Yes**
				PM	126	**Yes**
		SBL	100	AM	153	**Yes**
				PM	49	No
		SBR	115	AM	149	**Yes**
				PM	55	No
9	Midway Drive & East Drive	EBL	90	AM	144	**Yes**
				PM	61	No
		WBL	100	AM	<25	No
				PM	<25	No
17	Camino Del Rio West & Hancock Street	NBL	100	AM	40	No
				PM	55	No
		I-5 SB Off-Ramp	3500	AM	56	No
				PM	76	No
		I-8 WB Off-Ramp	3700	AM	56	No
				PM	76	No
		SBR	130	AM	56	No
				PM	76	No

Table 5-2. Horizon Year (2050) Baseline (CP) Scenario Queue Summary

#	Intersection	Movement	Storage Length/Link Distance (ft)	Peak Hour	95th Percentile Queue (ft)	Exceeds Storage Length?
18	Camino Del Rio West & Kurtz Street	EBR	200	AM	324	**Yes**
				PM	72	No
		SBL	100	AM	221	**Yes**
				PM	195	**Yes**
19	Camino Del Rio West & Sports Arena Boulevard	EBR	300	AM	464	**Yes**
				PM	229	No
		WBL	180	AM	185	**Yes**
				PM	154	No
20	Rosecrans Street & Midway Drive	EBL	100	AM	191	**Yes**
				PM	129	**Yes**
		EBR	240	AM	322	**Yes**
				PM	114	No
		WBL	250	AM	250	No
				PM	305	**Yes**
		WBR	180	AM	282	**Yes**
				PM	161	No
		NBL	280	AM	509	**Yes**
				PM	310	**Yes**
		SBL	320	AM	254	No
				PM	210	No
23	Rosecrans Street & Kurtz Street	WBR	70	AM	191	**Yes**
				PM	163	**Yes**
		SBL	100	AM	117	**Yes**
				PM	74	No
24	Rosecrans Street & Hancock Street	NBL	120	AM	149	**Yes**
				PM	69	No
25	Pacific Highway & Rosecrans Street	EBL	120	AM	54	No
				PM	29	No
		EBR	100	AM	106	**Yes**
				PM	50	No
		WBL	150	AM	133	No
				PM	134	No
		NBL	150	AM	250	**Yes**
				PM	109	No

Table 5-3. Horizon Year (2050) Baseline (CP) Scenario Roadway Segment Analysis Summary

ID	Roadway Segment	Extents	Horizon Year (2050) Baseline (CP)				
			Ultimate Classification[1]	LOS E Capacity[2]	Weekday		
					ADT[3]	V/C Ratio[4]	LOS[5]
1	Sports Arena Boulevard	N of I-8 EB On Ramp	6 Lane Prime Arterial	60,000	12,026	0.200	A
2		I-8 EB On Ramp to W Point Loma Boulevard	6 Lane Major Arterial	50,000	25,793	0.516	B
3		W Point Loma Boulevard to Hancock Street	6 Lane Major Arterial	50,000	17,061	0.341	A
4		Hancock Street to Kemper Street	6 Lane Major Arterial	50,000	18,785	0.376	A
5		Kemper Street to Frontier Drive	6 Lane Major Arterial	50,000	16,616	0.332	A
6		Frontier Drive to East Drive	6 Lane Major Arterial	50,000	19,499	0.390	A
7		East Drive to Camino Del Rio West	6 Lane Major Arterial	50,000	25,861	0.517	B
8		Rosecrans Street to Pacific Highway	2 Lane Collector (with two-way left-turn Lane)	15,000	10,700	0.713	D
9	Camino Del Rio West	North of Greenwood Street	6 Lane Prime Arterial	60,000	62,148	1.036	**F**
10		Greenwood Street to Hancock Street	6 Lane Prime Arterial	60,000	62,148	1.036	**F**
11		Hancock Street to Kurtz Street	6 Lane Prime Arterial	60,000	50,994	0.850	D
12	Rosecrans Street	Camino del Rio to Pacific Highway	4 Lane Major Arterial	40,000	9,837	0.246	A
13		Sports Arena Boulevard to Midway Drive	6 Lane Major Arterial	50,000	52,692	1.054	**F**
14	Midway Drive	Kemper Street to Rosecrans Street	4 Lane Collector (with two-way left-turn Lane)	30,000	19,391	0.646	C
15	Kurtz Street	Hancock Street to Frontier Drive	2 Lane Collector (one-way)	17,500	2,650	0.151	A
16		Frontier Drive to Sherman Street	2 Lane Collector (one-way)	17,500	2,650	0.151	A
17		Sherman Street to Camino del Rio West	2 Lane Collector (one-way)	17,500	6,696	0.383	A
18	Hancock Street	Sports Arena Boulevard to Channel Way	4 Lane Collector (without two-way left-turn Lane)	15,000	3,010	0.201	A
19		Channel Way to Kurtz St	4 Lane Collector (without two-way left-turn Lane)	15,000	3,085	0.206	A
20		Kurtz Street to Greenwood Street	3 Lane Major Arterial (one-way)	27,500	3,903	0.142	A
21		Greenwood Street to Camino Del Rio West	3 Lane Major Arterial (one-way)	27,500	3,909	0.142	A
22	Frontier Drive (Future Conditions Only)	Sports Arena Boulevard to Kurtz Street	2 Lane Collector (with two-way left-turn Lane)	15,000	12,200	0.813	D
23	Kemper Street (Future Conditions Only)	Sports Arena Boulevard to Kurtz Street	2 Lane Collector (with two-way left-turn Lane)	15,000	9,400	0.627	C

Notes:

[1]Ultimate Classification based on the Midway Pacific Highway Community Plan - Preferred Plan.

[2]LOS E Capacity provided by City of San Diego staff.

[3]ADT - Average Daily Traffic.

[4]V/C Ratio - Volume-to-capacity ratio.

[5]LOS - Level of Service.

6 HORIZON YEAR (2050) PLUS FULL PROJECT BUILDOUT

This section summarizes the Horizon Year (2050) Plus Full Project Buildout (CPA) scenario (event and non-event day), which is compared against the Horizon Year (2050) Baseline (CP) scenario.

6.1 ROADWAY NETWORK CHANGES

The roadway network in the CPA scenario represents the Horizon Year (2050) Baseline (CP) scenario roadway geometry with the roadway segment and intersection modifications proposed by the Midway Rising project described below:

Roadway Segments:

- **Kurtz Street** (between Hancock Street and Sherman Street): convert from a two-lane one-way (southeast-bound) collector to a two-way collector with one lane in each direction.
- **Rosecrans Street** (between Midway Drive and Pacific Highway): dedicate one lane in each direction for Business Access and Transit ("BAT") lane. The project does not trigger improvements, and thus construction of the median to implement CPA classification change to a major arterial between Camino Del Rio/Sports Arena Boulevard and Pacific Highway is not considered. The segment between Camino Del Rio/Sports Arena Boulevard and Pacific Highway is instead analyzed as a collector with two BAT lanes.
- **Sports Arena Boulevard** (between Midway Drive / W Point Loma Boulevard and Rosecrans St): dedicate one lane in each direction for BAT lane.
- **Greenwood Street** (between Kurtz Street and Sports Arena Boulevard): Not proposed to be constructed as planned in the Community Plan. Note that bicycles and pedestrians will still be able to travel between Kurtz Street and Sports Arena Boulevard on a north-south running Class I path to be constructed in the general location of the planned Sherman Street extension.

Intersections:

- **Intersection #2 – Midway Drive and Sports Arena Boulevard / West Point Loma Boulevard**: In addition to the improvements identified in *Figure 3-14* of the CP, the Midway Rising project proposes removal of the small channelized portions to accommodate an additional left-turn lane on the southeastbound and northwestbound approaches of Sports Arena Boulevard and Midway Drive, as well as removal of 174 feet of the existing median on W. Point Loma Boulevard to accommodate an additional through lane on the eastbound approach.
- **Intersection #4 – Kemper Street and Sports Arena Boulevard**: *Figure 3-8* of the CP proposes an exclusive left turn and right turn lane on the southbound approach of Kemper Street at Sports Arena Boulevard. The Midway Rising project proposes only a through lane and an exclusive right turn lane.
- **Intersection #18 – Kurtz Street and Camino del Rio West intersection**: Elimination of eastbound exclusive right turn lane to accommodate a proposed multi-use path along Kurtz Street.

- **Intersection #11 – Hancock Street and Kurtz Street intersection**: Construct a single-lane roundabout at this intersection instead of a traffic signal.
- **Intersection #19 – Camino del Rio West / Rosecrans Street and Sports Arena Boulevard**: In addition to the improvements identified in the CP, the Midway Rising project proposes the following modifications to the southeastbound approach as compared to the CP design concept:
    - Convert through lane to shared through-left turn lane
    - Replace second through lane to a bus-only through movement pocket
    - Separate shared through-right lane to an exclusive through lane and right turn lane by reconfiguring turn lane

Figure 6-1 illustrates the CPA scenario intersection geometries.

6.2 TRAFFIC VOLUMES

Intersection volumes were developed for the Horizon Year (2050) Plus Full Project Buildout (CPA) using 2023 roadway segment volumes and 2050 forecasted roadway segment volumes as described in Section 3.3 of this report. The SANDAG 2050 With Project model used for forecasting volumes includes the land uses associated with the Midway Rising project. It is important to note that the SANDAG model is not able to incorporate the internal roadway segments (Greenwood Street extension, Kemper Street extension, and Frontier Drive) that are proposed in the CPU and will be modified by the CPA. Thus, ADTs for these roadway segments were supplemented by Opening Year (2035) Plus Project Phase 2 Buildout daily roadway segment traffic volumes. **Figure 6-2 and 6-3** illustrate the resulting Horizon Year (2050) Plus Full Project Buildout (CPA) scenario traffic volumes for an event day and a non-event day, respectively.

6.3 INTERSECTION LEVEL OF SERVICE ANALYSIS

Table 6-1 displays the LOS analysis results for the study intersections under Horizon Year (2050) Plus Full Project Buildout (CPA) scenario, event day and non-event day. The results for the Horizon Year (2050) Baseline (CP) scenario are also included in the table to identify project transportation effects. Under the Horizon Year (2050) Plus Full Project Buildout (CPA) scenario, all study intersections are expected to operate at LOS D or better except the following:

Event day:

- Intersection #2 – Midway Dr / W Point Loma Blvd / Sports Arena Blvd (AM: LOS E; PM: LOS E)
- Intersection #19 – Rosecrans St / Sports Arena Blvd / Camino Del Rio W (PM: LOS E)

Non-event day:

- Intersection #2 – Midway Dr / W Point Loma Blvd / Sports Arena Blvd (AM: LOS E; PM: LOS E)
- Intersection #19 – Rosecrans St / Sports Arena Blvd / Camino Del Rio W (PM: LOS F)

Appendix J contains the intersection LOS calculation worksheets for the Horizon Year (2050) Plus Full Project Buildout (CPA) Event Day scenario. **Appendix K** contains the intersection LOS calculation worksheets for the Horizon Year (2050) Plus Full Project Buildout (CPA) Non-event Day scenario.

The Midway Rising project causes operational effects at both of the intersections listed above (Intersection #2 and #19). Project effects and potential improvements are discussed further in Section 6.6.

Figure 6-1. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Intersection Geometries

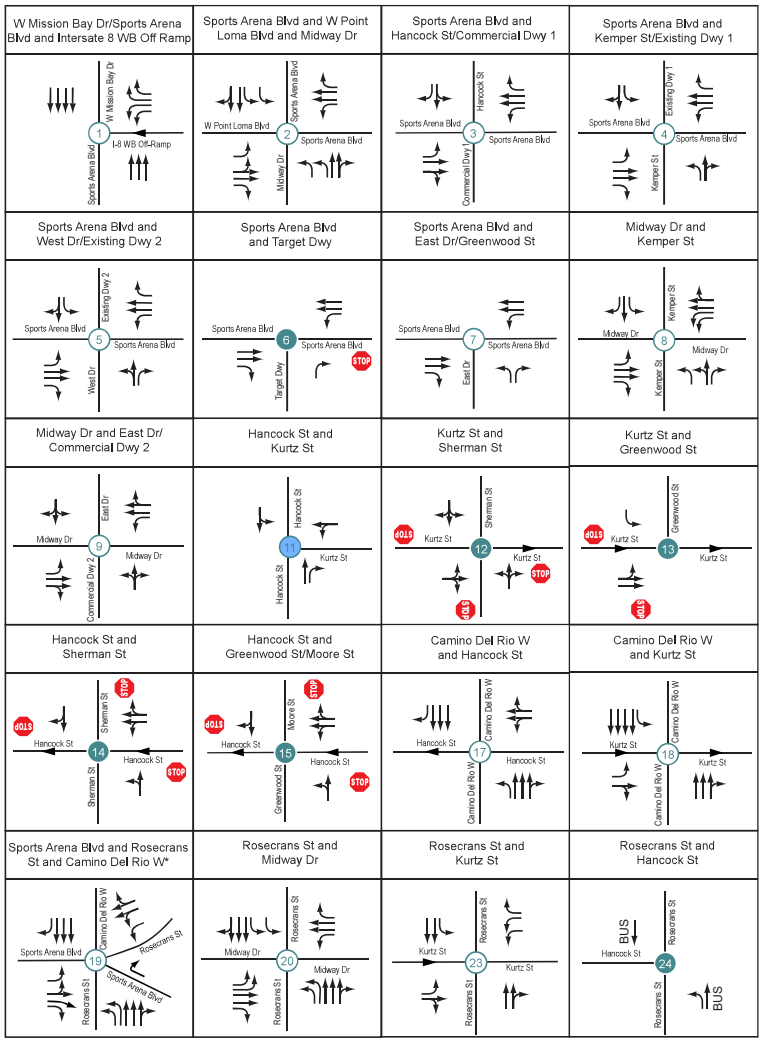


Figure 6-2a. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Traffic Volumes - Event Day

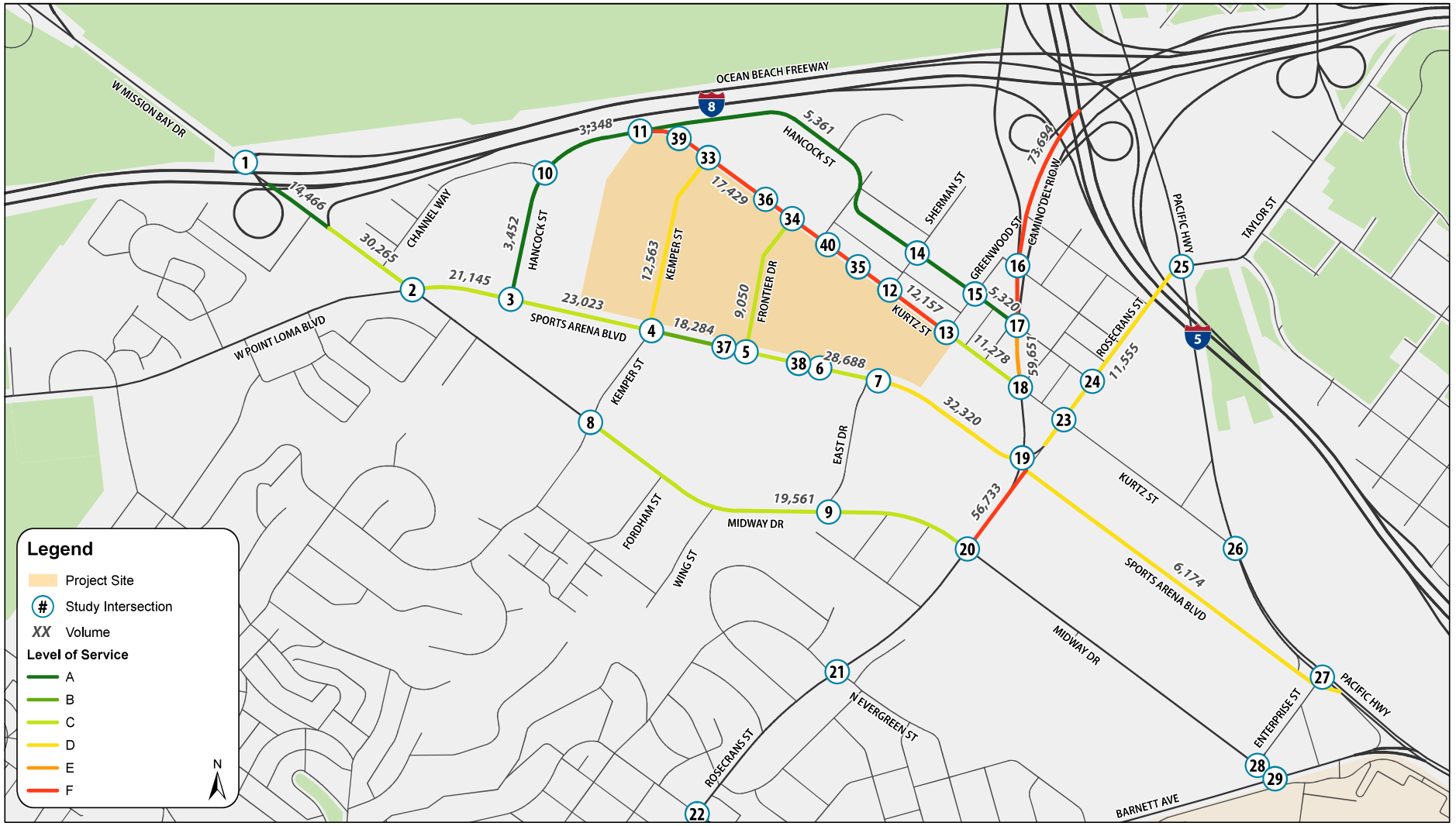


Figure 6-2b. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Traffic Volumes - Event Day

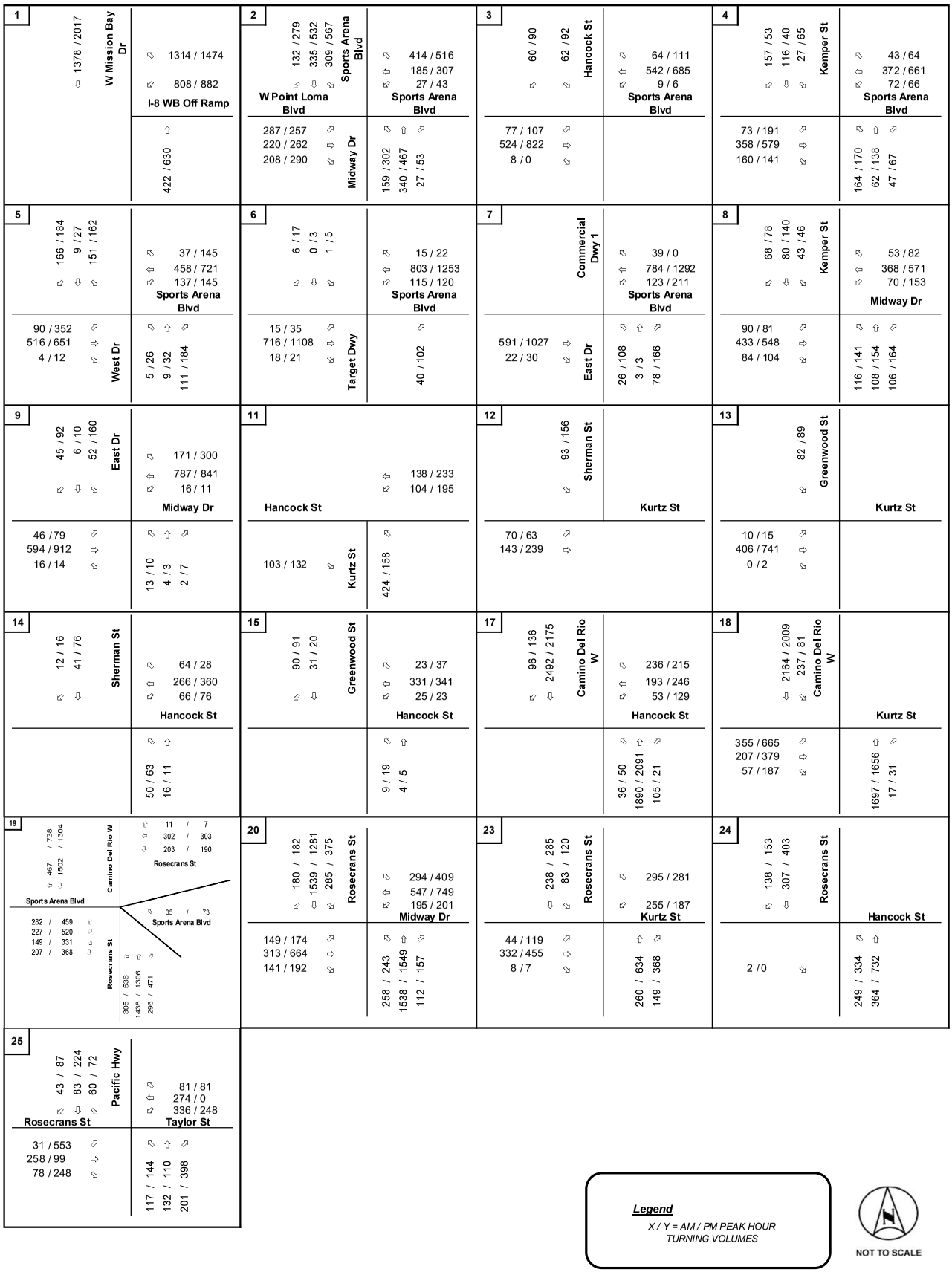


Figure 6-3a. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Traffic Volumes - Non-Event Day

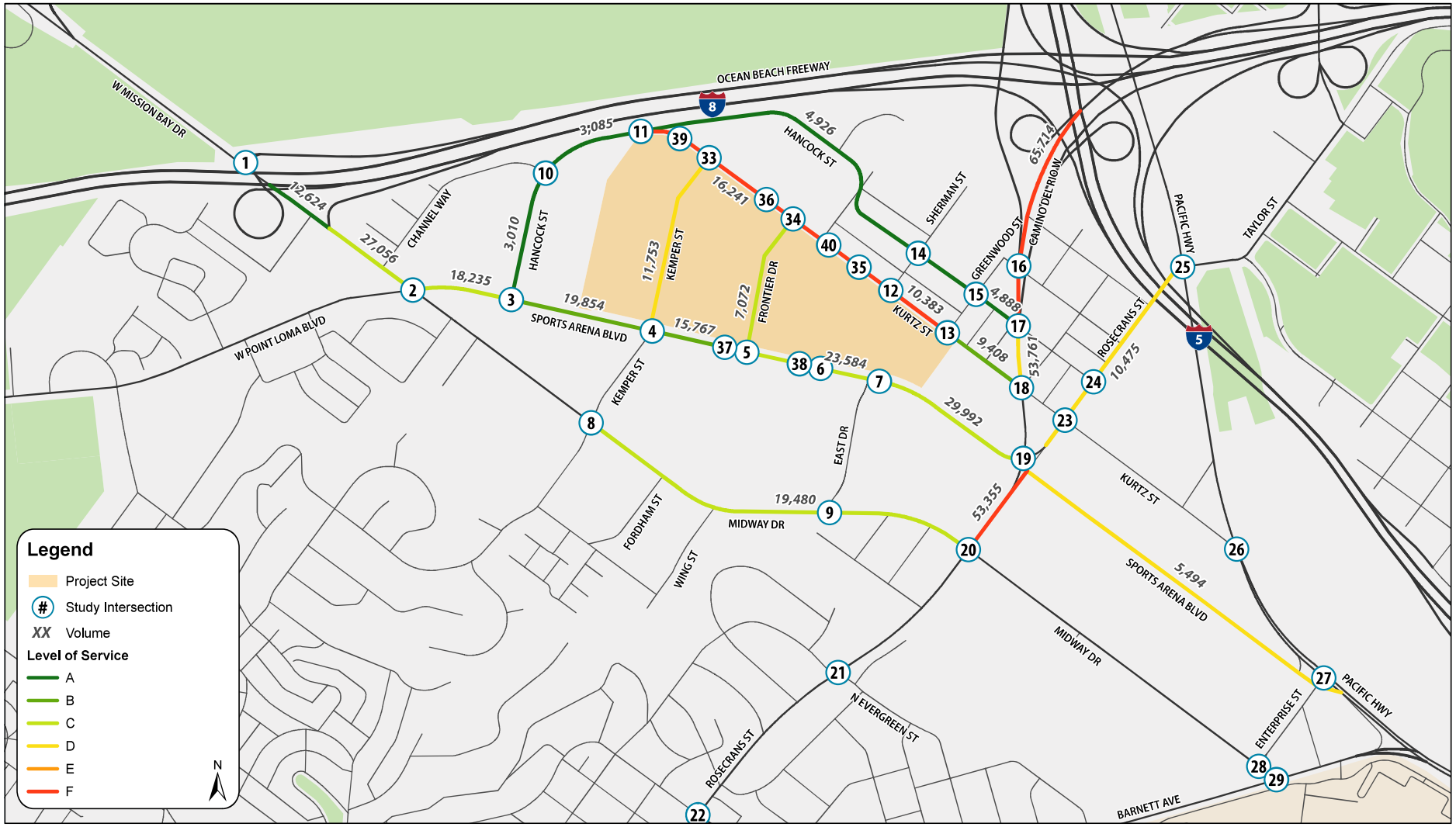


Figure 6-3b. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Traffic Volumes - Non-Event Day

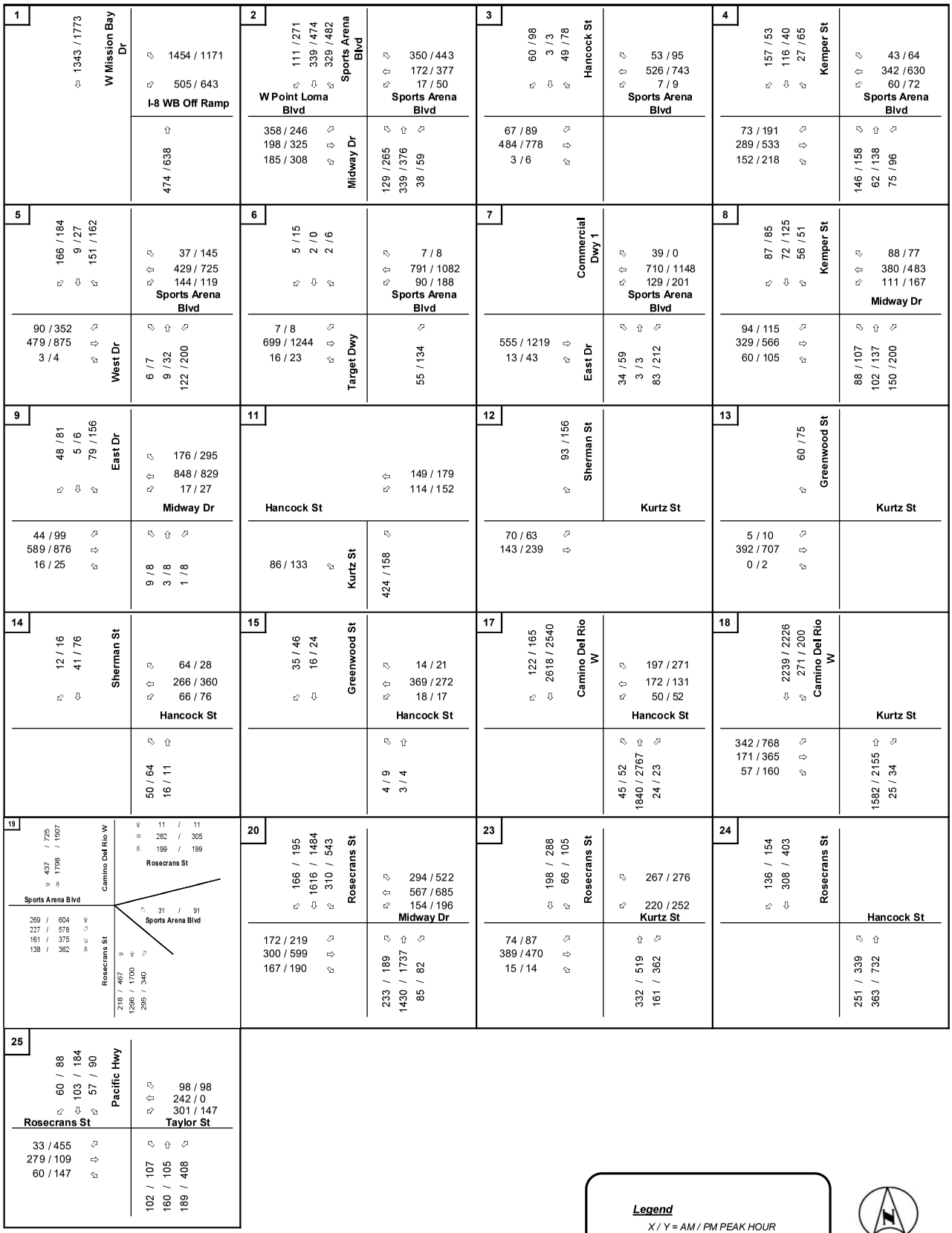


Table 6-1. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Intersection LOS Summary

#	INTERSECTION	HCM EDITION	PEAK HOUR	Horizon Year (2050) Midway-Pacific Highway Community Plan Baseline (CP) Scenario			Horizon Year (2050) Plus Full Project Buildout (CPA) Traffic Control	Horizon Year (2050) Plus Full Project Buildout (CPA) Event Day Scenario			Horizon Year (2050) Plus Full Project Buildout (CPA) Non-Event Day Scenario		
				TRAFFIC CONTROL	DELAY (a)	LOS (b)	TRAFFIC CONTROL	DELAY (a)	LOS (b)	Project Effect (Y/N?)	DELAY (a)	LOS (b)	Project Effect (Y/N?)
1	Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp	**HCM 2000**	Weekday AM	Signal	17.6	B	Signal	17.3	B	N	18.1	B	N
			Weekday Commuter PM		24.4	C		23.9	C	N	19.7	B	N
2	Midway Dr & W Point Loma Blvd & Sports Arena Blvd	HCM 6th	Weekday AM	Signal	43.0	D	Signal	61.2	**E**	Y	57.2	**E**	Y
			Weekday Commuter PM		80.8	**F**		64.5	**E**	N	59.7	**E**	N
3	Commercial Dwy 1/Hancock St & Sports Arena Blvd	HCM 6th	Weekday AM	Signal	26.1	C	Signal	31.8	C	N	32.0	C	N
			Weekday Commuter PM		20.5	C		25.7	C	N	15.7	B	N
4	Kemper St & Sports Arena Blvd	HCM 6th	Weekday AM	Signal	50.8	D	Signal	22.4	C	N	22.2	C	N
			Weekday Commuter PM		75.0	**E**		32.8	C	N	28.3	C	N
5	West Dr/Frontier Dr & Sports Arena Blvd	HCM 6th	Weekday AM	Signal	30.7	C	Signal	31.8	C	N	33.2	C	N
			Weekday Commuter PM		39.0	D		53.5	D	N	53.2	D	N
6	Target Dwy & Sports Arena Blvd	HCM 6th	Weekday AM	Two-Way Stop	13.3	B	One-Way Stop	11.5	B	N	11.6	B	N
			Worst Mvmt		*WBL*			*NBR*		N	*NBR*		N
			Weekday Commuter PM		17.6	C		16.8	C	N	20.8	C	N
			Worst Mvmt		*WBL*			*NBR*		N	*NBR*		N
7	East Dr/Greenwood St & Sports Arena Blvd	HCM 6th	Weekday AM	Signal	14.1	B	Signal	7.2	A	N	7.7	A	N
			Weekday Commuter PM		24.5	C		15.9	B	N	16.2	B	N
8	Kemper St & Midway Dr	HCM 6th	Weekday AM	Signal	24.2	C	Signal	30.5	C	N	35.3	D	N
			Weekday Commuter PM		46.1	D		42.8	D	N	40.6	D	N
9	Commercial Dwy 2/East Dr & Midway Dr	HCM 6th	Weekday AM	Signal	14.2	B	Signal	7.5	A	N	8.3	A	N
			Weekday Commuter PM		31.1	C		21.9	C	N	22.7	C	N
11	Kurtz St & Hancock St	HCM 6th	Weekday AM	Signal	0.3	A	Signal	11.5	B	N	11.6	A	N
			Weekday Commuter PM		0.5	A		10.4	B	N	9.8	A	N
			Weekday AM	Roundabout	3.7	A	Roundabout	5.4	A	N	5.6	A	N
			Weekday Commuter PM		4.0	A		5.9	A	N	5.0	A	N
12	Sherman St & Kurtz St	HCM 6th	Weekday AM	All-Way Stop	8.5	A	All-Way Stop	8.7	A	N	8.7	A	N
			Weekday Commuter PM		9.3	A		10.1	B	N	10.1	B	N
13	Greenwood St & Kurtz St	HCM 6th	Weekday AM	All-Way Stop	10.4	B	All-Way Stop	9.7	A	N	9.5	A	N
			Weekday Commuter PM		108.7	**F**		15.3	C	N	14.2	B	N
14	Sherman St & Hancock St	HCM 6th	Weekday AM	All-Way Stop	8.8	A	All-Way Stop	9.3	A	N	9.3	A	N
			Weekday Commuter PM		9.5	A		10.2	B	N	10.2	B	N
15	Greenwood St & Hancock St	HCM 6th	Weekday AM	All-Way Stop	8.7	A	All-Way Stop	9.2	A	N	9.0	A	N
			Weekday Commuter PM		8.6	A		9.3	A	N	8.5	A	N
17	Camino Del Rio W & Hancock St	HCM 6th	Weekday AM	Signal	22.5	C	Signal	50.7	D	N	33.1	C	N
			Weekday Commuter PM		14.0	B		23.4	C	N	33.2	C	N
18	Camino Del Rio W & Kurtz St	HCM 6th	Weekday AM	Signal	8.1	A	Signal	21.5	C	N	20.8	C	N
			Weekday Commuter PM		17.2	B		37.2	D	N	46.4	D	N
19	Rosecrans St & Sports Arena Blvd & Camino Del Rio W	**HCM 2000**	Weekday AM	Signal	28.8	C	Signal	42.0	D	N	44.4	D	N
			Weekday Commuter PM		78.4	**E**		73.2	**E**	N	96.9	**F**	Y
20	Rosecrans St & Midway Dr	HCM 6th	Weekday AM	Signal	38.6	D	Signal	48.2	D	N	44.9	D	N
			Weekday Commuter PM		62.6	**E**		54.6	D	N	53.9	D	N
23	Rosecrans St & Kurtz St	**HCM 2000**	Weekday AM	Signal	29.0	C	Signal	36.6	D	N	39.0	D	N
			Weekday Commuter PM		54.9	D		53.4	D	N	52.6	D	N
24	Rosecrans St & Hancock St	HCM 6th	Weekday AM	One-Way Stop	9.6	A	One-Way Stop	9.6	A	N	9.6	A	N
			Worst Mvmt		*EBR*			*NBL*			*NBL*		
			Weekday Commuter PM		10.0	B		11.3	B	N	11.4	B	N
			Worst Mvmt		*EBR*			*NBL*			*NBL*		
25	Pacific Hwy & Rosecrans St/Taylor St	HCM 6th	Weekday AM	Signal	26.0	C	Signal	45.8	D	N	41.4	D	N
			Weekday Commuter PM		29.1	C		39.4	D	N	35.4	D	N

Notes:
Bold values indicate intersections operating at LOS E or F.
ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *Highway Capacity Manual 6th Edition* and 2000 Edition. LOS calculations are performed using Synchro 11.0 and SIDRA 9.1.

INTERSECTION LOS COMPARISON FOR PROPOSED ROUNDABOUT

The Midway Rising project proposes to provide a single-lane roundabout at the intersection of Hancock Street / Kurtz Street rather than a traffic signal, which was modeled in the Midway-Pacific Highway Community Plan. The roundabout is intended to improve operational flow for the project as well as the rest of the community as redevelopment continues to occur to the northeast of Kurtz Street.

Table 6-2 summarizes a comparison between the level of service observed for the roundabout proposed under the Midway Rising project as compared to the signal proposed under the Midway Pacific-Highway Community Plan. **Table 6-2** shows that both proposed controls would be expected to operate at LOS D or better, but the roundabout may operate with a lower average delay than the signal control.

Table 6-2. Intersection LOS Analysis Comparison for Proposed Roundabout at Hancock St / Kurtz Street

Peak Hour	Intersection Control	Analysis Method	Horizon Year (2050) Baseline (CP)		Horizon Year (2050) Plus Full Project Buildout (CPA) – Event Day		Horizon Year (2050) Plus Full Project Buildout (CPA) - Non-Event Day	
			Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
AM	Roundabout	SIDRA (HCM 6th)	3.7	A	5.4	A	5.6	A
	Signalized	Synchro (HCM 6th)	0.3	A	11.5	B	11.6	B
PM	Roundabout	SIDRA (HCM 6th)	4.0	A	5.9	A	5.0	A
	Signalized	Synchro (HCM 6th)	0.5	A	10.4	**B**	9.8	A

6.4 QUEUEING ANALYSIS

Table 6-3 and **Table 6-4** display the 95th percentile queues under Horizon Year (2050) Plus Full Project Buildout (CPA) scenario for an event day and a non-event day, respectively. The 95th percentile queue lengths reported represent an average of five SimTraffic runs. **Appendix L** and **Appendix M** contain the 95th percentile queue worksheets for the Horizon Year (2050) Plus Full Project Buildout (CPA) Event Day scenario and the Horizon Year (2050) Plus Full Project Buildout (CPA) Non-Event Day scenario, respectively. Under the two Horizon Year (2050) Plus Full Project Buildout (CPA) scenarios, queues are expected to exceed the existing available storage length at:

Event Day:

- 5 intersections in the Commuter AM peak hour
- 12 intersections in the Commuter PM peak hour

Non-event Day:

- 5 intersections in the Commuter AM peak hour
- 11 intersections in the Commuter PM peak hour

Table 6-3. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Queue Summary - Event Day

#	Intersection	Movement	Storage Length/Link Distance (ft)	Peak Hour	95th Percentile Queue (ft)	Exceeds Storage Length?
1	West Mission Bay Drive & I-8 Westbound Off-Ramp	I-8 WB Off-Ramp	1800	AM	374	No
				PM	426	No
2	Sports Arena Boulevard & Midway Drive & West Point Loma Boulevard	EBL	360	AM	136	No
				PM	207	No
		WBL	150	AM	25	No
				PM	99	No
		NBL	230	AM	186	No
				PM	362	**Yes**
3	Sports Arena Boulevard & Hancock Street	EBL	350	AM	80	No
				PM	150	No
		WBL	100	AM	<25	No
				PM	<25	No
4	Sports Arena Boulevard & Kemper Street	EBL	440	AM	105	No
				PM	632	**Yes**
		WBL	175	AM	102	No
				PM	113	No
		NBL	100	AM	162	**Yes**
				PM	144	**Yes**
5	Sports Arena Boulevard & West Drive / Proposed Frontier Drive	EBL	330	AM	116	No
				PM	183	No
		WBL	175	AM	145	No
				PM	146	No
6	Sports Arena Boulevard & Target Driveway	EBL	-	AM	<25	No
				PM	<25	No
		WBL	125	AM	61	No
				PM	75	No
7	Sports Arena Boulevard & East Driveway	EBL	-	AM	<25	No
				PM	<25	No
		WBL	125	AM	110	No
				PM	167	**Yes**
		NBR	100	AM	59	No
				PM	112	**Yes**
8	Midway Drive & Kemper Street	EBL	320	AM	133	No
				PM	160	No
		EBR	150	AM	106	No
				PM	164	**Yes**
		NBL	90	AM	143	**Yes**
				PM	173	**Yes**
		SBL	100	AM	78	No
				PM	106	**Yes**
		SBR	115	AM	61	No
				PM	108	No
9	Midway Drive & East Drive	EBL	90	AM	34	No
				PM	123	**Yes**
		WBL	100	AM	51	No
				PM	81	No
17	Camino Del Rio West & Hancock Street	NBL	100	AM	52	No
				PM	63	No
		I-5 SB Off-Ramp	3500	AM	75	No
				PM	139	No
		I-8 WB Off-Ramp	3700	AM	75	No
				PM	139	No
		SBR	130	AM	75	No
				PM	139	**Yes**

Table 6-3. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Queue Summary - Event Day

#	Intersection	Movement	Storage Length/Link Distance (ft)	Peak Hour	95th Percentile Queue (ft)	Exceeds Storage Length?
18	Camino Del Rio West & Kurtz Street	EBR	-	AM	<25	No
				PM	<25	No
		SBL	100	AM	199	**Yes**
				PM	209	**Yes**
19	Camino Del Rio West & Sports Arena Boulevard	EBR	-	AM	210	No
				PM	1241	No
		WBL	180	AM	182	**Yes**
				PM	310	**Yes**
20	Rosecrans Street & Midway Drive	EBL	100	AM	160	**Yes**
				PM	209	**Yes**
		EBR	240	AM	131	No
				PM	318	**Yes**
		WBL	250	AM	290	**Yes**
				PM	346	**Yes**
		WBR	180	AM	295	**Yes**
				PM	306	**Yes**
		NBL	280	AM	352	**Yes**
				PM	457	**Yes**
		SBL	320	AM	383	**Yes**
				PM	194	No
23	Rosecrans Street & Kurtz Street	WBR	-	AM	409	No
				PM	500	No
		SBL	100	AM	89	No
				PM	191	**Yes**
24	Rosecrans Street & Hancock Street	NBL	120	AM	85	No
				PM	158	**Yes**
25	Pacific Highway & Rosecrans Street	EBL	120	AM	40	No
				PM	121	**Yes**
		EBR	100	AM	53	No
				PM	185	**Yes**
		WBL	150	AM	128	No
				PM	114	No
		NBL	150	AM	141	No
				PM	264	**Yes**

Table 6-4. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Queue Summary - Non-Event Day

#	Intersection	Movement	Storage Length/Link Distance (ft)	Peak Hour	95th Percentile Queue (ft)	Exceeds Storage Length?
1	West Mission Bay Drive & I-8 Westbound Off-Ramp	I-8 WB Off-Ramp	1800	AM	455	No
				PM	348	No
2	Sports Arena Boulevard & Midway Drive & West Point Loma Boulevard	EBL	360	AM	126	No
				PM	229	No
		WBL	150	AM	<25	No
				PM	151	**Yes**
		NBL	230	AM	144	No
				PM	215	No
3	Sports Arena Boulevard & Hancock Street	EBL	350	AM	69	No
				PM	184	No
		WBL	100	AM	<25	No
				PM	44	No
4	Sports Arena Boulevard & Kemper Street	EBL	440	AM	116	No
				PM	623	**Yes**
		WBL	175	AM	92	No
				PM	114	No
		NBL	100	AM	162	**Yes**
				PM	153	**Yes**
5	Sports Arena Boulevard & West Drive / Proposed Frontier Drive	EBL	330	AM	128	No
				PM	183	No
		WBL	175	AM	150	No
				PM	150	No
6	Sports Arena Boulevard & Target Driveway	EBL	-	AM	<25	No
				PM	<25	No
		WBL	125	AM	51	No
				PM	104	No
7	Sports Arena Boulevard & East Driveway	EBL	-	AM	<25	No
				PM	<25	No
		WBL	125	AM	116	No
				PM	159	**Yes**
		NBR	100	AM	58	No
				PM	160	**Yes**
8	Midway Drive & Kemper Street	EBL	320	AM	155	No
				PM	269	No
		EBR	150	AM	52	No
				PM	194	**Yes**
		NBL	90	AM	124	**Yes**
				PM	137	**Yes**
		SBL	100	AM	83	No
				PM	82	No
		SBR	115	AM	81	No
				PM	68	No
9	Midway Drive & East Drive	EBL	90	AM	45	No
				PM	154	**Yes**
		WBL	100	AM	53	No
				PM	85	No
17	Camino Del Rio West & Hancock Street	NBL	100	AM	74	No
				PM	59	No
		I-5 SB Off-Ramp	3500	AM	78	No
				PM	72	No
		I-8 WB Off-Ramp	3700	AM	78	No
				PM	72	No
		SBR	130	AM	78	No
				PM	72	No

Table 6-4. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Queue Summary - Non-Event Day

#	Intersection	Movement	Storage Length/Link Distance (ft)	Peak Hour	95th Percentile Queue (ft)	Exceeds Storage Length?
18	Camino Del Rio West & Kurtz Street	EBR	-	AM	<25	No
				PM	<25	No
		SBL	100	AM	191	**Yes**
				PM	181	**Yes**
19	Camino Del Rio West & Sports Arena Boulevard	EBR	-	AM	391	No
				PM	1310	No
		WBL	180	AM	194	**Yes**
				PM	273	**Yes**
20	Rosecrans Street & Midway Drive	EBL	100	AM	174	**Yes**
				PM	204	**Yes**
		EBR	240	AM	110	No
				PM	362	**Yes**
		WBL	250	AM	262	**Yes**
				PM	309	**Yes**
		WBR	180	AM	288	**Yes**
				PM	279	**Yes**
		NBL	280	AM	341	**Yes**
				PM	484	**Yes**
		SBL	320	AM	301	No
				PM	243	No
23	Rosecrans Street & Kurtz Street	WBR	-	AM	434	No
				PM	630	No
		SBL	100	AM	64	No
				PM	166	**Yes**
24	Rosecrans Street & Hancock Street	NBL	120	AM	89	No
				PM	127	**Yes**
25	Pacific Highway & Rosecrans Street	EBL	120	AM	59	No
				PM	78	No
		EBR	100	AM	58	No
				PM	129	**Yes**
		WBL	150	AM	127	No
				PM	126	No
		NBL	150	AM	126	No
				PM	257	**Yes**

QUEUE ANALYSIS COMPARISON FOR PROPOSED ROUNDABOUT

The Midway Rising project proposes to provide a single-lane roundabout at the intersection of Hancock Street and Kurtz Street rather than a traffic signal, as modeled in the Midway-Pacific Highway Community Plan. **Table 6-5** summarizes a comparison between the queue lengths anticipated for the roundabout proposed under the Midway Rising project as compared to the traffic signal planned in the Midway Pacific-Highway Community Plan. The table shows that the Midway Rising project's proposed roundabout control would be expected to have lower queue lengths than the traffic signal control proposed in the Midway Pacific-Highway Community Plan.

Table 6-5. Horizon Year (2050) Baseline (CPA) Scenario Queue Analysis Summary for Proposed Roundabout at Hancock St / Kurtz Street

Peak Hour	Intersection Control	Analysis Method	Horizon Year (2050) Baseline (CP) 95th Percentile Queue (ft)	Horizon Year (2050) Plus Full Project Buildout (CPA) 95th Percentile Queue (ft) – Event Day	Horizon Year (2050) Plus Full Project Buildout (CPA) 95th Percentile Queue (ft) – Non-Event Day
AM	Roundabout	SIDRA (HCM 6th)	11	38	43
	Signalized	Synchro (HCM 6th)	0	102	105
PM	Roundabout	SIDRA (HCM 6th)	17	64	45
	Signalized	Synchro (HCM 6th)	0	137	131

6.5 ROADWAY SEGMENT ANALYSIS

The Horizon Year (2050) Plus Full Project Buildout (CPA) scenario roadway segment analysis was performed based on proposed roadway geometries and 2050 expected roadway segment volumes. **Table 6-6** summarizes the roadway segment LOS analysis at the study segments under CPA scenario for a weekday event day and non-event day.

Under the Horizon Year (2050) Plus Full Project Buildout (CPA) scenario, all roadway segments are expected to operate at LOS D or better except the following:

Weekday Event Day

- Camino del Rio West North of Greenwood Street (LOS F)
- Camino del Rio West between Greenwood Street and Hancock Street (LOS F)
- Camino del Rio West between Hancock Street and Kurtz Street (LOS E)
- Rosecrans Street between Sports Arena Boulevard and Midway Drive (LOS F)
- Kurtz Street between Hancock Street and Frontier Drive (LOS F)
- Kurtz Street between Frontier Drive and Sherman Street (LOS F)

Weekday Non-Event Day

- Camino del Rio West North of Greenwood Street (LOS F)
- Camino del Rio West between Greenwood Street and Hancock Street (LOS F)
- Rosecrans Street between Sports Arena Boulevard and Midway Drive (LOS F)
- Kurtz Street between Hancock Street and Frontier Drive (LOS F)
- Kurtz Street between Frontier Drive and Sherman Street (LOS F)

The Midway Rising project would be expected to cause an operational effect at all roadway segments listed above. Project effects for roadway segments are discussed further in Section 6.6.

6.6 PROJECT EFFECTS

Based on the transportation analysis discussed in the previous sections, the Midway Rising project's proposed changes to the Midway Pacific-Highway Community Plan would result in project transportation effects at intersections along Sports Arena Boulevard and roadway segments along Sports Arena Boulevard, Rosecrans Street, and Kurtz Street.

PROJECT EFFECTS ON INTERSECTION LEVEL OF SERVICE

The project is expected to cause a transportation effect at the following two intersections in the Horizon Year (2050) Plus Full Project Buildout (CPA) scenario:

- **Intersection #2: Midway Drive and Point Loma Boulevard/Sports Arena Boulevard** – Although the intersection would operate at LOS E under the Horizon Year (2050) CP scenario, the Midway Rising project traffic volumes cause the overall intersection delay to increase by more than one second under the Horizon Year (2050) Plus Full Project Buildout (CPA) scenario. The worst observed movement is the westbound right turn in the AM peak hour and the northbound right turn in the PM peak hour; however, all movements would operate at LOS E or F during both peak hours.
- **Intersection #19**: **Rosecrans St / Sports Arena Blvd & Camino Del Rio W** – Although the intersection would operate at LOS E under the Horizon Year (2050) CP scenario, the Midway Rising project traffic volumes cause the overall intersection delay to increase by more than one second under the Horizon Year (2050) Plus Full Project Buildout (CPA) scenario. The worst observed movement is the northbound left turn in the PM peak hour.

PROJECT EFFECTS ON ROADWAY LEVEL OF SERVICE

The project is expected to cause a transportation effect at the following seven roadway segments in the Horizon Year (2050) Plus Full Project Buildout (CPA) scenario:

- **Camino del Rio West, North of Greenwood Street** (LOS F) – The Midway Rising project adds traffic to an LOS F segment, resulting in a project effect.
- **Camino del Rio West, between Greenwood Street and Hancock Street** (LOS F) – The Midway Rising project adds traffic to an LOS F segment, resulting in a project effect.

- **Camino del Rio West, between Hancock Street and Kurtz Street** (LOS F) – The Midway Rising project adds traffic to an LOS F segment, resulting in a project effect.
- **Rosecrans Street, between Sports Arena Boulevard and Midway Drive** (LOS f) – The Midway Rising project adds traffic to an LOS F segment, resulting in a project effect.
- **Kurtz Street, between Frontier Drive and Sherman Street** (LOS F) – The Midway Rising CPA proposes to convert this segment from a 2-lane, one-way collector to a 2-lane, two-way collector, resulting in a change in LOS from D to F, and thus a project effect.
- **Kurtz Street, between Hancock Street and Frontier Drive** (LOS F) – The Midway Rising project adds traffic to an LOS F segment, resulting in a project effect.

Table 6-6. Horizon Year (2050) Plus Full Project Buildout (CPA) Scenario Roadway Segment Analysis Summary

ID	Roadway Segment	Extents	Horizon Year (2050) Baseline (CP)					Horizon Year (2050) Plus Full Project Buildout (CPA)									
					Weekday					Weekday Event Day				Weekday Non-Event Day			
			Ultimate Classification[1]	LOS E Capacity[2]	ADT[3]	V/C Ratio[4]	LOS[5]	With Project Classification[6]	LOS E Capacity[2]	ADT[3]	V/C Ratio[4]	LOS[5]	Project Effect (Y/N?)	ADT[3]	V/C Ratio[4]	LOS[5]	Project Effect (Y/N?)
1	Sports Arena Boulevard	N of I-8 EB On Ramp	6 Lane Prime Arterial	60,000	12,026	0.200	A	6 Lane Prime Arterial	60,000	14,466	0.241	A	N	12,624	0.210	A	N
2		I-8 EB On Ramp to W Point Loma Boulevard	6 Lane Major Arterial	50,000	25,793	0.516	B	5 Lane Major Arterial	45,000	30,265	0.673	C	N	27,056	0.601	C	N
3		W Point Loma Boulevard to Hancock Street	6 Lane Major Arterial	50,000	17,061	0.341	A	5 Lane Collector (with two-way left-turn Lane)	37,500	21,145	0.564	C	N	18,235	0.486	C	N
4		Hancock Street to Kemper Street	6 Lane Major Arterial	50,000	18,785	0.376	A	4 Lane Major Arterial (with 2 flexible lanes)	40,000	23,023	0.576	C	N	19,854	0.496	B	N
5		Kemper Street to Frontier Drive	6 Lane Major Arterial	50,000	16,616	0.332	A	4 Lane Major Arterial (with 2 flexible lanes)	40,000	18,284	0.457	B	N	15,767	0.394	B	N
6		Frontier Drive to East Drive	6 Lane Major Arterial	50,000	19,499	0.390	A	4 Lane Major Arterial (with 2 flexible lanes)	40,000	28,688	0.717	C	N	23,584	0.590	C	N
7		East Drive to Camino Del Rio West	6 Lane Major Arterial	50,000	25,861	0.517	B	4 Lane Major Arterial (with 2 flexible lanes)	40,000	32,320	0.808	D	N	29,992	0.750	C	N
8		Rosecrans Street to Pacific Highway	2 Lane Collector (with two-way left-turn Lane)	15,000	10,700	0.713	D	2 Lane Collector (without two-way left-turn lane)	8,000	6,174	0.772	D	N	5,494	0.687	D	N
9	Camino Del Rio West	North of Greenwood Street	6 Lane Prime Arterial	60,000	62,148	1.036	**F**	6 Lane Prime Arterial	60,000	73,694	1.228	**F**	Y	65,714	1.095	**F**	Y
10		Greenwood Street to Hancock Street	6 Lane Prime Arterial	60,000	62,148	1.036	**F**	6 Lane Prime Arterial	60,000	73,694	1.228	**F**	Y	65,714	1.095	**F**	Y
11		Hancock Street to Kurtz Street	6 Lane Prime Arterial	60,000	50,994	0.850	D	6 Lane Prime Arterial	60,000	59,651	0.994	**E**	Y	53,761	0.896	D	N
12	Rosecrans Street	Camino del Rio to Pacific Highway	4 Lane Major Arterial	40,000	9,837	0.246	A	2 Lane Collector (with 2 flexible lanes)	15,000	11,555	0.770	D	N	10,475	0.698	D	N
13		Sports Arena Boulevard to Midway Drive	6 Lane Major Arterial	50,000	52,692	1.054	**F**	6 Lane Major Arterial	50,000	56,733	1.135	**F**	Y	53,355	1.067	**F**	Y
14	Midway Drive	Kemper Street to Rosecrans Street	4 Lane Collector (with two-way left-turn Lane)	30,000	19,391	0.646	C	4 Lane Collector (with two-way left-turn Lane)	30,000	19,561	0.652	C	N	19,480	0.649	C	N
15	Kurtz Street	Hancock Street to Frontier Drive	2 Lane Collector (one-way)	17,500	2,650	0.151	A	2 Lane Collector (without two-way left-turn lane)	8,000	17,429	2.179	**F**	Y	16,241	2.030	**F**	Y
16		Frontier Drive to Sherman Street	2 Lane Collector (one-way)	17,500	2,650	0.151	A	2 Lane Collector (without two-way left-turn lane)	8,000	12,157	1.520	**F**	Y	10,383	1.298	**F**	Y
17		Sherman Street to Camino del Rio West	2 Lane Collector (one-way)	17,500	6,696	0.383	A	2 Lane Collector (one-way)	17,500	11,278	0.644	C	N	9,408	0.538	B	N
18	Hancock Street	Sports Arena Boulevard to Channel Way	4 Lane Collector (without two-way left-turn Lane)	15,000	3,010	0.201	A	4 Lane Collector (without two-way left-turn Lane)	15,000	3,452	0.230	A	N	3,010	0.201	A	N
19		Channel Way to Kurtz St	4 Lane Collector (without two-way left-turn Lane)	15,000	3,085	0.206	A	4 Lane Collector (without two-way left-turn Lane)	15,000	3,348	0.223	A	N	3,085	0.206	A	N
20		Kurtz Street to Greenwood Street	3 Lane Major Arterial (one-way)	27,500	3,903	0.142	A	3 Lane Major Arterial (one-way)	27,500	5,361	0.195	A	N	4,926	0.179	A	N
21		Greenwood Street to Camino Del Rio West	3 Lane Major Arterial (one-way)	27,500	3,909	0.142	A	3 Lane Major Arterial (one-way)	27,500	5,320	0.193	A	N	4,888	0.178	A	N
22	Frontier Drive (Future Conditions Only)	Sports Arena Boulevard to Kurtz Street	2 Lane Collector (with two-way left-turn Lane)	15,000	12,200	0.813	D	2 Lane Collector (with two-way left-turn Lane)	15,000	9,050	0.603	C	N	7,072	0.471	C	N
23	Kemper Street (Future Conditions Only)	Sports Arena Boulevard to Kurtz Street	2 Lane Collector (with two-way left-turn Lane)	15,000	9,400	0.627	C	2 Lane Collector (with two-way left-turn Lane)	15,000	12,563	0.838	D	N	11,753	0.784	D	N

Notes:

[1]Ultimate Classification based on the Midway Pacific Highway Community Plan - Preferred Plan.

[2]LOS E Capacity provided by City of San Diego staff. LOS E capacity of Segment 12 under WP Conditions is based on a 2-lane Collector with two-way left-turn lane as the project wouldn't construct the median for a Major Arterial on Rosecrans St because there is not a project effect, and instead proposes a 2-lane Collector with flex lanes.

[3]ADT - Average Daily Traffic.

[4]V/C Ratio - Volume-to-capacity ratio.

[5]LOS - Level of Service.

[6]With Project Classification based on roadway classifications proposed by the Midway Rising Project.

[7]Due to limitations of the SANDAG ABM 2+ model, manual calculations were used to develop ADTs to reflect geometry modifications at intersection #19

[8]Due to limitations of the SANDAG ABM 2+ model, the 2050 Base and With Project ADTs reflect the 2035 Base and With Project ADTs, respectively, as these roadways were unable to be modeled accurately.

7 CONCLUSIONS AND PROJECT IMPROVEMENTS

7.1 INTERSECTION CONCLUSIONS AND PROJECT IMPROVEMENTS

The project is expected to cause a transportation effect at two study intersections in the Midway-Pacific Highway community under the Horizon Year (2050) Plus Full Project Buildout (CPA) scenario.

Table 7-1 summarizes the Midway Rising CPA transportation network improvements to address project effects on study area intersections.

7.2 ROADWAY SEGMENT CONCLUSIONS

Although the CPA scenario identified the project would be expected to cause transportation effects along six roadway segments, improvements are not recommended due to limited right-of-way and prioritization of safety of all roadway users, not only vehicles. Consistent with the Midway-Pacific Highway Community Plan, the Midway Rising project intends to promote and enhance multi-modal travel by constructing improvements that would leverage the project's proximity to the Old Town Transit Center, located between 0.7- and 1-mile walking distance from the site. The project will provide shuttle services and multi-modal paths and connections to the Transit Center as envisioned in the CP to enable and achieve vehicle trip reductions through multi-modal services.

Table 7-2 describes the project improvements which address the identified project effects on roadway segments.

Table 7-1. Horizon Year (2050) CPA Scenario Intersection Improvements

ID	Location	2050 CPA Considered Improvement	Improved Recommendation
2	Midway Drive and Point Loma Boulevard/Sports Arena Boulevard	**Improvements:** - Signal timing optimization - Reduce roadway width in northeast corner to convert westbound channelized right turn lane to an exclusive right turn lane per CP. - Provide overlap phase for westbound right turn movement. Requires signal modification. - Remove small, channelized portions of northbound and southbound right turn movements. Right-most lanes will be shared through-right instead. - Separate southbound shared through/left turn lane into exclusive left turn and exclusive through lane. Southbound approach to include 2 left turn lanes, 2 through lanes, and 1 right turn lane. Requires signal modification. - Separate northbound shared through/left turn lane into exclusive left turn and exclusive through lane. Northbound approach to include 2 left turn lanes, 1 through lanes, and 1 shared through/right turn lane. - Widen eastbound approach by 6' to construct additional through lane. Eastbound approach to include 1 left turn lane, 1 shared left/through lane, 1 through lane, and 1 right turn lane. - Modify northbound and southbound signal timing to protected left turn phasing instead of split phasing. **Results:** Maintain LOS E during both peaks.	**Midway Rising will improve this intersection to the extent feasible by incorporating the imporvements described.** *The intersection cannot be improved to LOS D or better without diminishing pedestrian and bicycle safety or conflicting with the Community Plan's visions for multimodal improvements. Removal of the westbound channelized free right turn lane as proposed in the CP prevents this intersection from being able to improve to LOS D or better. Removal of the free right turn would also decrease pedestrian safety. There is not enough right-of-way to further widen the intersection due to the adjacent residential and commercial land uses, the skew of the intersection, and the proposed multimodal improvements on all approaches to the intersection (including bus only lanes).*
19	Rosecrans St/Sports Arena Blvd & Camino Del Rio W	**Improvements**: - Convert channelized right turn lane to exclusive right turn lane per CP. - Remove northbound "channelized" right turn and ancillary intersection per CP. - Allow through movement from eastbound Sports Arena Boulevard to Sports Arena Boulevard per CP. - Modify eastbound approach to include 1 left turn lane, 1 shared left/through lane, 1 right turn lane to Sports Arena Boulevard, and 1 right turn lane to Camino del Rio W. Requires traffic signal modification. **Results**: Improves overall delay and queuing at the intersection, but does not improve the intersection operations to LOS D or better	**Midway Rising will improve this intersection to the extent feasible by incorporating the imporvements described.** *The intersection cannot be improved to LOS D or better without widening the approaches to the intersection with additional turn lanes, and potentially diminishing pedestrian and bicycle safety or conflicting with the Community Plan's visions for multimodal improvements.*

Table 7-2. Horizon Year (2050) CPA Scenario Roadway Improvements

ID	Location	Potential Improvement	Improved Recommendation
9	Camino del Rio West, North of Greenwood Street	**Improves roadway segment operations to LOS D or better:** - Widening the roadway to a 8 Lane Prime Arterial improves roadway segment operations	**Midway Rising will <u>not</u> improve this roadway segment <u>beyond</u> the planned classification per the Community Plan.** Widening the roadway past 6 lanes is inconsistent with the Midway-Pacific Highway Preferred Plan and is infeasible due to limited right-of-way and the nearby freeway access points to and from I-8 to the east and 1-5 to the north. This segment of roadway is built to its planned classification per the Community Plan, and any increase in capacity above the ultimate classification could induce VMT which does not align with City or state climate action goals. *Thus, the Midway Rising project does not recommend vehicle capacity improvements on this segment.*
10	Camino del Rio West, between Greenwood Street and Hancock Street	**Improves roadway segment operations to LOS D or better:** - Widening the roadway to an 8 Lane Prime Arterial improves roadway segment operations	**Midway Rising will <u>not</u> improve this roadway segment <u>beyond</u> the planned classification per the Community Plan.** Widening the roadway past 6 lanes is inconsistent with the Midway-Pacific Highway Preferred Plan and infeasible due to limited right-of-way. The Midway Rising project proposes multimodal improvements along Kurtz Street, including a Class I multi-use path and improved pedestrian access between Camino Del Rio West and the proposed project site. This path intends to increase pedestrian and bicycle access to and from the Old Town Transit Center and encourage the use of alternative transportation, as is the vision of the Midway Pacific-Highway Community Plan. This segment of roadway is built to its planned classification per the Community Plan, and any increase in capacity above the ultimate condition could induce VMT which does not align with City or state climate action goals. *Thus, the Midway Rising project does not recommend vehicle capacity improvements on this segment.*
11	Camino del Rio West, between Hancock Street and Kurtz Street	**Improves roadway segment operations to LOS D or better:** - Widening the roadway to an 8 Lane Prime Arterial improves roadway segment operations	**Midway Rising will <u>not</u> improve this roadway segment <u>beyond</u> the planned classification per the Community Plan.** Widening the roadway is infeasible due to limited right-of-way caused by surrounding commercial land uses. This segment of roadway is built out to its ultimate condition per the Community Plan, and any increase in capacity above the ultimate condition could induce VMT which does not align with City or state climate action goals. *Thus, the Midway Rising project does not recommend vehicle capacity improvements on this segment.*
13	Rosecrans Street, between Sports Arena Blvd and Midway Drive	**Improves roadway segment operations to LOS D or better**: - Widening the roadway to an 8 Lane Prime Arterial improves roadway segment operations	**Midway Rising will <u>not</u> improve this roadway segment <u>beyond</u> the planned classification per the Community Plan.** Widening the roadway is infeasible due to limited right-of-way caused by surrounding commercial land uses. This segment of roadway is built out to its ultimate condition per the Community Plan, and any increase in capacity above the ultimate condition could induce VMT which does not align with City or state climate action goals. *Thus, the Midway Rising project does not recommend vehicle capacity improvements on this segment.*
15	Kurtz Street, between Hancock Street and Frontier Drive	**Improves roadway segment operations to LOS D or better**: - Widening the roadway to a 4 Lane Collector with two-way left-turn lane improves roadway segment operations, but is infeasible due to fronting land uses that are not part of the project site on both sides of Kurtz Street	**Midway Rising will <u>not</u> improve this roadway segment**. Midway Rising proposes multimodal improvements along Kurtz Street, including a Class I multi-use path and improved pedestrian facilities, intended to increase pedestrian and bicycle activity along Kurtz Street by providing safe access between the site and high-frequency transit services at Old Town Transit Center, Rosecrans Street, and Sports Arena Boulevard. Although widening the roadway would improve vehicular LOS, this would reduce the multimodal improvements along this segment that connect to high-frequency transit services. *Thus, the Midway Rising project does not recommend vehicle capacity improvements on this segment.*
16	Kurtz Street, between Frontier Drive and Sherman Street	**Improves roadway segment operations to LOS D or better:** - Widening the roadway to a 4 Lane Collector with two-way left-turn lane improves roadway segment operations, but is infeasible due to fronting land uses that are not part of the project site on both sides of Kurtz Street	**Midway Rising will <u>not</u> improve this roadway segment.** Midway Rising proposes multimodal improvements along Kurtz Street, including a Class I multi-use path and improved pedestrian facilities, intended to increase pedestrian and bicycle activity along Kurtz Street by providing safe access between the site and high-frequency transit services at Old Town Transit Center, Rosecrans Street, and Sports Arena Boulevard. Although widening the roadway would improve vehicular LOS, this would reduce the multimodal improvements along this segment that connect to high-frequency transit services. *Thus, the Midway Rising project does not recommend vehicle capacity improvements on this segment.*

APPENDICES

Appendix A Midway-Pacific Highway CP Excerpts

Appendix B Signal Timing Sheets

Appendix C Midway Rising VMT Analysis Memo

Appendix D Existing Traffic Count Data

Appendix E Existing (2023) Conditions Intersection LOS Worksheets

Appendix F Existing Conditions 95th Percentile Queue Worksheets

Appendix G Planned Street Classifications

Appendix H Horizon Year (2050) Baseline (CP) Scenario Intersection LOS Worksheets

Appendix I Horizon Year (2050) Baseline (CP) Scenario 95th Percentile Queue Worksheets

Appendix J Horizon Year (2050) Plus Full Project Buildout (CPA) Event Day Scenario Intersection LOS Worksheets

Appendix K Horizon Year (2050) Plus Full Project Buildout (CPA) Non Event Day Scenario Intersection LOS Worksheets

Appendix L Horizon Year (2050) Plus Full Project Buildout (CPA) Event Day Scenario 95th Percentile Queue Worksheets

Appendix M Horizon Year (2050) Plus Full Project Buildout (CPA) Non-Event Day Scenario 95th Percentile Queue Worksheets

Appendix A

Midway-Pacific Highway CPU Excerpts

FIGURE 3-1: PLANNED PEDESTRIAN FACILITIES

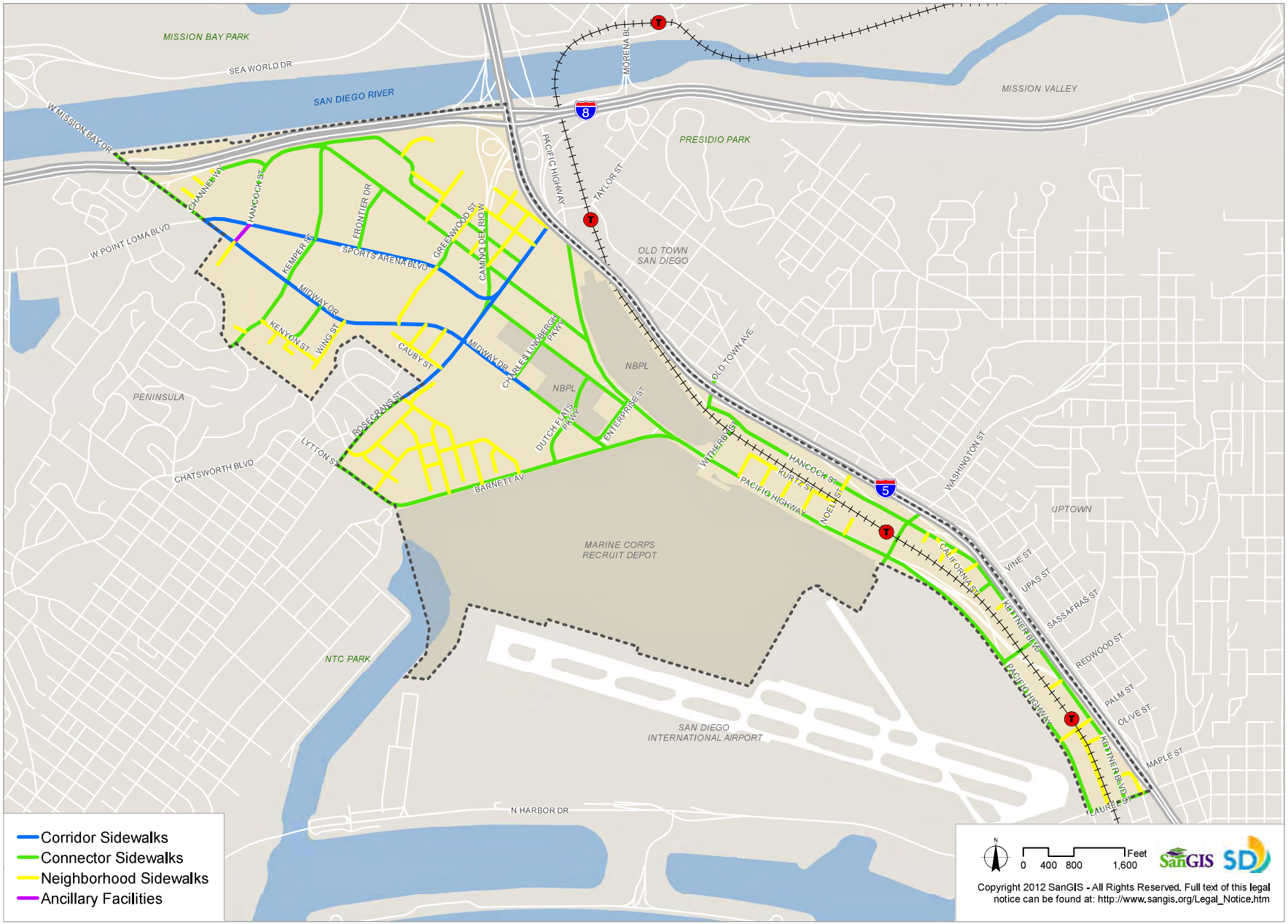


FIGURE 3-2: MULTI-USE URBAN PATH SYSTEM

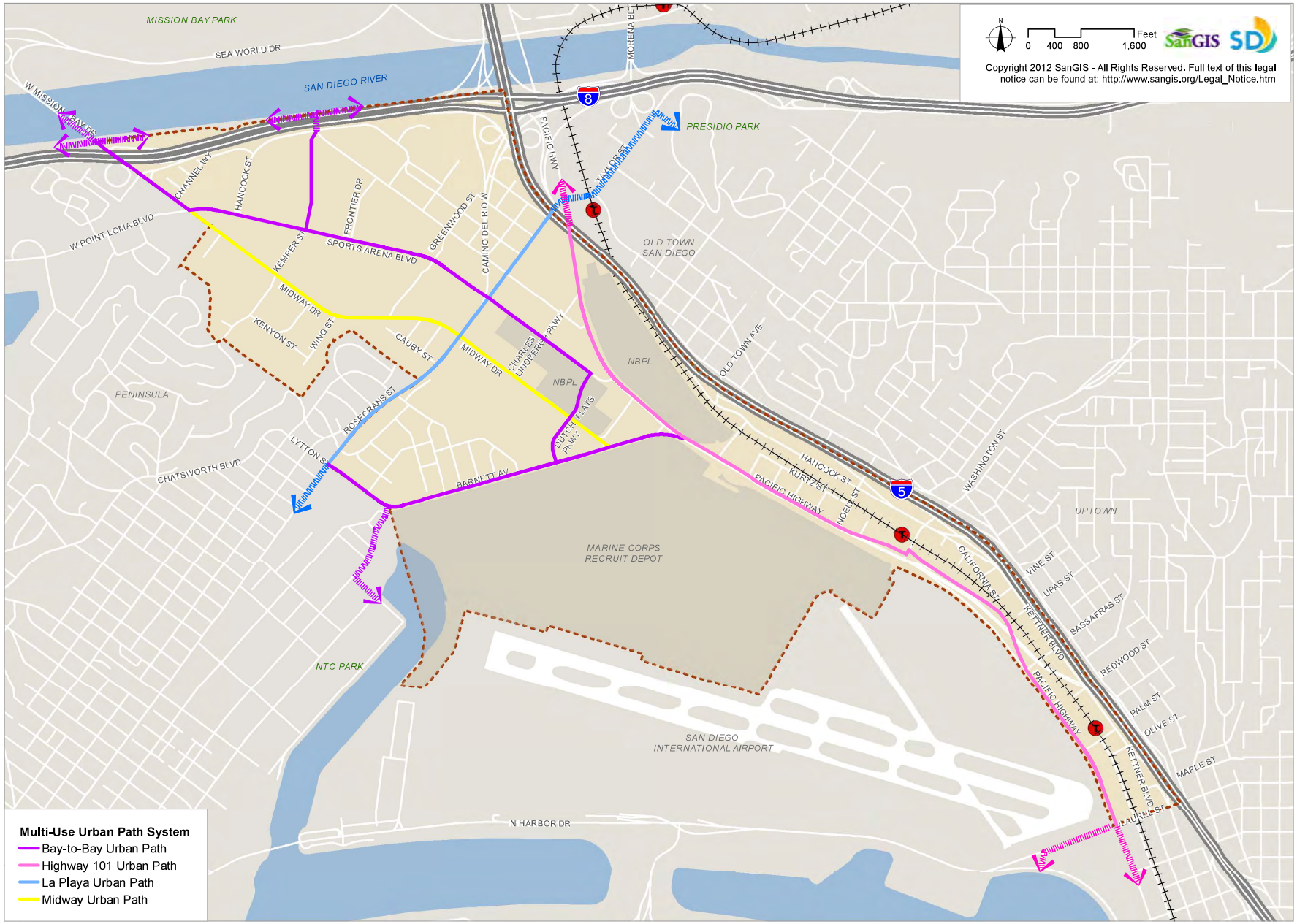


FIGURE 3-3: EXISTING AND PLANNED BICYCLE FACILITIES

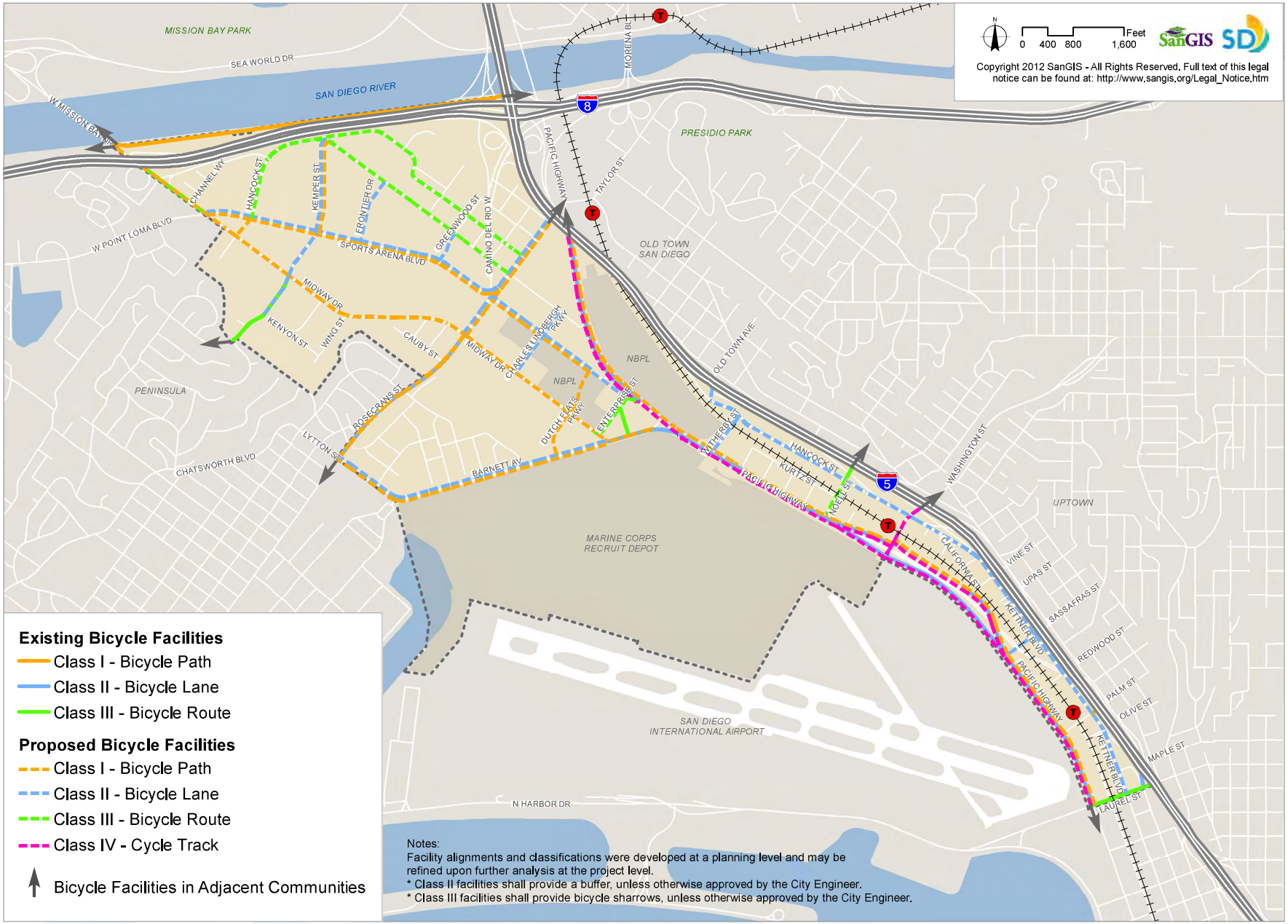


FIGURE 3-6: PLANNED STREET CLASSIFICATIONS

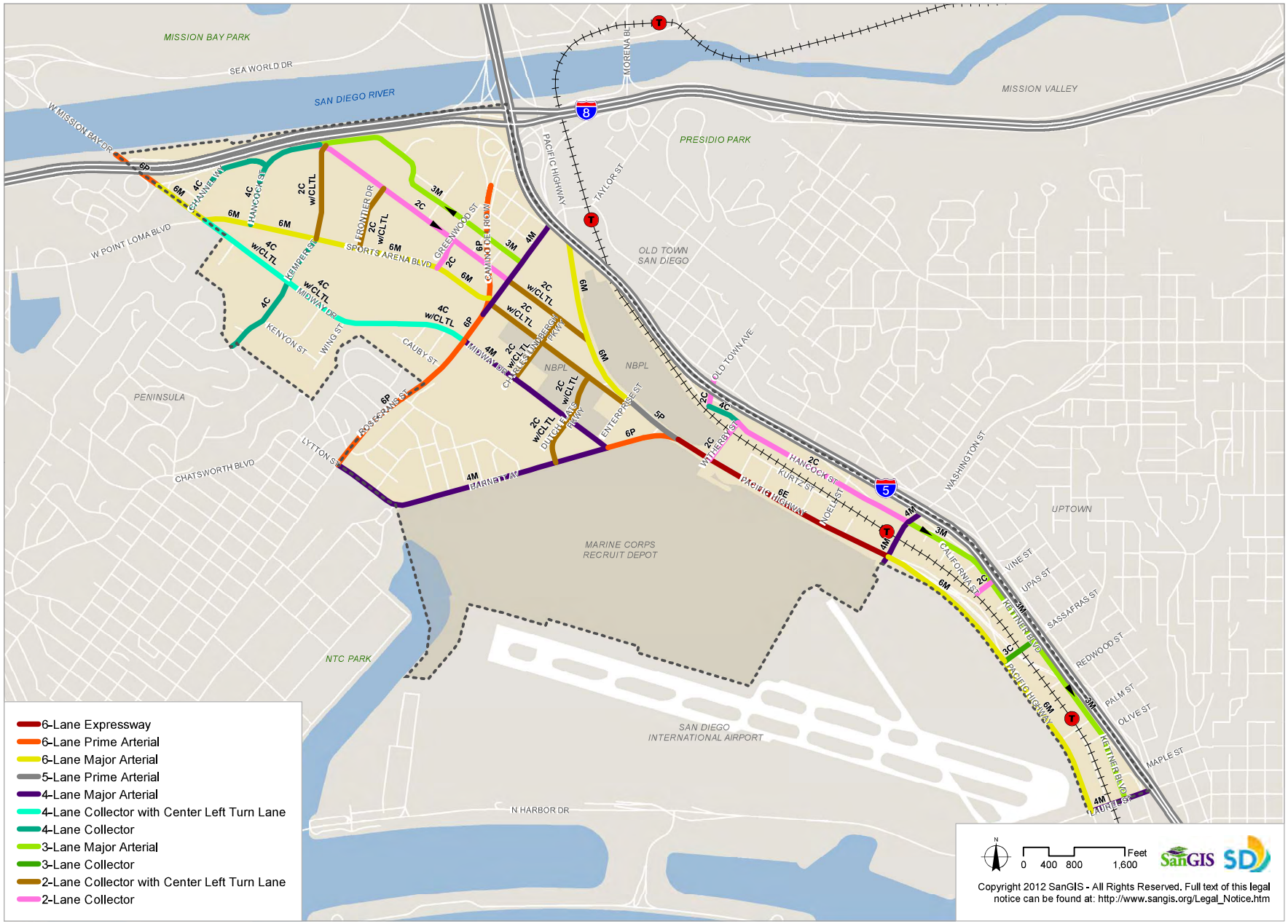
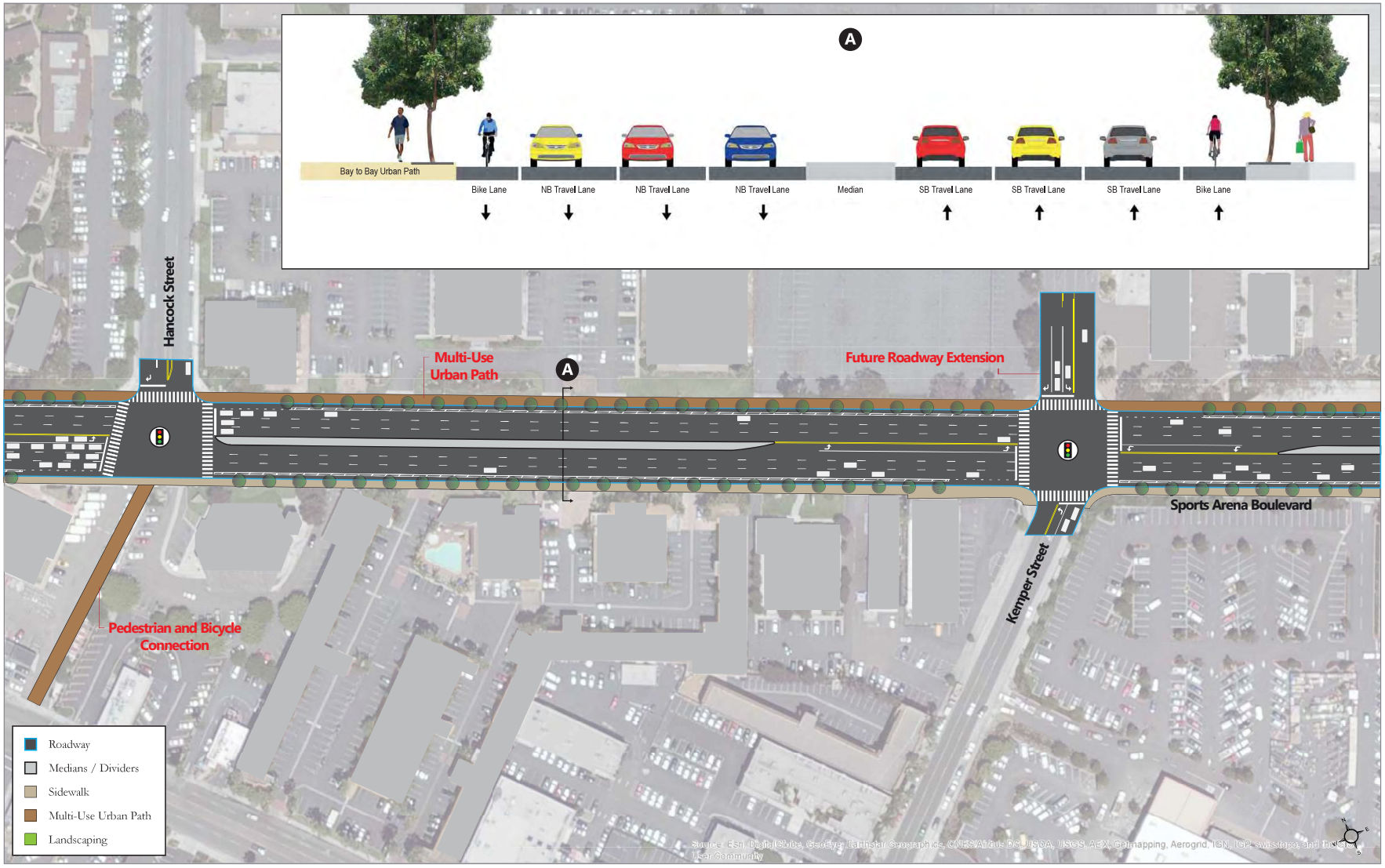
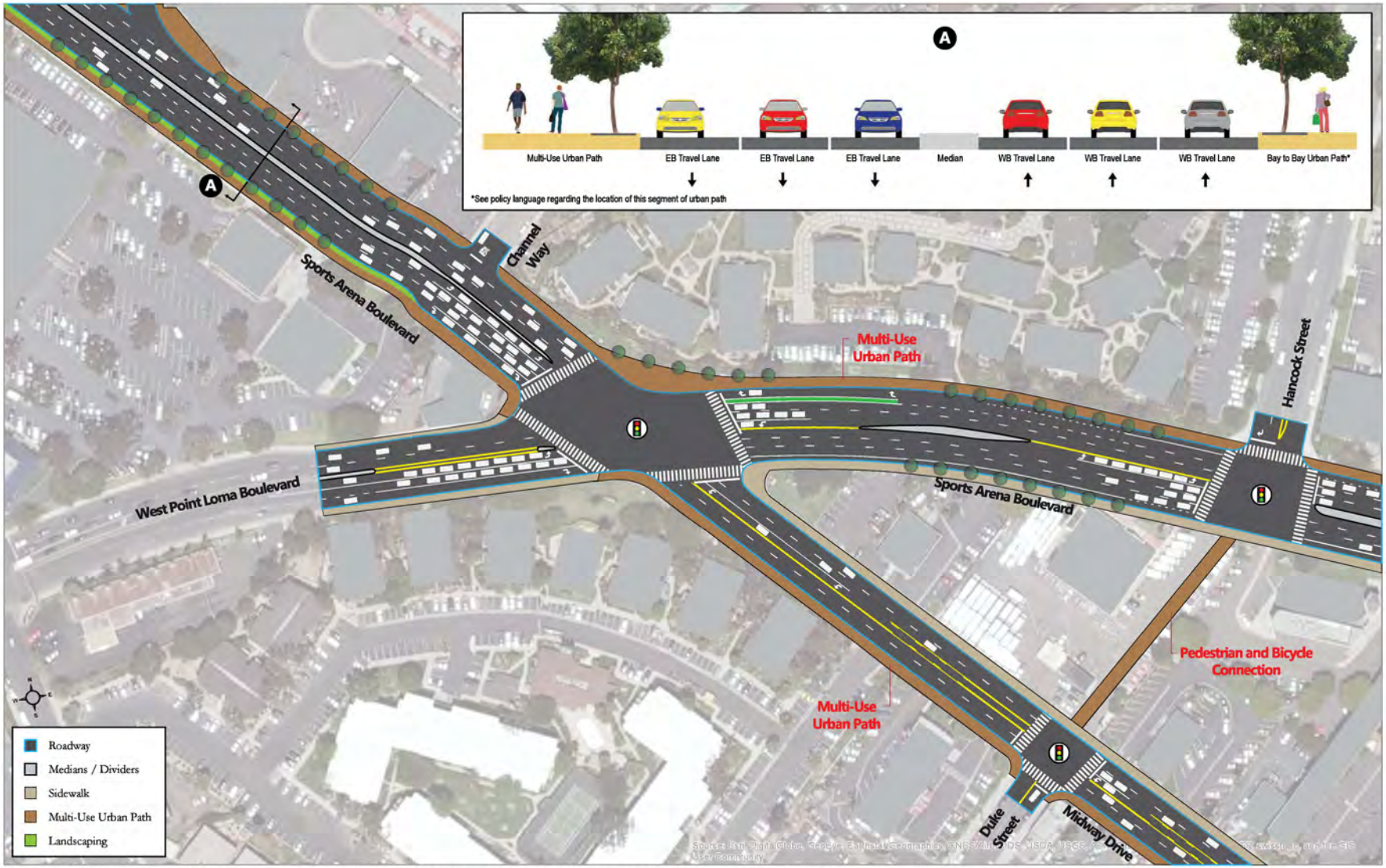


FIGURE 3-8: SPORTS ARENA BOULEVARD IMPROVEMENTS



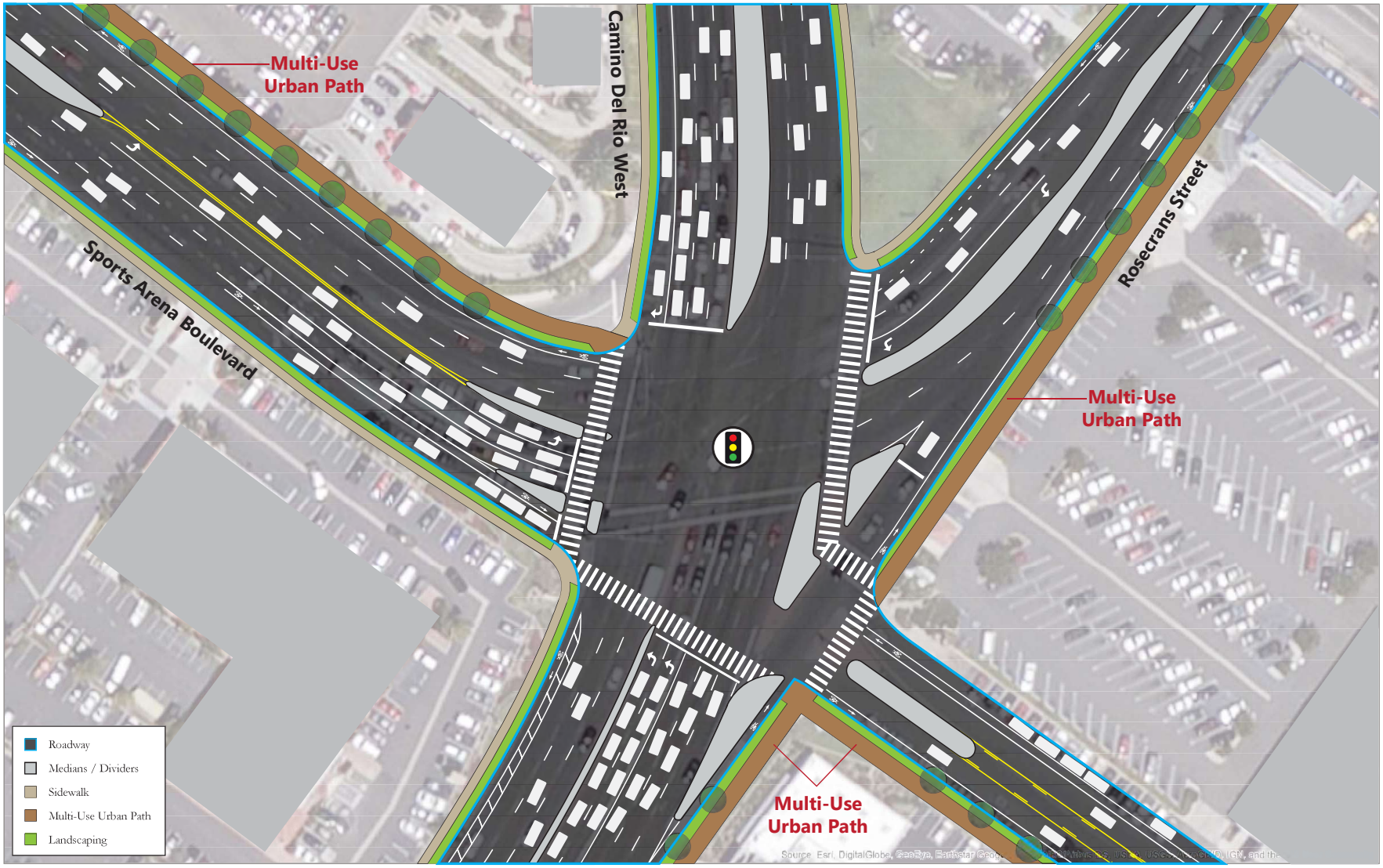
This graphic is for conceptual purposes only. Further engineering study would be required at the project level prior to implementation.

FIGURE 3-14: SPORTS ARENA BOULEVARD / W. POINT LOMA BOULEVARD / MIDWAY DRIVE INTERSECTION IMPROVEMENTS



This graphic is for conceptual purposes only. Further engineering study would be required at the project level prior to implementation.

FIGURE 3-15: SPORTS ARENA BOULEVARD / ROSECRANS STREET / CAMINO DEL RIO WEST INTERSECTION IMPROVEMENTS



This graphic is for conceptual purposes only. Further engineering study would be required at the project level prior to implementation.

Appendix B

Signal Timing Sheets

INTERSECTION: BARNETT AVE @ MIDWAY AVE

223 Program

Group Assignment:
Field Master Assignment:
N/S Street Name: MIDWAY
E/W Street Name: BARNETT

MIDWAY | BARNETT | BARNETT

Row	Column # ----> / Phase # ---->	Phase 1	2	3	4	5	6	7	8
		↘	=	!				/	↖
0	Ped Walk		7	7				7	
1	Ped FDW		4	17				5	
2	Min Green	10	10	4				4	10
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.5	2.9	0.0				0.0	3.0
6	Max Gap	2.5	2.9	0.0				0.0	3.0
7	Min Gap	0.2	0.2	0.0				0.0	0.2
8	Max Limit	40 ~~60~~	60	0				0	40 ~~60~~
9	Max Limit 2		(2) 70						
A	Bus Adv								
B	Call to Phs								
C	Reduce By	0.1	0.1						0.1
D	Every	1.3	1.1						1.1
E	Yellow	4.2	4.4	3.0				3.0	4.4
F	Red Clear	1.0	1.0						1.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

FLG 10-26-12

(2) LV3 7/7/2014

Row	E	RR-1 Delay	RR-1 Clear	EV-A Delay	EV-A Clear	EV-B Delay	EV-B Clear	EV-C Delay	EV-C Clear	EV-D Delay	EV-D Clear	RR-2 Delay	RR-2 Clear	View EV Delay	View EV Clear	View RR Delay	View RR Clear
	E			0	0			0	0					---	---	---	---

F + E + Row

Row	F	Permit	Red Lock	Yellow Lock	Min Recall	Ped Recall	Peds (View)	Rest In Walk	Red Rest	Dbl Entry	Max Recall	Soft Recall	Max 2	Cond Serv	Ped Lock	Yellow Start	1st Phases
	F	123___78			_2_____8		_23___7_								12345678	1_____7_	_2_____8

F + F + Row

NOTE: SPLIT RING OPERATION - PH 1 ,2 & 3 ARE INDEPENDENT OF PH 7 & 8

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	14	C + 0 + 0
Zone Number	14	C + 0 + 1
Area Number	0	C + 0 + 2
Area Address	203	C + 0 + 3
QuicNet Channel	COM 66	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_23___8	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page> <D Page>
F + COLOR + D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	_234___

Disable Communication Ports
D + D + 9

Timing Sheet By: M2S
Approved By:
Drawing Number:
Timing Implemented On: 2/23/2011

INTERSECTION: BARNETT AVE @ MIDWAY AVE

223 Program

LV3 7/7/2014

Row	Time	Function	Day of Week	Column F Phases/Bits
0	16:00	B	-23456-	2
1	18:00	B E	-23456-	
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	
7	Ped 4P	3
8	Ped 8P	7
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	1
B	EV-B Phases	
C	EV-C Phases	2 8
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345 8
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 = Bus Advance

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		1.8
1		1.8
2		1.8
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
WB	2I2U	1
EB	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		1.8
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: CAM DEL RIO W
E/W Street Name: KURTZ ST/ GAINES

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
M2S	M2S	1/10/2017

Free Lag <C/1+F+0> 2 4 6

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Notes: **Adaptive System operartion RULES:**

1- Intersection is running in Adaptive system coordination signal timing.
2- Do not change PIN ASSIGNMENTS on page 3. Pin numbers are changed for Adaptive mode operation.
3- No Recalls/Detector delays to be USED in the controller. Recalls/Delays are to be configured in the InSync Processor, Detector Setup.
4- Controller MUST BE set to FREE operation. C/0-A-1 =14
5- Min G is 10s for sync phases and 5s for all other permitted phases.
6- Veh Ext, Max Gap & Min Gap are set to 1.0s, Reduce Every is set to "zero".
7- "Carry Over" is SET to "zero" for all detectors.

Drop Number	14	<C/0+0+0>
Zone Number	14	<C/0+0+1>
Area Number	1	<C/0+0+2>
Area Address	94	<C/0+0+3>
QuicNet Channel	COM76:	(QuicNet)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

CAM DEL RIO W — KURTZ — CAN DEL RIO W

Phase

Row	Column Numbers --->	1	2	3	4	5	6	7	8
0	Ped Walk		7		7		7		
1	Ped FDW		15		38		13		
2	Min Green	5	10		5		10		
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	1.0	1.0		1.0		1.0		
6	Max Gap	1.0	1.0		1.0		1.0		
7	Min Gap	1.0	1.0		1.0		1.0		
8	Max Limit	30	60		40		60		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change	3.4	3.9		3.9		3.9		
F	Red Clear	1.0	1.0		1.0		1.0		

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	
EV-B Clear	
EV-C Delay	
EV-C Clear	
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

Row		F
0	Permit	12 4 6
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	*View Set Peds*	2 4 6
6	Rest In Walk	
7	Red Rest	
8	Dual Entry	
9	Max Recall	
A	Soft Recall	2 6
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	
E	Yellow Start	2 6
F	First Phases	4

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: CAM DEL RIO W @KURTZ ST/ GAINES ST

Row	Column Numbers —> / Overlap Name —>	Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

	C
EV-A	0
EV-B	0
EV-C	0
EV-D	0
RR-1 *	- - -
RR-2 *	- - -
SE-1	0
SE-2	0

Preempt Priority <E/125+C+Row>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers —>	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1_345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

	2
Phase 1	10
Phase 2	10
Phase 3	10
Phase 4	10
Phase 5	10
Phase 6	10
Phase 7	10
Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: CAM DEL RIO W @KURTZ ST/ GAINES ST

Column Numbers --->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	47	45_7	2	123		
1	6J2U	48	45_7	6	123		
2	4I6U	45	45_7	4	123		
3		42	45_7	8	123		
4		43	45_7	2	123		
5		44	45_7	6	123		
6	4I6L	41	45_7	4	123		
7		46	45_7	8	123		
8	2I4	39	45_7	2	123		
9	6J4	40	45_7	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7	5	123		
D		56	45_7	1	123		
E	6J5	57	45_7	6	123		
F		58	45_7	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7	5	123		
1		60	45_7	1	123		
2		61	45_7	7	123		
3		62	45_7	3	123		
4		63	45_7	2	123		
5		64	45_7	6	123		
6		65	45_7	4	123		
7		66	45_7	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7	2	123		
D		77	45_7	6	123		
E		78	45_7	4	123		
F		79	45_7	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: CAM DEL RIO W @KURTZ ST/ GAINES ST

TOD Coordination <9/0.1+Row> (Bank 1)

Row	Time	Plan	Offset	Day of Week
0	06 : 00	6	A	23456
1	11 : 00	2	A	23456
2	13 : 00	7	A	23456
3	14 : 45	5	A	23456
4	19 : 30	E	A	23456
5	10 : 00	4	A	1 7
6	18 : 00	E	A	1 7
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <7/0.1+Row> <E/27+4+Row>

Time	Funct.	Day of Week	Column 4 Phases/Bits

Holiday Dates <8/1.1+Row> (Bank 1)

Day	Year	Month	Holiday Type

Holiday Events <9/1.1+Row> (Bank 1)

Time	Plan	Offset	Holiday Type

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

TOD Coordination <C+0+9=0.2> (Bank 2)

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday Dates <C+0+8=1.2> (Bank 2)

Day	Year	Month	Holiday Type

Holiday Events <C+0+9=1.2> (Bank 2)

Time	Plan	Offset	Holiday Type

Month Select: October = A, November = B, December = C

INTERSECTION: CAM DEL RIO W @KURTZ ST/ GAINES ST

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	1	2	3	4	5	6	7	8	9
		Plan								
Row	Plan Name ---->		MID		WKND	PM (PEAK)	AM	PM		
0	Cycle Length		140		140	172	130	160		
1	Phase 1 - ForceOff		75		75	60	65	60		
2	Phase 2 - ForceOff		0		0	0	0	0		
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff		42		42	40	40	40		
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff		0		0	0	0	0		
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset 1		139		139	96	4	70		
B	Offset 2									
C	Offset 3									
D	Perm 1 - End		12		15	17	13	16		
E	Hold Release		255		255	255	255	255		
F	Reserved									

Coordination - Bank 1 <C/1+Plan+Row>

Row	E
0	
1	Plan 1 - Sync
2	Plan 2 - Sync 2 6
3	Plan 3 - Sync
4	Plan 4 - Sync 2 6
5	Plan 5 - Sync 2 6
6	Plan 6 - Sync 2 6
7	Plan 7 - Sync 2 6
8	Plan 8 - Sync
9	Plan 9 - Sync
A	NEMA Sync
B	NEMA Hold
C	
D	
E	Coord Extra
F	

Sync Phases <C/1+E+Row>

Row										
0	Ped Adjustment		0		0	10	5	10		
1	Perm 2 - Start									
2	Perm 2 - End									
3	Perm 3 - Start									
4	Perm 3 - End									
5	Reservice Time									
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase									
B	Perm 1 Ped Phase									
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C/2+Plan+Row>

Row	F
0	Free Lag
1	Plan 1 - Lag
2	Plan 2 - Lag 2 4 6
3	Plan 3 - Lag
4	Plan 4 - Lag 2 4 6
5	Plan 5 - Lag 2 4 6
6	Plan 6 - Lag 2 4 6
7	Plan 7 - Lag 2 4 6
8	Plan 8 - Lag
9	Plan 9 - Lag
A	External Lag
B	Lag Hold
C	
D	
E	
F	

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 3/22/2010

INTERSECTION: CAM DEL RIO W @KURTZ ST/ GAINES ST

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: CAM DEL RIO W @KURTZ ST/ GAINES ST

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk		7		7		7		
1	Ped FDW		15		38		13		
2	Min Green	4	10		4		10		
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	3.7		2.0		3.8		
6	Max Gap	2.0	3.7		2.0		3.8		
7	Min Gap	2.0	0.2		2.0		0.2		
8	Max Limit	30	60		40		60		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every		0.9				0.8		
E	Yellow Change	3.4	3.9		3.9		3.9		
F	Red Clear	1.0	1.0		1.0		1.0		

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Hawk Select	0	<F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	0	<C/1+0+6>
Select Parity	0	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	0	<C/5+2+E>
Max Cycle Time	20	<C/5+2+F>

Yellow Yield Coordination

	12345678	
Omit Alarm	#NAME?	

Local Alarm Disable <C/5+F+0>

IEN Status	1	<C/5+1+B>
Synch Time	0.0	<C/5+1+C>

Other Parameters

Row		1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **CAM DEL RIO W**
E/W Street Name: **HANCOCK**

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
M2S	M2S	1/10/2017

Free Lag <C/1+F+0> _2_4_6__

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Notes: **Adaptive System operartion RULES:**

1- Intersection is running in Adaptive system coordination signal timing.
2- Do not change PIN ASSIGNMENTS on page 3. Pin numbers are changed for Adaptive mode operation.
3- No Recalls/Detector delays to be USED in the controller. Recalls/Delays are to be configured in the InSync Processor, Detector Setup.
4- Controller MUST BE set to FREE operation. C/0-A-1 =14
5- Min G is 10s for sync phases and 5s for all other permitted phases.
6- Veh Ext, Max Gap & Min Gap are set to 1.0s, Reduce Every is set to "zero".
7- "Carry Over" is SET to "zero" for all detectors.

Drop Number	15	<C/0+0+0>
Zone Number	15	<C/0+0+1>
Area Number	1	<C/0+0+2>
Area Address	92	<C/0+0+3>
QuicNet Channel	COM75	(QuicNet)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

CAM DEL RIO W — HANCOCK ST — CAM DEL RIO W

Row	Column Numbers --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk		7		7		7		
1	Ped FDW		14		37		16		
2	Min Green		10		5	5	10		
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension		1.0		1.0	1.0	1.0		
6	Max Gap		1.0		1.0	1.0	1.0		
7	Min Gap		1.0		1.0	1.0	1.0		
8	Max Limit		60		40	30	60		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change		3.9		3.9	3.4	3.9		
F	Red Clear		1.0		1.0	1.0	1.0		

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	
EV-B Clear	
EV-C Delay	
EV-C Clear	
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

Row	F	
0	Permit	_2_456__
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	*View Set Peds*	_2_4_6__
6	Rest In Walk	
7	Red Rest	
8	Dual Entry	
9	Max Recall	
A	Soft Recall	2___6__
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	
E	Yellow Start	2___6__
F	First Phases	___4___

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: CAM DEL RIO W @ HANCOCK ST

Row	Column Numbers ----> / Overlap Name ---->	Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	- - -	4
RR-2 *	- - -	5
SE-1	0	6
SE-2	0	7
		8
		9
		A
		B
		C
		D
		E
		F

Preempt Priority <E/125+C+Row>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interruptor

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: CAM DEL RIO W @ HANCOCK ST

Column Numbers -->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	47	45_7	2	123		
1	6J2U	48	45_7	6	123		
2		41	45_7	4	123		
3		42	45_7	8	123		
4	2I2L	39	45_7	2	123		
5		44	45_7	6	123		
6		45	45_7	4	123		
7		46	45_7	8	123		
8	2I4	39	67	2	123		
9	6J4	40	67	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7	5	123		
D		56	45_7	1	123		
E		57	45_7	7	123		
F		58	45_7	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7	5	123		
1		60	45_7	1	123		
2		61	45_7	7	123		
3		62	45_7	3	123		
4		63	45_7	2	123		
5		64	45_7	6	123		
6		65	45_7	4	123		
7		66	45_7	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7	2	123		
D		77	45_7	6	123		
E		78	45_7	4	123		
F		79	45_7	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers -->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: CAM DEL RIO W @ HANCOCK ST

Row	Time	Plan	Offset	Day of Week
0	06 : 00	6	A	23456
1	11 : 00	2	A	23456
2	13 : 00	7	A	23456
3	14 : 45	5	A	23456
4	19 : 30	E	A	23456
5	10 : 00	4	A	1 7
6	18 : 00	E	A	1 7
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct	Day of Week	Column 4 Phases/Bits

INTERSECTION: CAM DEL RIO W @ HANCOCK ST

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers --->	1	2	3	4	5	6	7	8	9
	Plan Name --->		MID		WKND	PM (PEAK)	AM	PM		
0	Cycle Length		140		140	172	130	160		
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff		0		0	0	0	0		
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff		65		65	40	61	40		
5	Phase 5 - ForceOff		25		25	71	21	71		
6	Phase 6 - ForceOff		0		0	0	0	0		
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset 1		131		116	105	126	94		
B	Offset 2									
C	Offset 3									
D	Perm 1 - End		12		15	17	13	16		
E	Hold Release		255		255	255	255	255		
F	Reserved									

Coordination - Bank 1 <C/1+Plan+Row>

Row		E
0		
1	Plan 1 - Sync	
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	
4	Plan 4 - Sync	2 6
5	Plan 5 - Sync	2 6
6	Plan 6 - Sync	2 6
7	Plan 7 - Sync	2 6
8	Plan 8 - Sync	
9	Plan 9 - Sync	
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C/1+E+Row>

Row		1	2	3	4	5	6	7	8	9
0	Ped Adjustment		0		0	0	0	0		
1	Perm 2 - Start									
2	Perm 2 - End									
3	Perm 3 - Start									
4	Perm 3 - End									
5	Reservice Time									
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase									
B	Perm 1 Ped Phase									
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C/2+Plan+Row>

Row		F
0	Free Lag	
1	Plan 1 - Lag	
2	Plan 2 - Lag	2 45
3	Plan 3 - Lag	
4	Plan 4 - Lag	2 45
5	Plan 5 - Lag	2 4 6
6	Plan 6 - Lag	2 45
7	Plan 7 - Lag	2 4 6
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	External Lag	
B	Lag Hold	
C		
D		
E		
F		

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 3/22/2010

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: CAM DEL RIO W @ HANCOCK ST

Row	Phase Names →	1	2	3	4	5	6	7	8
0	Ped Walk		7		7		7		
1	Ped FDW		14		37		16		
2	Min Green		10		4	4	10		
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension		4.0		2.0	2.0	3.9		
6	Max Gap		4.0		2.0	2.0	3.9		
7	Min Gap		0.2		2.0	2.0	0.2		
8	Max Limit		60		40	30	60		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		
C	Cond Serv Check								
D	Reduce Every		0.8				0.8		
E	Yellow Change		3.9		3.9	3.4	3.9		
F	Red Clear		1.0		1.0	1.0	1.0		

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type		<C/5+1+9>

TBC Transition

Hawk Select		<F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address		<C/1+0+6>
Select Parity		<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month		<C/5+2+A>
Begin Week		<C/5+2+B>
End Month		<C/5+2+C>
End Week		<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time		<C/5+2+E>
Max Cycle Time		<C/5+2+F>

Yellow Yield Coordination

	12345678	
Omit Alarm	#NAME?	

Local Alarm Disable <C/5+F+0>

IEN Status		<C/5+1+B>
Synch Time		<C/5+1+C>

Other Parameters

Row		1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: ROSECRANS/CAM DEL RIO W Last Database Change:
E/W Street Name: ROSECRANS ST/ SPORTS ARENA BLVD

Change Record		
Timing Sheet By	Approved By	Date
M2S	M2S	1/10/2017

Free Lag <C/1+F+0>: 2 4 6

Notes:

Adaptive System operartion RULES:

1- Intersection is running in Adaptive system coordination signal timing.
2- Do not change PIN ASSIGNMENTS on page 3. Pin numbers are changed for Adaptive mode operation.
3- No Recalls/Detector delays to be USED in the controller. Recalls/Delays are to be configured in the InSync Processor, Detector Setup.
4- Controller MUST BE set to FREE operation. C/0-A-1 =14
5- Min G is 10s for sync phases and 5s for all other permitted phases.
6- Veh Ext, Max Gap & Min Gap are set to 1.0s, Reduce Every is set to "zero".
7- "Carry Over" is SET to "zero" for all detectors.

Manual Plan
0 = Automatic
1-8 = Plan 1-8
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	13	<C/0+0+0>
Zone Number	13	<C/0+0+1>
Area Number	1	<C/0+0+2>
Area Address	90	<C/0+0+3>
QuicNet Channel	COM76	(QuicNet)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row		ROSECRANS 1	ROSECRANS 2	SPORTS ARENA 3	SPORTS ARENA 4	CAM DEL RIO W 5	CAM DEL RIO W 6	7	8
	Column Numbers -->				Phase				
0	Ped Walk		7		7		7		
1	Ped FDW		23		29		21		
2	Min Green		10	5	5	5	10		
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension		1.0	1.0	1.0	1.0	1.0		
6	Max Gap		1.0	1.0	1.0	1.0	1.0		
7	Min Gap		1.0	1.0	1.0	1.0	1.0		
8	Max Limit		60	40	40	30	60		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change		3.9	3.9	3.9	3.4	3.9		
F	Red Clear		2.0	2.0	2.0	2.0	2.0		

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

Row	F
0	Permit: 23456
1	Red Lock
2	Yellow Lock
3	Min Recall
4	Ped Recall
5	*View Set Peds*: 2 4 6
6	Rest In Walk
7	Red Rest
8	Dual Entry
9	Max Recall
A	Soft Recall: 2 6
B	Max 2
C	Cond. Service
D	Man Cntrl Calls
E	Yellow Start: 2 6
F	First Phases: 3

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: ROSECRANS ST/CAM DEL RIO W @ ROSECRANS ST/SPORTS ARENA BLVD

Overlap Assignments <E/29+Column+Row>

Row	Column Numbers ---> / Overlap Name --->	Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Configuration <E/125+E+Row>

Row	Column Numbers --->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	6
D	EV-D Phases	3
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+F+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Specials <F/2+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passago	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Flash to PE & PE Non Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interruoter

	2
Phase 1	10
Phase 2	10
Phase 3	10
Phase 4	10
Phase 5	10
Phase 6	10
Phase 7	10
Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: ROSECRANS ST/CAM DEL RIO W @ ROSECRANS ST/SPORTS ARENA BLVD

Column Numbers -->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	47	45_7	2	123		
1	6J2U	48	45_7	6	123		
2	4I6U	45	45_7	4	123		
3	8J6U	42	45_7	8	123		
4		43	45_7	2	123		
5		44	45_7	6	123		
6	4I6L	41	45_7	4	123		
7		46	45_7	8	123		
8	2I4	39	45_7	2	123		
9	6J4	40	45_7	6	123		
A	4I8	41	45_7	4	123		
B		50	67	8	123		
C		55	45_7	5	123		
D		56	45_7	1	123		
E		57	45_7	7	123		
F		58	45_7	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7	5	123		
1	3I9U	58	45_7	3	123		
2		61	45_7	7	123		
3		62	45_7	3	123		
4		63	45_7	2	123		
5		64	45_7	6	123		
6		65	45_7	4	123		
7		66	45_7	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7	2	123		
D		77	45_7	6	123		
E	4I7L	41	45_7	4	123		
F		79	45_7	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers -->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: ROSECRANS ST/CAM DEL RIO W @ ROSECRANS ST/SPORTS ARENA BLVD

Row	Time	Plan	Offset	Day of Week
0	06 : 00	6	A	23456
1	11 : 00	2	A	23456
2	13 : 00	7	A	23456
3	14 : 45	5	A	23456
4	19 : 30	E	A	23456
5	10 : 00	4	A	1 7
6	18 : 00	E	A	1 7
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits

TOD Function <7/0.1+Row> <E/27+4+Row>

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, December = C

INTERSECTION: ROSECRANS ST/CAM DEL RIO W @ ROSECRANS ST/SPORTS ARENA BLVD

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers → / Plan Name →	Plan 1	2 MID	3	4 WKND	5 PM (PEAK)	6 AM	7 PM	8	9
0	Cycle Length		140		140	172	130	160		
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff		0		0	0	0	0		
3	Phase 3 - ForceOff		31		31	40	30	40		
4	Phase 4 - ForceOff		68		68	82	71	82		
5	Phase 5 - ForceOff		90		90	108	92	108		
6	Phase 6 - ForceOff		0		0	0	0	0		
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset 1		133		133	78	117	71		
B	Offset 2									
C	Offset 3									
D	Perm 1 - End		10		10	17	13	16		
E	Hold Release		255		255	255	255	255		
F	Reserved									

Coordination - Bank 1 <C/1+Plan+Row>

Row		E
0		
1	Plan 1 - Sync	
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	
4	Plan 4 - Sync	2 6
5	Plan 5 - Sync	2 6
6	Plan 6 - Sync	2 6
7	Plan 7 - Sync	2 6
8	Plan 8 - Sync	
9	Plan 9 - Sync	
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C/1+E+Row>

Row		Plan 1	2	3	4	5	6	7	8	9
0	Ped Adjustment									
1	Perm 2 - Start									
2	Perm 2 - End									
3	Perm 3 - Start									
4	Perm 3 - End									
5	Reservice Time									
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase									
B	Perm 1 Ped Phase									
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C/2+Plan+Row>

Row		F
0	Free Lag	
1	Plan 1 - Lag	
2	Plan 2 - Lag	2 4 6
3	Plan 3 - Lag	
4	Plan 4 - Lag	2 4 6
5	Plan 5 - Lag	2 4 6
6	Plan 6 - Lag	2 4 6
7	Plan 7 - Lag	2 4 6
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	External Lag	
B	Lag Hold	
C		
D		
E		
F		

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 3/22/2010

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 83	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: ROSECRANS ST/CAM DEL RIO W @ ROSECRANS ST/SPORTS ARENA BLVD

		Phase							
	Column Numbers ---->	1	2	3	4	5	6	7	8
Row	Phase Names ---->								
0	Ped Walk		7		7		7		
1	Ped FDW		23		29		21		
2	Min Green		10	7	7	4	10		
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension		3.9	2.0	2.0	2.0	4.0		
6	Max Gap		3.9	2.0	2.0	2.0	4.0		
7	Min Gap		0.2	0.2	0.2	2.0	0.2		
8	Max Limit		60	40	40	30	60		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		
C	Cond Serv Check								
D	Reduce Every		0.8	1.7	1.7		0.8		
E	Yellow Change		3.9	3.9	3.9	3.4	3.9		
F	Red Clear		2.0	2.0	2.0	2.0	2.0		

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Hawk Select	0	<F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	0	<C/1+0+6>
Select Parity	0	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	0	<C/5+2+E>
Max Cycle Time	20	<C/5+2+F>

Yellow Yield Coordination

	12345678	
Omit Alarm	#NAME?	

Local Alarm Disable <C/5+F+0>

IEN Status	1	<C/5+1+B>
Synch Time	0.0	<C/5+1+C>

Other Parameters

Row		1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

INTERSECTION: MIDWAY DR & DUKE ST

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **DUKE**
E/W Street Name: **MIDWAY**

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
SGC	M23	2/4/16

Notes: ***FDW is calculated using 3.5 fps pedestrian speed***

Free Lag <C/1+F+0>: _2_4_6_8

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	15	<C/0+0+0>
Zone Number	15	<C/0+0+1>
Area Number	1	<C/0+0+2>
Area Address	234	<C/0+0+3>
QuicNet Channel	COM 66	(QuicNet)

Communication Addresses

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

MIDWAY | DWY | MIDWAY | DUKE

Phase

Row	Column Numbers --->	1	2	3	4	5	6	7	8
	N	PPLT				PPLT			
0	Ped Walk		7				7		7
1	Ped FDW		13				13		16
2	Min Green	4	10		4	4	10		4
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	2.9		2.0	2.0	2.9		2.0
6	Max Gap	2.0	2.9		2.0	2.0	2.9		2.0
7	Min Gap	2.0	0.2		2.0	2.0	0.2		2.0
8	Max Limit	30	60		40	30	60		40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1				1		1
C	Cond Serv Check								
D	Reduce Every		1.1				1.1		
E	Yellow Change	3.4	3.9		3.9	3.4	3.9		3.9
F	Red Clear	1.0	1.0		1.0	1.0	1.0		1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	
EV-B Clear	
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

Row		F
0	Permit	12_456_8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	*View Set Peds*	_2___6_8
6	Rest In Walk	
7	Red Rest	
8	Dual Entry	___4___8
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	12345678
E	Yellow Start	_2___6__
F	First Phases	___4___8

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: MIDWAY DR & DUKE ST

Row	Column Numbers --->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name --->								
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers --->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	1 5
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: MIDWAY DR & DUKE ST

Row	Detector Name	0 C1 Pin Number	1 Attributes	2 Phase(s)	3 Assign	1 Delay	3 Carry-over
0	2I2U	39	45_7	2	123		1.8
1	6J2U	40	45_7	6	123		1.8
2		41	45_7	4	123		
3	8J6U	42	45_7	8	123	10.0	
4	2I2L	43	45_7	2	123		1.8
5	6J2L	44	45_7	6	123		1.8
6		45	45_7	4	123		
7		46	45_7	8	123		
8		47	67	2	123		
9		48	67	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7	5	123		
D		56	45_7	1	123		
E		57	45_7	7	123		
F		58	45_7	3	123		

Row	Detector Name	4 C1 Pin Number	5 Attributes	6 Phase(s)	7 Assign	2 Delay	4 Carry-over
0		59	45_7	5	123		
1		60	45_7	1	123		
2		61	45_7	7	123		
3		62	45_7	3	123		
4		63	45_7	2	123		
5		64	45_7	6	123		
6		65	45_7	4	123		
7		66	45_7	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7	2	123		
D		77	45_7	6	123		
E		78	45_7	4	123		
F		79	45_7	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers →	1	2	3	4	5	6	7	8	Row
	Ped / Phase / Overlap								
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: MIDWAY DR & DUKE ST

Row	Time	Plan	Offset	Day of Week
0	11 : 00	2	A	_23456_
1	14 : 30	3	A	_23456_
2	18 : 30	E	A	1234567
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits

TOD Function <7/0.1+Row> <E/27+4+Row>

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select: October = A, November = B, Decmber = C

INTERSECTION: MIDWAY DR & DUKE ST

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9	Row
	Plan Name ---->		MID	PM							
0	Cycle Length		78	80							0
1	Phase 1 - ForceOff		46	42							1
2	Phase 2 - ForceOff		0	0							2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff		30	29							4
5	Phase 5 - ForceOff		46	42							5
6	Phase 6 - ForceOff		0	0							6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff		30	29							8
9	Ring Offset										9
A	Offset 1		45	31							A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End		8	8							D
E	Hold Release		255	255							E
F	Reserved										F

Coordination - Bank 1 <C/1+Plan+Row>

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync	2 6	2
3	Plan 3 - Sync	2 6	3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row		Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9	Row
0	Ped Adjustment		0	0							0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag	2 4 6 8	2
3	Plan 3 - Lag	2 4 6 8	3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B	Lag Hold		B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 5/14/2013

INTERSECTION: MIDWAY DR & DUKE ST

Row	Column 3		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	One-Shot Timer		Latch 1 Set		NOT-3		Max 2		Pretimed		Set Monday		Dial 2 (7-Wire)		Sim Term	0	0
1	AND-5 (a)		Latch 1 Reset		NOT-4		Reserved		Plan 1		Ext. Perm 1		Dial 3 (7-Wire)		EV-A	71	1
2	AND-5 (b)		Latch 2 Set		OR-4 (a)		Reserved		Plan 2		Ext. Perm 2		Offset 1 (7-Wire)		EV-B	72	2
3	AND-6 (a)		Latch 2 Reset		OR-4 (b)		Reserved		Plan 3		Gate Down		Offset 2 (7-Wire)		EV-C	73	3
4	AND-6 (b)		NAND-3 (a)		OR-5 (a)		Reserved		Plan 4		Set Clock		Offset 3 (7-Wire)		EV-D	74	4
5	Reserved		NAND-3 (b)		OR-5 (b)		Reserved		Plan 5		Stop Time	82	Free (7-Wire)		RR-1	51	5
6	Reserved		NAND-4 (a)		OR-6 (a)		Reserved		Plan 6		Flash Sense	81	Flash (7-Wire)		RR-2	52	6
7	Reserved		NAND-4 (b)		OR-6 (b)		Reserved		Plan 7		Manual Enable		Excl. Ped Omit		Spec. Event 1		7
8	Spec. Funct. 1		OR-7 (a)		EXTMR		Reserved		Plan 8		Man. Advance		NOT-1		Spec. Event 2		8
9	Spec. Funct. 2		OR-7 (b)		Reserved		Max Inhibit (nema)		Plan 9		External Alarm		NOT-2		External Lag		9
A	Spec. Funct. 3		OR-7 (c)		AND-4 (a)		Force A (nema)		DELAY-A		Phase Bank 2		OR-1 (a)		AND-1 (a)		A
B	Spec. Funct. 4		OR-7 (d)		AND-4 (b)		Force B (nema)		DELAY-B		Phase Bank 3		OR-1 (b)		AND-1 (b)		B
C	Reserved		OR-8 (a)		NAND-1 (a)		C.N.A. (nema)		DELAY-C		Overlap Set 2		OR-2 (a)		AND-2 (a)		C
D	Reserved		OR-8 (b)		NAND-1 (b)		Hold (nema)		DELAY-D		Overlap Set 3		OR-2 (b)		AND-2 (b)		D
E	Reserved		OR-8 (c)		NAND-2 (a)		Max Recall		DELAY-E		Detector Set 2		OR-3 (a)		AND-3 (a)		E
F	Reserved		OR-8 (d)		NAND-2 (b)		Min Recall		DELAY-F		Detector Set 3		OR-3 (b)		AND-3 (b)		F

Assignable Inputs <E/126+Column+Row>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Phase ON - 1		Preempt Fail		Flasher 0		Free		NOT-1		TOD Out 1		Dial 2 (7-Wire)		0
1	Reserved		Phase ON - 2		Sp Evnt Out 1		Flasher 1		Plan 1		OR-1		TOD Out 2		Dial 3 (7-Wire)		1
2	Reserved		Phase ON - 3		Sp Evnt Out 2		Fast Flasher		Plan 2		OR-2		TOD Out 3		Offset 1 (7-Wire)		2
3	Reserved		Phase ON - 4		Sp Evnt Out 3		EXTMR		Plan 3		OR-3		TOD Out 4		Offset 2 (7-Wire)		3
4	Reserved		Phase ON - 5		Sp Evnt Out 4		One-Shot Timer		Plan 4		AND-1		TOD Out 5		Offset 3 (7-Wire)		4
5	Reserved		Phase ON - 6		Sp Evnt Out 5		Reserved		Plan 5		AND-2		TOD Out 6		Free (7-Wire)		5
6	Reserved		Phase ON - 7		Sp Evnt Out 6		Latch 1		Plan 6		AND-3		TOD Out 7		Flash (7-Wire)		6
7	Reserved		Phase ON - 8		Sp Evnt Out 7		Latch 2		Plan 7		NOT-2		TOD Out 8		Preempt		7
8	Flh Yell Arrow 1		Ph. Check - 1		Sp Evnt Out 8		NOT-3		Plan 8		EV-A		Adv. Warn - 1		Low Priority A		8
9	Green 1		Ph. Check - 2		Coord On		NOT-4		Plan 9		EV-B		Adv. Warn - 2		Low Priority B		9
A	Flh Yell Arrow 3		Ph. Check - 3		Detector Fail		OR-4		Spec. Funct. 3		EV-C		DELAY-A		Low Priority C		A
B	Green 3		Ph. Check - 4		Spec. Funct. 1		OR-5		Spec. Funct. 4		EV-D		DELAY-B		Low Priority D		B
C	Flh Yell Arrow 5		Ph. Check - 5		Spec. Funct. 2		OR-6		NAND-3		RR-1		DELAY-C		AND-5		C
D	Green 5		Ph. Check - 6		Central Control		AND-4		NAND-4		RR-2		DELAY-D		AND-6		D
E	Flh Yell Arrow 7		Ph. Check - 7		Excl. Ped DW		NAND-1		OR-7		Spec. Event 1		DELAY-E		Reserved		E
F	Green 7		Ph. Check - 8		Excl. Ped WK		NAND-2		OR-8		Spec. Event 2		DELAY-F		Reserved		F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: MIDWAY DR & EAST DR

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **EAST**
E/W Street Name: **MIDWAY**

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
SGC	M25	

Free Lag <C/1+F+0> _2_4_6_8

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	12	<C/0+0+0>
Zone Number	12	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	201	<C/0+0+3>
QuicNet Channel	COM 66	(QuicNet)

Communication Addresses

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

MIDWAY EAST MIDWAY DWY

		Phase 1	2	3	4	5	6	7	8
Column Numbers →									
Row		PPLT				PPLT			
0	Ped Walk		7		7		7		
1	Ped FDW		6		14		7		
2	Min Green	4	10		7	4	10		7
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	3.2		2.0	2.0	3.2		2.0
6	Max Gap	2.0	3.2		2.0	2.0	3.2		2.0
7	Min Gap	2.0	0.2		2.0	2.0	0.2		2.0
8	Max Limit	30	60		40	30	60		40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		
C	Cond Serv Check								
D	Reduce Every		1.0				1.0		
E	Yellow Change	3.4	3.9		3.9	3.4	3.9		3.9
F	Red Clear	1.0	1.0		1.0	1.0	1.0		1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	
EV-B Clear	
EV-C Delay	0
EV-C Clear	0
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12_456_8	0
Red Lock		1
Yellow Lock		2
Min Recall		3
Ped Recall		4
View Set Peds	_2_4_6_	5
Rest In Walk		6
Red Rest		7
Dual Entry	4 8	8
Max Recall		9
Soft Recall	_2 6_	A
Max 2		B
Cond. Service		C
Man Cntrl Calls	12345678	D
Yellow Start	_2 6_	E
First Phases	4 8	F

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: MIDWAY DR & EAST DR

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	- - -
5	RR-2 *	- - -
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	1 5
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: MIDWAY DR & EAST DR

Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
	Column Numbers ---->	0	1	2	3	1	3
0	2I2U	39	45_7	2	123		1.8
1		40	45_7	6	123		
2		41	45_7	4	123		
3		42	45_7	8	123		
4		43	45_7	2	123		
5		44	45_7	6	123		
6		45	45_7	4	123		
7		46	45_7	8	123		
8		47	67	2	123		
9		48	67	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7	5	123		
D		56	45_7	1	123		
E		57	45_7	7	123		
F		58	45_7	3	123		

Row	Defector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
		4	5	6	7	2	4
0		59	45_7	5	123		
1		60	45_7	1	123		
2		61	45_7	7	123		
3		62	45_7	3	123		
4		63	45_7	2	123		
5	6J3U	64	45_7	6	123		1.8
6		65	45_7	4	123		
7		66	45_7	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7	2	123		
D		77	45_7	6	123		
E		78	45_7	4	123		
F		79	45_7	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers --->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: MIDWAY DR & EAST DR

TOD Coordination <9/0.1+Row> (Bank 1)

Row	Time	Plan	Offset	Day of Week
0	11 : 00	2	A	23456_
1	14 : 30	3	A	_23456_
2	18 : 30	E	A	1234567
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <7/0.1+Row> <E/27+4+Row>

Time	Funct.	Day of Week	Column 4 Phases/Bits

Holiday Dates <8/1.1+Row> (Bank 1)

Day	Year	Month	Holiday Type

Holiday Events <9/1.1+Row> (Bank 1)

Time	Plan	Offset	Holiday Type

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

TOD Coordination <C+0+9=0.2> (Bank 2)

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday Dates <C+0+8=1.2> (Bank 2)

Day	Year	Month	Holiday Type

Holiday Events <C+0+9=1.2> (Bank 2)

Time	Plan	Offset	Holiday Type

Month Select: October = A, November = B, December = C

INTERSECTION: MIDWAY DR & EAST DR

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->		MID	PM							
0	Cycle Length		78	80							0
1	Phase 1 - ForceOff		41	39							1
2	Phase 2 - ForceOff		0	0							2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff		25	26							4
5	Phase 5 - ForceOff		41	39							5
6	Phase 6 - ForceOff		0	0							6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff		25	26							8
9	Ring Offset										9
A	Offset 1		45	35							A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End		8	8							D
E	Hold Release		225	255							E
F	Reserved										F

Coordination - Bank 1 <C/1+Plan+Row>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync	2 6	2
3	Plan 3 - Sync	2 6	3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment		0	0							0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag	2 4 6 8	2
3	Plan 3 - Lag	2 4 6 8	3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B	Lag Hold		B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 5/14/2013

INTERSECTION: MIDWAY DR & EAST DR

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term 0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: SPORTS ARENA BLVD & EAST DR

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: EAST
E/W Street Name: SPORTS ARENA

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
SGC	M26	

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Free Lag <C/1+F+0>: _2__6_8

Drop Number	7	<C/0+0+0>
Zone Number	7	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	197	<C/0+0+3>
QuicNet Channel	COM 66	(QuicNet)

Communication Addresses

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers →	1	2	3	4	5	6	7	8
			SPORTS ARENA				SPORTS ARENA		EAST
		Phase							
0	Ped Walk		7				7		7
1	Ped FDW		11				18		21
2	Min Green	4	10			4	10		4
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	4.9			2.0	3.9		2.0
6	Max Gap	2.0	4.9			2.0	3.9		2.0
7	Min Gap	2.0	0.2			2.0	0.2		2.0
8	Max Limit	30	60			30	60		40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1				1		1
C	Cond Serv Check								
D	Reduce Every		0.6				0.8		
E	Yellow Change	3.4	3.9			3.4	3.9		3.9
F	Red Clear	1.0	1.0			1.0	1.0		1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	
EV-B Clear	
EV-C Delay	0
EV-C Clear	0
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12__56_8	0
Red Lock		1
Yellow Lock		2
Min Recall		3
Ped Recall		4
View Set Peds	_2___6_8	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall	_2___6__	A
Max 2		B
Cond. Service		C
Man Cntrl Calls	12345678	D
Yellow Start	_2___6__	E
First Phases	_____8	F

How to Set Page Access Code: F/1 – C + 0 + F = 1

INTERSECTION: SPORTS ARENA BLVD & EAST DR

Row	Column Numbers --> / Overlap Name -->	Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers -->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	
F	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0	Phase 1	10
1	Phase 2	10
2	Phase 3	10
3	Phase 4	10
4	Phase 5	10
5	Phase 6	10
6	Phase 7	10
7	Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: SPORTS ARENA BLVD & EAST DR

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	39	45_7_	2	123		1.8
1		40	45_7_	6	123		
2		41	45_7_	4	123		
3		42	45_7_	8	123		
4		43	45_7_	2	123		
5		44	45_7_	6	123		
6		45	45_7_	4	123		
7	8J6L	46	45_7_	8	123	10.0	
8		47	67	2	123		
9		48	67	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7_	5	123		
D		56	45_7_	1	123		
E		57	45_7_	7	123		
F		58	45_7_	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123		
1		60	45_7_	1	123		
2		61	45_7_	7	123		
3		62	45_7_	3	123		
4		63	45_7_	2	123		
5	6J3U	64	45_7_	6	123		1.8
6		65	45_7_	4	123		
7		66	45_7_	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7_	2	123		
D		77	45_7_	6	123		
E		78	45_7_	4	123		
F		79	45_7_	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: SPORTS ARENA BLVD & EAST DR

Row	Time	Plan	Offset	Day of Week
0	11 : 00	5	A	23456
1	14 : 00	6	A	23456
2	19 : 00	E	A	1234567
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits

INTERSECTION: SPORTS ARENA BLVD & EAST DR

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---> / Plan Name --->	Plan 1	2	3	4	5	6	7	8	9	Row
						MID	PM				
0	Cycle Length					110	108				0
1	Phase 1 - ForceOff					81	81				1
2	Phase 2 - ForceOff					0	16				2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff										4
5	Phase 5 - ForceOff					18	16				5
6	Phase 6 - ForceOff					0	0				6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff					45	45				8
9	Ring Offset										9
A	Offset 1					70	89				A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End					11	16				D
E	Hold Release					255	255				E
F	Reserved					0	0				F

Coordination - Bank 1 <C/1+Plan+Row>

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync		2
3	Plan 3 - Sync		3
4	Plan 4 - Sync		4
5	Plan 5 - Sync	2 6	5
6	Plan 6 - Sync	2 6	6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment					0	0				0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag		2
3	Plan 3 - Lag		3
4	Plan 4 - Lag		4
5	Plan 5 - Lag	2 5 8	5
6	Plan 6 - Lag	2 5 8	6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B	Lag Hold		B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 5/14/2013

INTERSECTION: SPORTS ARENA BLVD & EAST DR

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	One-Shot Timer		Latch 1 Set		NOT-3		Max 2		Pretimed		Set Monday		Dial 2 (7-Wire)		Sim Term	0	0
1	AND-5 (a)		Latch 1 Reset		NOT-4		Reserved		Plan 1		Ext. Perm 1		Dial 3 (7-Wire)		EV-A	71	1
2	AND-5 (b)		Latch 2 Set		OR-4 (a)		Reserved		Plan 2		Ext. Perm 2		Offset 1 (7-Wire)		EV-B	72	2
3	AND-6 (a)		Latch 2 Reset		OR-4 (b)		Reserved		Plan 3		Gate Down		Offset 2 (7-Wire)		EV-C	73	3
4	AND-6 (b)		NAND-3 (a)		OR-5 (a)		Reserved		Plan 4		Set Clock		Offset 3 (7-Wire)		EV-D	74	4
5	Reserved		NAND-3 (b)		OR-5 (b)		Reserved		Plan 5		Stop Time	82	Free (7-Wire)		RR-1	51	5
6	Reserved		NAND-4 (a)		OR-6 (a)		Reserved		Plan 6		Flash Sense	81	Flash (7-Wire)		RR-2	52	6
7	Reserved		NAND-4 (b)		OR-6 (b)		Reserved		Plan 7		Manual Enable		Excl. Ped Omit		Spec. Event 1		7
8	Spec. Funct. 1		OR-7 (a)		EXTMR		Reserved		Plan 8		Man. Advance		NOT-1		Spec. Event 2		8
9	Spec. Funct. 2		OR-7 (b)		Reserved		Max Inhibit (nema)		Plan 9		External Alarm		NOT-2		External Lag		9
A	Spec. Funct. 3		OR-7 (c)		AND-4 (a)		Force A (nema)		DELAY-A		Phase Bank 2		OR-1 (a)		AND-1 (a)		A
B	Spec. Funct. 4		OR-7 (d)		AND-4 (b)		Force B (nema)		DELAY-B		Phase Bank 3		OR-1 (b)		AND-1 (b)		B
C	Reserved		OR-8 (a)		NAND-1 (a)		C.N.A. (nema)		DELAY-C		Overlap Set 2		OR-2 (a)		AND-2 (a)		C
D	Reserved		OR-8 (b)		NAND-1 (b)		Hold (nema)		DELAY-D		Overlap Set 3		OR-2 (b)		AND-2 (b)		D
E	Reserved		OR-8 (c)		NAND-2 (a)		Max Recall		DELAY-E		Detector Set 2		OR-3 (a)		AND-3 (a)		E
F	Reserved		OR-8 (d)		NAND-2 (b)		Min Recall		DELAY-F		Detector Set 3		OR-3 (b)		AND-3 (b)		F

Assignable Inputs <E/126+Column+Row>

Row	Column 8		Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Phase ON - 1		Preempt Fail		Flasher 0		Free		NOT-1		TOD Out 1		Dial 2 (7-Wire)		0
1	Reserved		Phase ON - 2		Sp Evnt Out 1		Flasher 1		Plan 1		OR-1		TOD Out 2		Dial 3 (7-Wire)		1
2	Reserved		Phase ON - 3		Sp Evnt Out 2		Fast Flasher		Plan 2		OR-2		TOD Out 3		Offset 1 (7-Wire)		2
3	Reserved		Phase ON - 4		Sp Evnt Out 3		EXTMR		Plan 3		OR-3		TOD Out 4		Offset 2 (7-Wire)		3
4	Reserved		Phase ON - 5		Sp Evnt Out 4		One-Shot Timer		Plan 4		AND-1		TOD Out 5		Offset 3 (7-Wire)		4
5	Reserved		Phase ON - 6		Sp Evnt Out 5		Reserved		Plan 5		AND-2		TOD Out 6		Free (7-Wire)		5
6	Reserved		Phase ON - 7		Sp Evnt Out 6		Latch 1		Plan 6		AND-3		TOD Out 7		Flash (7-Wire)		6
7	Reserved		Phase ON - 8		Sp Evnt Out 7		Latch 2		Plan 7		NOT-2		TOD Out 8		Preempt		7
8	Flh Yell Arrow 1		Ph. Check - 1		Sp Evnt Out 8		NOT-3		Plan 8		EV-A		Adv. Warn - 1		Low Priority A		8
9	Green 1		Ph. Check - 2		Coord On		NOT-4		Plan 9		EV-B		Adv. Warn - 2		Low Priority B		9
A	Flh Yell Arrow 3		Ph. Check - 3		Detector Fail		OR-4		Spec. Funct. 3		EV-C		DELAY-A		Low Priority C		A
B	Green 3		Ph. Check - 4		Spec. Funct. 1		OR-5		Spec. Funct. 4		EV-D		DELAY-B		Low Priority D		B
C	Flh Yell Arrow 5		Ph. Check - 5		Spec. Funct. 2		OR-6		NAND-3		RR-1		DELAY-C		AND-5		C
D	Green 5		Ph. Check - 6		Central Control		AND-4		NAND-4		RR-2		DELAY-D		AND-6		D
E	Flh Yell Arrow 7		Ph. Check - 7		Excl. Ped DW		NAND-1		OR-7		Spec. Event 1		DELAY-E		Reserved		E
F	Green 7		Ph. Check - 8		Excl. Ped WK		NAND-2		OR-8		Spec. Event 2		DELAY-F		Reserved		F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: HANCOCK ST @ SPORTS ARENA BLVD

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **HANCOCK**
E/W Street Name: **SPORTS ARENA**

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
SI	M2S	11/8/16

Notes: ***FDW is calculated using 3.5 fps pedestrian speed.***

Free Lag <C/1+F+0>: 2 4 6

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	4	<C/0+0+0>
Zone Number	4	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	194	<C/0+0+3>
QuicNet Channel	COM66:	(QuicNet)

Communication Addresses

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

SPORTS ARENA — HANCOCK — SPORTS ARENA

		Phase 1	2	3	4	5	6	7	8
Column Numbers →		1	2	3	4	5	6	7	8
Row		↓	→		↓	↑	←		
0	Ped Walk				7		7		
1	Ped FDW				27		19		
2	Min Green	4	10		4	4	10		
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	3.5		2.0	2.0	3.5		
6	Max Gap	2.0	3.5		2.0	2.0	3.5		
7	Min Gap	2.0	0.2		2.0	2.0	0.2		
8	Max Limit	30	60		40	30	60		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW				1		1		
C	Cond Serv Check								
D	Reduce Every		0.9				0.9		
E	Yellow Change	3.4	3.9		3.9	3.4	3.9		
F	Red Clear	1.0	1.0		1.0	1.0	1.0		

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12 456	0
Red Lock		1
Yellow Lock		2
Min Recall	2 6	3
Ped Recall		4
View Set Peds	4 6	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall		A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start	2 6	E
First Phases	4	F

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: HANCOCK ST @ SPORTS ARENA BLVD

Row	Column Numbers --->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name --->								
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0
8		
9		
A		
B		
C		
D		
E		
F		

Preempt Priority <E/125+C+Row>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers --->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A
2 = EV B
3 = EV C
4 = EV D
5 = RR 1
6 = RR 2
7 = SE 1
8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10
9		
A		
B		
C		
D		
E		
F		

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: HANCOCK ST @ SPORTS ARENA BLVD

Row	Time	Plan	Offset	Day of Week
0	11 : 00	5	A	_23456_
1	14 : 00	6	A	_23456_
2	19 : 00	E	A	1234567
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits

TOD Function <7/0.1+Row> <E/27+4+Row>

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, Decmber = C

INTERSECTION: HANCOCK ST @ SPORTS ARENA BLVD

Column Numbers --->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	39	45_7	2	123		1.8
1	6J2U	40	45_7	6	123		1.8
2		41	45_7	4	123		
3		42	45_7	8	123		
4		43	45_7	2	123		
5		44	45_7	6	123		
6		45	45_7	4	123		
7		46	45_7	8	123		
8		47	67	2	123		
9		48	67	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7	5	123		
D		56	45_7	1	123		
E		57	45_7	7	123		
F		58	45_7	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7	5	123		
1		60	45_7	1	123		
2		61	45_7	7	123		
3		62	45_7	3	123		
4		63	45_7	2	123		
5		64	45_7	6	123		
6		65	45_7	4	123		
7		66	45_7	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7	2	123		
D		77	45_7	6	123		
E	4I7L	78	45_7	4	123	10.0	
F		79	45_7	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers --->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: HANCOCK ST @ SPORTS ARENA BLVD

Row	Column Numbers -->	Plan 1	2	3	4	5	6	7	8	9
	Plan Name -->					MID	PM			
0	Cycle Length					110	108			
1	Phase 1 - ForceOff					55	16			
2	Phase 2 - ForceOff					0	0			
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff					39	55			
5	Phase 5 - ForceOff					65	76			
6	Phase 6 - ForceOff					0	0			
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset 1					77	90			
B	Offset 2									
C	Offset 3									
D	Perm 1 - End					11	11			
E	Hold Release					255	255			
F	Reserved									

Coordination - Bank 1 <C/1+Plan+Row>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	E
0	
1	Plan 1 - Sync
2	Plan 2 - Sync
3	Plan 3 - Sync
4	Plan 4 - Sync
5	Plan 5 - Sync 2 6
6	Plan 6 - Sync 2 6
7	Plan 7 - Sync
8	Plan 8 - Sync
9	Plan 9 - Sync
A	NEMA Sync
B	NEMA Hold
C	
D	
E	Coord Extra
F	

Sync Phases <C/1+E+Row>

Row	Ped Adjustment	1	2	3	4	5	6	7	8	9
0	Ped Adjustment					0	0			
1	Perm 2 - Start									
2	Perm 2 - End									
3	Perm 3 - Start									
4	Perm 3 - End									
5	Reservice Time									
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase									
B	Perm 1 Ped Phase									
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C/2+Plan+Row>

Row	F
0	Free Lag
1	Plan 1 - Lag
2	Plan 2 - Lag
3	Plan 3 - Lag
4	Plan 4 - Lag
5	Plan 5 - Lag 2 4 6
6	Plan 6 - Lag 1 4 6
7	Plan 7 - Lag
8	Plan 8 - Lag
9	Plan 9 - Lag
A	External Lag
B	Lag Hold
C	
D	
E	
F	

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 5/14/2013

INTERSECTION: MIDWAY DR & KEMPER DR

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **KEMPER**
E/W Street Name: **MIDWAY**

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
SGC	M25	

Notes: ***FDW calculated using 3.5 fps pedestrian speed***

Free Lag <C/1+F+0>: 2 5 8

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	9	<C/0+0+0>
Zone Number	9	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	198	<C/0+0+3>
QuicNet Channel	COM 66	(QuicNet)

Communication Addresses

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

MIDWAY MIDWAY KEMPER KEMPER

		Phase							
	Column Numbers --->	1	2	3	4	5	6	7	8
Row	N	1+8							
0	Ped Walk		7				7	7	7
1	Ped FDW		20				16	26	27
2	Min Green	4	10			4	10	7	7
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	4.0			2.0	4.5	2.0	2.0
6	Max Gap	2.0	4.0			2.0	4.5	2.0	2.0
7	Min Gap	2.0	0.2			2.0	0.2	2.0	2.0
8	Max Limit	30	60			30	60	40	40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1				1	1	1
C	Cond Serv Check								
D	Reduce Every		0.8				0.7		
E	Yellow Change	3.4	3.9			3.4	3.9	3.9	3.9
F	Red Clear	1.0	1.0			1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
<F/1+E+Row>

	F	Row
Permit	12 5678	0
Red Lock		1
Yellow Lock		2
Min Recall		3
Ped Recall		4
View Set Peds	2 678	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall	2 6	A
Max 2		B
Cond. Service		C
Man Cntrl Calls	12345678	D
Yellow Start	2 6	E
First Phases	7	F

How to Set Page Access Code: F/1 – C + 0 + F = 1

INTERSECTION: MIDWAY DR & KEMPER DR

Row	Column Numbers ----> / Overlap Name ---->	Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number								
1	Veh Set 1 - Phases	1 8							
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases	2 78							
5	Neg Ped Phases	2 78							
6	Green Omit Phases	8							
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change	3.4							
F	Red Clear	1.0							

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	- - -
5	RR-2 *	- - -
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	7
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	7
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: MIDWAY DR & KEMPER DR

Column Numbers --->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	39	45_7_	2	123		1.8
1	6J2U	40	45_7_	6	123		1.8
2		41	45_7_	4	123		
3		42	45_7_	8	123		
4		43	45_7_	2	123		
5		44	45_7_	6	123		
6		45	45_7_	4	123		
7		46	45_7_	8	123		
8		47	67	2	123		
9		48	67	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7_	5	123		
D		56	45_7_	1	123		
E		57	45_7_	7	123		
F		58	45_7_	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123		
1		60	45_7_	1	123		
2	7J9L	61	45_7_	7	123	10.0	
3		62	45_7_	3	123		
4		63	45_7_	2	123		
5		64	45_7_	6	123		
6		65	45_7_	4	123		
7	8J7U	66	45_7_	8	123	10.0	
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7_	2	123		
D		77	45_7_	6	123		
E		78	45_7_	4	123		
F		79	45_7_	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers --->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green	35								5
Overlap Yellow	37								6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	30	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: MIDWAY DR & KEMPER DR

TOD Coordination <9/0.1+Row> (Bank 1)

Row	Time	Plan	Offset	Day of Week
0	11 : 00	2	A	23456_
1	14 : 30	3	A	23456_
2	18 : 30	E	A	1234567
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <7/0.1+Row> <E/27+4+Row>

Time	Funct.	Day of Week	Column 4 Phases/Bits

Holiday Dates <8/1.1+Row> (Bank 1)

Day	Year	Month	Holiday Type

Holiday Events <9/1.1+Row> (Bank 1)

Time	Plan	Offset	Holiday Type

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

TOD Coordination <C+0+9=0.2> (Bank 2)

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday Dates <C+0+8=1.2> (Bank 2)

Day	Year	Month	Holiday Type

Holiday Events <C+0+9=1.2> (Bank 2)

Time	Plan	Offset	Holiday Type

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select: October = A, November = B, December = C

INTERSECTION: MIDWAY DR & KEMPER DR

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers --->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9	Row
	Plan Name --->		MID	PM							
0	Cycle Length		156	160							0
1	Phase 1 - ForceOff		129	136							1
2	Phase 2 - ForceOff		0	0							2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff										4
5	Phase 5 - ForceOff		25	30							5
6	Phase 6 - ForceOff		0	0							6
7	Phase 7 - ForceOff		64	70							7
8	Phase 8 - ForceOff		104	110							8
9	Ring Offset										9
A	Offset 1		136	126							A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End		16	16							D
E	Hold Release		225	255							E
F	Reserved										F

Coordination - Bank 1 <C/1+Plan+Row>

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync	2 6	2
3	Plan 3 - Sync	2 6	3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row		Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9	Row
0	Ped Adjustment		0	0							0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag	2 5 8	2
3	Plan 3 - Lag	2 5 8	3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B	Lag Hold		B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 5/14/2013

INTERSECTION: MIDWAY DR & KEMPER DR

Row	Column 8	Column 9	Column A	Column B	Column C	Column D		Column E	Column F		Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday		Dial 2 (7-Wire)	Sim Term	0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1		Dial 3 (7-Wire)	EV-A	71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2		Offset 1 (7-Wire)	EV-B	72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down		Offset 2 (7-Wire)	EV-C	73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock		Offset 3 (7-Wire)	EV-D	74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time	82	Free (7-Wire)	RR-1	51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense	81	Flash (7-Wire)	RR-2	52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable		Excl. Ped Omit	Spec. Event 1		7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance		NOT-1	Spec. Event 2		8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm		NOT-2	External Lag		9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2		OR-1 (a)	AND-1 (a)		A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3		OR-1 (b)	AND-1 (b)		B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2		OR-2 (a)	AND-2 (a)		C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3		OR-2 (b)	AND-2 (b)		D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2		OR-3 (a)	AND-3 (a)		E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3		OR-3 (b)	AND-3 (b)		F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: KEMPER ST @ SPORTS ARENA BLVD

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: KEMPER ST
E/W Street Name: SPORTS ARENA

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
SI	M25	11/3/16

Free Lag <C/1+F+0>: 2 6 8

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	5	<C/0+0+0>
Zone Number	5	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	195	<C/0+0+3>
QuicNet Channel	COM66:	(QuicNet)

Communication Addresses

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers →	1	2	3	4	5	6	7	8
		SPORTS ARENA				SPORTS ARE	KEMPER		DWY
		Phase							
0	Ped Walk		7				7	7	
1	Ped FDW		18				17	24	
2	Min Green	4	10			4	10	7	7
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	4.8			2.0	4.8	2.0	2.0
6	Max Gap	2.0	4.8			2.0	4.8	2.0	2.0
7	Min Gap	2.0	0.2			2.0	0.2	2.0	2.0
8	Max Limit	35	60			60	60	40	80
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1				1	1	
C	Cond Serv Check								
D	Reduce Every		0.7				0.7		
E	Yellow Change	3.4	3.9			3.4	3.9	3.9	3.9
F	Red Clear	1.0	1.0			1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

Row	F
0	Permit: 12 5678
1	Red Lock:
2	Yellow Lock:
3	Min Recall:
4	Ped Recall:
5	*View Set Peds*: 2 67
6	Rest In Walk:
7	Red Rest:
8	Dual Entry:
9	Max Recall:
A	Soft Recall: 2 6
B	Max 2:
C	Cond. Service:
D	Man Cntrl Calls:
E	Yellow Start: 2 6
F	First Phases: 7

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 – C ÷ 0 + F = 1

INTERSECTION: KEMPER ST @ SPORTS ARENA BLVD

Row	Column Numbers →	Overlap 1	2	3	4	5	6	7	8
	Overlap Name →								
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers →	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	7
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	7
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0	Phase 1	10
1	Phase 2	10
2	Phase 3	10
3	Phase 4	10
4	Phase 5	10
5	Phase 6	10
6	Phase 7	10
7	Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: KEMPER ST @ SPORTS ARENA BLVD

Column Numbers →	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	39	45_7_	2	123		1.8
1	6J2U	40	45_7_	6	123		1.8
2		41	45_7_	4	123		
3		42	45_7_	8	123		
4		43	45_7_	2	123		
5		44	45_7_	6	123		
6		45	45_7_	4	123		
7		46	45_7_	8	123		
8		47	67_	2	123		
9		48	67_	6	123		
A		49	67_	4	123		
B		50	67_	8	123		
C		55	45_7_	5	123		
D		56	45_7_	1	123		
E		57	45_7_	7	123		
F		58	45_7_	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123		
1		60	45_7_	1	123		
2		61	45_7_	7	123		
3		62	45_7_	3	123		
4		63	45_7_	2	123		
5		64	45_7_	6	123		
6		65	45_7_	4	123		
7		66	45_7_	8	123		
8		67	2	2	123		
9		68	2	6	123		
A	PH7 ped	69	2	7	123		
B		70	2	8	123		
C		76	45_7_	2	123		
D		77	45_7_	6	123		
E		78	45_7_	4	123		
F		79	45_7_	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers →	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	30	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	5	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: KEMPER ST @ SPORTS ARENA BLVD

Row	Time	Plan	Offset	Day of Week
0	11 : 00	5	A	_23456_
1	14 : 00	6	A	_23456_
2	19 : 00	E	A	1234567
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits

TOD Function <7/0.1+Row> <E/27+4+Row>

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, December = C

INTERSECTION: KEMPER ST @ SPORTS ARENA BLVD

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers →	Plan 1	2	3	4	5	6	7	8	9
	Plan Name →					MID	PM			
0	Cycle Length					110	108			
1	Phase 1 - ForceOff					80	75			
2	Phase 2 - ForceOff					0	0			
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff					72	68			
6	Phase 6 - ForceOff					0	0			
7	Phase 7 - ForceOff					36	30			
8	Phase 8 - ForceOff					56	52			
9	Ring Offset									
A	Offset 1					67	87			
B	Offset 2									
C	Offset 3									
D	Perm 1 - End					11	11			
E	Hold Release					255	255			
F	Reserved									

Coordination - Bank 1 <C/1+Plan+Row>

Row		E
0		
1	Plan 1 - Sync	
2	Plan 2 - Sync	
3	Plan 3 - Sync	
4	Plan 4 - Sync	
5	Plan 5 - Sync	2 6
6	Plan 6 - Sync	2 6
7	Plan 7 - Sync	
8	Plan 8 - Sync	
9	Plan 9 - Sync	
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C/1+E+Row>

Row		1	2	3	4	5	6	7	8	9
0	Ped Adjustment					0	0			
1	Perm 2 - Start									
2	Perm 2 - End									
3	Perm 3 - Start									
4	Perm 3 - End									
5	Reservice Time									
6	Reservice Phases									
7	-									
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase									
B	Perm 1 Ped Phase									
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C/2+Plan+Row>

Row		F
0	Free Lag	
1	Plan 1 - Lag	
2	Plan 2 - Lag	
3	Plan 3 - Lag	
4	Plan 4 - Lag	
5	Plan 5 - Lag	2 6 8
6	Plan 6 - Lag	2 6 8
7	Plan 7 - Lag	
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	External Lag	
B	Lag Hold	
C		
D		
E		
F		

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 5/14/2013

INTERSECTION: KEMPER ST @ SPORTS ARENA BLVD

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: Kurtz St @ Rosecrans St

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **Rosecrans St**
E/W Street Name: **Kurtz St**

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
MB	MJS	10/8/18

Free Lag <C/1+F+0> _23__6__

Notes:

Adaptive System Operation Rules:

1- Intersection is running in Adaptive system coordination signal timing.
2- No Min Recalls/Max Recalls/Detector delays or locks to be used in the controller.
Only soft recall to be used for sync phases.
Recalls/Delays are to be configured in the InSync Processor, Detector Setup.
3- Controller MUST BE set to FREE operation. C/0+A+1 =14
4- Min Green is 10s for sync phases and 5s for all other permitted phases.
5- Veh Ext, Max Gap & Min Gap are set to 1.0s, Reduce Every is set to "zero".
6- "Carry Over" is set to "zero" for all detectors.

Manual Plan
0 = Automatic
1-8 = Plan 1-8
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	1	<C/0+0+2>
Area Address	160	<C/0+0+3>
Transparity Channe	13	(Transparity)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers →	1	2	3	4	5	6	7	8
			ROSECRANS	KURTZ	KURTZ		ROSECRANS		
			Phase						
	N	PPLT							
0	Ped Walk		7		7		7		
1	Ped FDW		15		19		10		
2	Min Green	5	10	5	5		10		
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	1.0	1.0	1.0	1.0		1.0		
6	Max Gap	1.0	1.0	1.0	1.0		1.0		
7	Min Gap	1.0	1.0	1.0	1.0		1.0		
8	Max Limit	10	60	30	30		60		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change	3.4	3.9	3.4	3.9		3.9		
F	Red Clear	1.0	1.0	1.0	1.0		1.0		

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

	F	Row
Permit	1234_6__	0
Red Lock		1
Yellow Lock		2
Min Recall		3
Ped Recall		4
View Set Peds	_2_4_6__	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall	_2___6__	A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start	_2___6__	E
First Phases	__3_____	F

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 – C + 0 + F = 1

INTERSECTION: Kurtz St @ Rosecrans St

Row	Column Numbers --->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name --->								
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>

(*RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers --->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	1
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	3
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	1234_6
Start-up Ped Calls	2 4 6

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: Kurtz St @ Rosecrans St

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123		
1		40	45_7_	6	123		
2		41	45_7_	4	123		
3		42	45_7_	8	123		
4		43	45_7_	2	123		
5		44	45_7_	6	123		
6		45	45_7_	4	123		
7		46	45_7_	8	123		
8		47	67	2	123		
9		48	67	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7_	5	123		
D		56	45_7_	1	123		
E		57	45_7_	7	123		
F		58	45_7_	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123		
1		60	45_7_	1	123		
2		61	45_7_	7	123		
3		62	45_7_	3	123		
4		63	45_7_	2	123		
5		64	45_7_	6	123		
6		65	45_7_	4	123		
7		66	45_7_	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7_	2	123		
D		77	45_7_	6	123		
E		78	45_7_	4	123		
F		79	45_7_	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	60	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: Kurtz St @ Rosecrans St

TOD Coordination <9/0.1+Row> (Bank 1)

Row	Time	Plan	Offset	Day of Week
0	11 : 00	2	A	_23456_
1	13 : 00	7	A	_23456_
2	14 : 45	5	A	_23456_
3	19 : 30	E	A	_23456_
4	10 : 00	4	A	1____7
5	18 : 00	E	A	1____8
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <7/0.1+Row> <E/27+4+Row>

Time	Funct.	Day of Week	Column 4 Phases/Bits

Holiday Dates <8/1.1+Row> (Bank 1)

Day	Year	Month	Holiday Type

Holiday Events <9/1.1+Row> (Bank 1)

Time	Plan	Offset	Holiday Type

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

TOD Coordination <C+0+9=0.2> (Bank 2)

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday Dates <C+0+8=1.2> (Bank 2)

Day	Year	Month	Holiday Type

Holiday Events <C+0+9=1.2> (Bank 2)

Time	Plan	Offset	Holiday Type

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select: October = A, November = B, December = C

INTERSECTION: Kurtz St @ Rosecrans St

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers —>	1	2	3	4	5	6	7	8	9
	Plan Name —>		MID		WKND	PM(PEAK)		PM		
0	Cycle Length		140		140	86		160		
1	Phase 1 - ForceOff		88		86	62		93		
2	Phase 2 - ForceOff		0		0	0		0		
3	Phase 3 - ForceOff		73		71	50		77		
4	Phase 4 - ForceOff		38		36	28		43		
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff		0		0	0		0		
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset 1		60		72	70		150		
B	Offset 2									
C	Offset 3									
D	Perm 1 - End		12		15	9		16		
E	Hold Release		255		255	255		255		
F	Reserved									

Coordination - Bank 1 <C/1+Plan+Row>

Row		E
0		
1	Plan 1 - Sync	
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	
4	Plan 4 - Sync	2 6
5	Plan 5 - Sync	2 6
6	Plan 6 - Sync	
7	Plan 7 - Sync	2 6
8	Plan 8 - Sync	
9	Plan 9 - Sync	
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C/1+E+Row>

Row		1	2	3	4	5	6	7	8	9
0	Ped Adjustment		0		0	0		0		
1	Perm 2 - Start									
2	Perm 2 - End									
3	Perm 3 - Start									
4	Perm 3 - End									
5	Reservice Time									
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase									
B	Perm 1 Ped Phase									
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C/2+Plan+Row>

Row		F
0	Free Lag	
1	Plan 1 - Lag	
2	Plan 2 - Lag	23 6
3	Plan 3 - Lag	
4	Plan 4 - Lag	23 6
5	Plan 5 - Lag	23 6
6	Plan 6 - Lag	
7	Plan 7 - Lag	23 6
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	External Lag	
B	Lag Hold	
C		
D		
E		
F		

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 4/20/2010

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term 0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: Kurtz St @ Rosecrans St

Row	Phase Names --->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk		7		7		7		
1	Ped FDW		15		19		10		
2	Min Green	4	10	4	4		10		
3	Type 3 Disconnect								
4	Added per Vehicle		1.6				1.6		
5	Veh Extension	2.0	6.3	3.0	3.0		7.1		
6	Max Gap	2.0	6.3	3.0	3.0		7.1		
7	Min Gap	2.0	2.0	3.0	3.0		2.0		
8	Max Limit	10	50	30	30		50		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		
C	Cond Serv Check								
D	Reduce Every		0.7				0.6		
E	Yellow Change	3.4	3.9	3.4	3.9		3.9		
F	Red Clear	1.0	1.0	1.0	1.0		1.0		

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2	23				
Phase 3					
Phase 4					
Phase 5					
Phase 6	23				
Phase 7					
Phase 8					

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Hawk Select	0	<F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	0	<C/1+0+6>
Select Parity	0	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	0	<C/5+2+E>
Max Cycle Time	20	<C/5+2+F>

Yellow Yield Coordination

12345678

Omit Alarm	#NAME?

Local Alarm Disable <C/5+F+0>

IEN Status	1	<C/5+1+B>
Synch Time	0.0	<C/5+1+C>

Other Parameters

Row	Phase Names --->	1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

[ ] <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

[ ] <E/28+5+F>
Limited Service Interval

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **ROSECRANS**
E/W Street Name: **MIDWAY**

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
M2S	M2S	1/10/2017

Free Lag <C/1+F+0> 1__4_67_

Notes: **Adaptive System operartion RULES:**

1- Intersection is running in Adaptive system coordination signal timing.
2- Do not change PIN ASSIGNMENTS on page 3. Pin numbers are changed for Adaptive mode operation.
3- No Recalls/Detector delays to be USED in the controller. Recalls/Delays are to be configured in the InSync Processor, Detector Setup.
4- Controller MUST BE set to FREE operation. C/0-A-1 =14
5- Min G is 10s for sync phases and 5s for all other permitted phases.
6- Veh Ext, Max Gap & Min Gap are set to 1.0s, Reduce Every is set to "zero".
7- "Carry Over" is SET to "zero" for all detectors.

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	12	<C/0+0+0>
Zone Number	12	<C/0+0+1>
Area Number	1	<C/0+0+2>
Area Address	89	<C/0+0+3>
QuicNet Channel	COM76	(QuicNet)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

		ROSECRANS		MIDWAY		ROSECRANS		MIDWAY	
		Phase							
	Column Numbers ---->	1	2	3	4	5	6	7	8
Row		N							
0	Ped Walk		5		5		5		5
1	Ped FDW		20		27		19		26
2	Min Green	5	10	5	10	5	10	5	10
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
6	Max Gap	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
7	Min Gap	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
8	Max Limit	30	45	30	40	35	40	30	40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		1
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change	3.4	3.9	3.4	3.9	3.4	4.7	3.4	3.9
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12345678	0
Red Lock		1
Yellow Lock		2
Min Recall		3
Ped Recall		4
View Set Peds	_2_4_6_8	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall	_2__6__	A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start	_2___6__	E
First Phases	__3___8	F

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: MIDWAY @ ROSECRANS ST

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0		
1	Phase 1	
2	Phase 2	
3	Phase 3	
4	Phase 4	
5	Phase 5	
6	Phase 6	
7	Phase 7	
8	Phase 8	

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: MIDWAY @ ROSECRANS ST

Column Numbers --->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	43	45_7_	2	123		
1	6J2U	48	45_7_	6	123		
2	4I6U	65	45_7_	4	123		
3	8J6U	46	45_7_	8	123		
4	2I2L	39	45_7_	2	123		
5		44	45_7_	6	123		
6		45	45_7_	4	123		
7	8J6L	42	45_7_	8	123		
8		47	67_	2	123		
9	6J4	40	45_7_	6	123		
A		49	67_	4	123		
B		50	67_	8	123		
C		55	45_7_	5	123		
D		56	45_7_	1	123		
E		57	45_7_	7	123		
F		58	45_7_	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123		
1		60	45_7_	1	123		
2		61	45_7_	7	123		
3		62	45_7_	3	123		
4	2I3U	39	45_7_	2	123		
5		64	45_7_	6	123		
6	4I7U	41	45_7_	4	123		
7		66	45_7_	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7_	2	123		
D		77	45_7_	6	123		
E		78	45_7_	4	123		
F		79	45_7_	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers --->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: MIDWAY @ ROSECRANS ST

TOD Coordination <9/0.1+Row> (Bank 1)

Row	Time	Plan	Offset	Day of Week
0	06 : 00	6	A	23456
1	11 : 00	2	A	23456
2	13 : 00	7	A	23456
3	14 : 45	5	A	23456
4	19 : 30	E	A	23456
5	10 : 00	4	A	1 7
6	18 : 00	E	A	1 7
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <7/0.1+Row> <E/27+4+Row>

Time	Funct	Day of Week	Column 4 Phases/Bits

Holiday Dates <8/1.1+Row> (Bank 1)

Day	Year	Month	Holiday Type

Holiday Events <9/1.1+Row> (Bank 1)

Time	Plan	Offset	Holiday Type

TOD Coordination <C+0+9=0.2> (Bank 2)

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Time	Funct	Holiday Type	Column 4 Phases/Bits

Holiday Dates <C+0+8=1.2> (Bank 2)

Day	Year	Month	Holiday Type

Holiday Events <C+0+9=1.2> (Bank 2)

Time	Plan	Offset	Holiday Type

Month Select: October = A, November = B, December = C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

INTERSECTION: MIDWAY @ ROSECRANS ST

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers --->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name --->		MID		WKND	PM(PEAK)	AM	PM			
0	Cycle Length		140		140	172	130	160			0
1	Phase 1 - ForceOff		29		29	34	26	35			1
2	Phase 2 - ForceOff		0		0	0	0	0			2
3	Phase 3 - ForceOff		85		52	95	41	100			3
4	Phase 4 - ForceOff		62		85	72	81	77			4
5	Phase 5 - ForceOff		115		115	133	107	128			5
6	Phase 6 - ForceOff		29		29	30	26	35			6
7	Phase 7 - ForceOff		54		85	60	81	65			7
8	Phase 8 - ForceOff		85		59	95	60	100			8
9	Ring Offset										9
A	Offset 1		118		118	55	111	44			A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End		10		10	17	13	16			D
E	Hold Release		255		255	255	125	255			E
F	Reserved										F

Coordination - Bank 1 <C/1+Plan+Row>

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync	2	2
3	Plan 3 - Sync		3
4	Plan 4 - Sync	2	4
5	Plan 5 - Sync	2	5
6	Plan 6 - Sync	2	6
7	Plan 7 - Sync	2	7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment		4		4	2	0	3			0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag	1 3 6 8	2
3	Plan 3 - Lag		3
4	Plan 4 - Lag	1 4 67	4
5	Plan 5 - Lag	1 3 6 8	5
6	Plan 6 - Lag	1 4 67	6
7	Plan 7 - Lag	1 3 6 8	7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B	Lag Hold		B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 3/22/2010

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 75	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 51	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1 52	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: MIDWAY @ ROSECRANS ST

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk		5		5		5		5
1	Ped FDW		20		27		19		26
2	Min Green	4	10	4	10	4	10	4	10
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	3.9	2.0	2.1	2.0	2.9	2.0	2.0
6	Max Gap	2.0	3.9	2.0	2.1	2.0	2.9	2.0	2.0
7	Min Gap	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
8	Max Limit	30	45	30	40	35	40	30	40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		1
C	Cond Serv Check								
D	Reduce Every		0.8		1.6		1.1		1.7
E	Yellow Change	3.4	3.9	3.4	3.9	3.4	4.7	3.4	3.9
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Hawk Select	0	<F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	0	<C/1+0+6>
Select Parity	0	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	0	<C/5+2+E>
Max Cycle Time	20	<C/5+2+F>

Yellow Yield Coordination

	12345678	
Omit Alarm	#NAME?	

Local Alarm Disable <C/5+F+0>

IEN Status	1	<C/5+1+B>
Synch Time	0.0	<C/5+1+C>

Other Parameters

Row	Phase 1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

INTERSECTION: MIDWAY DR @ SPORTS ARENA BLVD/W. POINT LOMA BLVD

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: MIDWAY
E/W Street Name: SPORTS ARENA

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
M2S	M2S	1/27/16

Notes: *FDW IS CALCULATED USING 3.5 FPS PEDESTRIAN SPEED.*

Free Lag <C/1+F+0>: 1_3____

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	3	<C/0+0+0>
Zone Number	3	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	193	<C/0+0+3>
QuicNet Channel	COM 66	(QuicNet)

Communication Addresses

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row		SPORTS ARENA	W. PT LOMA	MIDWAY	SPORTS ARENA				
	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	7	7	7	7				
1	Ped FDW	24	32	26	28				
2	Min Green	7	7	7	7				
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	6.1	5.5	2.6	2.3				
6	Max Gap	6.1	5.5	2.6	2.3				
7	Min Gap	0.2	0.2	0.2	0.2				
8	Max Limit	50	35	30	30				
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW	1	1	1	1				
C	Cond Serv Check								
D	Reduce Every	0.5	0.6	1.3	1.4				
E	Yellow Change	3.9	3.9	3.9	3.9				
F	Red Clear	1.0	1.0	1.0	1.0				

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	
EV-A Clear	
EV-B Delay	
EV-B Clear	
EV-C Delay	
EV-C Clear	
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

Row	F
Permit	1234
Red Lock	
Yellow Lock	
Min Recall	4
Ped Recall	
View Set Peds	1234
Rest In Walk	
Red Rest	
Dual Entry	
Max Recall	
Soft Recall	
Max 2	
Cond. Service	
Man Cntrl Calls	12345678
Yellow Start	4
First Phases	3

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: MIDWAY DR @ SPORTS ARENA BLVD/W. POINT LOMA BLVD

Row	Column Numbers --->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name --->								
0	Load Switch Number								
1	Veh Set 1 - Phases	3							
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases	12_4							
5	Neg Ped Phases	2_4							
6	Green Omit Phases	2							
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change	3.4							
F	Red Clear	1.0							

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Gm B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers --->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	4
C	EV-C Phases	1
D	EV-D Phases	3
E	Extra 1 Config. Bits	1_45
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	1
Ped for 4P Output	4
Ped for 8P Output	3
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: MIDWAY DR @ SPORTS ARENA BLVD/W. POINT LOMA BLVD

Column Numbers -->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	39	45_7	2	123		1.8
1		40	45_7	6	123		
2	4I6U	41	45_7	4	123		1.8
3		42	45_7	8	123		
4		43	45_7	2	123		
5		44	45_7	6	123		
6		45	45_7	4	123		
7		46	45_7	8	123		
8		47	67	2	123		
9		48	67	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7	5	123		
D	1I1	56	45_7	1	123		1.8
E		57	45_7	7	123		
F	3I5	58	45_7	3	123		1.8

Row	Detector Name	4 C1 Pin Number	5 Attributes	6 Phase(s)	7 Assign	2 Delay	4 Carry-over
0		59	45_7	5	123		
1		60	45_7	1	123		
2		61	45_7	7	123		
3		62	45_7	3	123		
4		63	45_7	2	123		
5		64	45_7	6	123		
6		65	45_7	4	123		
7		66	45_7	8	123		
8		67	2	2	123		
9	Ph 1 Ped	68	2	1	123		
A		69	2	4	123		
B	Ph 3 Ped	70	2	3	123		
C		76	45_7	2	123		
D		77	45_7	6	123		
E		78	45_7	4	123		
F		79	45_7	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers -->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green	35								5
Overlap Yellow	37								6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	30	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: MIDWAY DR @ SPORTS ARENA BLVD/W. POINT LOMA BLVD

Row	Time	Plan	Offset	Day of Week
0	11 : 00	2	A	23456
1	14 : 30	3	A	23456
2	18 : 30	E	A	1234567
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct	Day of Week	Column 4 Phases/Bits

TOD Function <7/0.1+Row> <E/27+4+Row>

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, December = C

INTERSECTION: MIDWAY DR @ SPORTS ARENA BLVD/W. POINT LOMA BLVD

Plan

Row	Column Numbers --->	1	2	3	4	5	6	7	8	9	Row
	Plan Name --->		MID	PM							
0	Cycle Length		156	160							0
1	Phase 1 - ForceOff		79	80							1
2	Phase 2 - ForceOff		43	44							2
3	Phase 3 - ForceOff		0	0							3
4	Phase 4 - ForceOff		119	120							4
5	Phase 5 - ForceOff										5
6	Phase 6 - ForceOff										6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff										8
9	Ring Offset										9
A	Offset 1		144	133							A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End		16	16							D
E	Hold Release		255	255							E
F	Reserved										F

Coordination - Bank 1 <C/1+Plan+Row>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync	3	2
3	Plan 3 - Sync	3	3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row											Row
0	Ped Adjustment		0	0							0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag	1_3	2
3	Plan 3 - Lag	1_3	3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B	Lag Hold		B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 5/14/2013

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F		Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A	71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B	72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C	73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D	74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1	51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2	52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1		7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2		8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag		9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)		A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)		B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)		C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)		D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)		E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)		F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Fih Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Fih Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Fih Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Fih Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: PACIFIC HWY @ ROSECRANS ST/TAYLOR ST

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **PACIFIC HWY**
E/W Street Name: **ROSECRANS/TAYLOR**

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
M2S	M2S	

Free Lag <C/1+F+0>: _2_4_6_8

Notes:
1- Adjust Railroad timing to check bus detection during limited service.
2- Make sure Detector ASSIGN fields are correctly set to remove DET SET2 for all phase 2 detection except within the bus lane and phase 2 ped.
3- RR2 input calls Special Event Sequence 1 and Calls DET SET2.
4- Overlap 3: Bus Indication is phase 2 and EB (ph2) vehicle indications are the overlapping phase.

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	10	<C/0+0+0>
Zone Number	10	<C/0+0+1>
Area Number	2	<C/0+0+2>
Area Address	161	<C/0+0+3>
QuicNet Channel	COM84	(QuicNet)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

	ROSECRANS		PACIFIC HWY		TAYLOR		PACIFIC HWY	
	Phase							
Column Numbers ---->	1	2	3	4	5	6	7	8
Row	1+8		2+3					
0 Ped Walk		7		7		7		7
1 Ped FDW		29		31		22		29
2 Min Green	4	10	4	10	4	10	4	10
3 Type 3 Disconnect								
4 Added per Vehicle								
5 Veh Extension	2.0	3.5	2.0	2.0	2.0	2.2	2.0	3.0
6 Max Gap	2.0	3.5	2.0	2.0	2.0	2.2	2.0	3.0
7 Min Gap	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
8 Max Limit	30	40	30	40	30	40	30	40
9 Max Limit 2								
A Adv. / Delay Walk								
B PE Min Ped FDW		1		1		1		1
C Cond Serv Check								
D Reduce Every		0.9		1.7		1.5		1.1
E Yellow Change	3.4	3.9	3.4	4.7	3.4	3.9	3.4	4.7
F Red Clear	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	
EV-A Clear	
EV-B Delay	
EV-B Clear	
EV-C Delay	
EV-C Clear	
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12345678	0
Red Lock		1
Yellow Lock		2
Min Recall	_2__6_	3
Ped Recall		4
View Set Peds	_2_4_6_8	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall	_4__8_	A
Max 2		B
Cond. Service		C
Man Cntrl Calls	12345678	D
Yellow Start	_2__6_	E
First Phases	_4__8_	F

Phase Functions <F/1+F+Row>

① ALS 9/23/21

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: PACIFIC HWY @ ROSECRANS ST/TAYLOR ST

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number			10					
1	Veh Set 1 - Phases	1 8	23	2					
2	Veh Set 2 - Phases		3						
3	Veh Set 3 - Phases								
4	Neg Veh Phases	2 7	1 4	1 34 78					
5	Neg Ped Phases	2 8	2 4	4 8					
6	Green Omit Phases	8	2						
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change	4.7	3.9	3.9					
F	Red Clear	2.0	2.0	2.0					

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	- - -
5	RR-2 *	- - -
6	SE-1	0
7	SE-2	0

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 34
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: PACIFIC HWY @ ROSECRANS ST/TAYLOR ST

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U*	39	45_7	2	1 3		1.8
1		40	45_7	6	123		
2		41	45_7	4	123		
3	8J6U	42	45_7	8	123		1.8
4	2I2L*	43	45_7	2	1 3	10.0	
5	6J2L	44	45_7	6	123		1.8
6		45	45_7	4	123		
7		46	45_7	8	123		
8		47	67	2	1 3		
9		48	67	6	123		
A		49	67	4	123		
B		50	67	8	123		
C		55	45_7	5	123		
D		56	45_7	1	123		
E		57	45_7	7	123		
F		58	45_7	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7	5	123		
1		60	45_7	1	123		
2		61	45_7	7	123		
3		62	45_7	3	123		
4	2I3U Bus Loop	63	45_7	2	123		
5		64	45_7	6	123		
6	4I7U	65	45_7	4	123		1.8
7		66	45_7	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C	2I3L*	76	45_7	2	1 3		
D		77	45_7	6	123		
E		78	45_7	4	123		
F		79	45_7	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green	35	36	96						5
Overlap Yellow	37	38	95						6
Overlap Red			94						7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	30	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

*** Remove Det Set 2**

INTERSECTION: PACIFIC HWY @ ROSECRANS ST/TAYLOR ST

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct	Day of Week	Column 4 Phases/Bits

TOD Function <7/0.1+Row> <E/27+4+Row>

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, December = C

INTERSECTION: PACIFIC HWY @ ROSECRANS ST/TAYLOR ST

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9
	Plan Names ---->									
0	Cycle Length									
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff									
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff									
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset 1									
B	Offset 2									
C	Offset 3									
D	Perm 1 - End									
E	Hold Release									
F	Reserved									

Coordination - Bank 1 <C/1+Plan+Row>

Row		E
0		
1	Plan 1 - Sync	
2	Plan 2 - Sync	
3	Plan 3 - Sync	
4	Plan 4 - Sync	
5	Plan 5 - Sync	
6	Plan 6 - Sync	
7	Plan 7 - Sync	
8	Plan 8 - Sync	
9	Plan 9 - Sync	
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C/1+E+Row>

Row		
0	Ped Adjustment	
1	Perm 2 - Start	
2	Perm 2 - End	
3	Perm 3 - Start	
4	Perm 3 - End	
5	Reservice Time	
6	Reservice Phases	
7		
8	Pretimed Phases	
9	Max Recall	
A	Perm 1 Veh Phase	
B	Perm 1 Ped Phase	
C	Perm 2 Veh Phase	
D	Perm 2 Ped Phase	
E	Perm 3 Veh Phase	
F	Perm 3 Ped Phase	

Coordination - Bank 2 <C/2+Plan+Row>

Row		F
0	Free Lag	
1	Plan 1 - Lag	
2	Plan 2 - Lag	
3	Plan 3 - Lag	
4	Plan 4 - Lag	
5	Plan 5 - Lag	
6	Plan 6 - Lag	
7	Plan 7 - Lag	
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	External Lag	
B	Lag Hold	
C		
D		
E		
F		

Lag Phases <C/1+F+Row>

Coordination Timing By:
Date:

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term 0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 0	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2 52	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2 52	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2 52	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: PACIFIC HWY @ ROSECRANS ST/TAYLOR ST

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1	1 6	20		1 6	2345 78		1 6	1 6	2 4 6 8	
2		0								
3		1				1 6		2345 78		
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

3 <E/28+5+F>
Limited Service Interval

INTERSECTION: RALPHS DWY @ SPORTS ARENA

2. Program

Group Assignment: 4109
Field Master Assignment: NONE
N/S Street Name: RALPHS DWY
E/W Street Name: SPORTS ARENA
Last Database Change: 7/8/03 13:58
System Ref. Number: 607

N

Row	Phase # ---->	1	2	3	4	5	6	7	8	Row
	Column # ---->	SPORTS ARENA BI				SPORTS ARENA BI			RALPHS Dy	
		Phase								
		1+8								
0	Ped Walk		7				7		7	0
1	Ped FDW		14				16		29	1
2	Min Green	4	10			4	10	6	4	2
3	Type 3 Limit									3
4	Add/Veh									4
5	Veh Extn	2.0	3.6			2.0	2.0	2.0	2.0	5
6	Max Gap	2.0	3.6			2.0	2.0	2.0	2.0	6
7	Min Gap	2.0	0.2			2.0	0.2	2.0	2.0	7
8	Max Limit	30	60			60	60	80	30	8
9	Max Limit 2									9
A	Bus Adv									A
B	Call to Phs									B
C	Reduce By		0.1				0.1			C
D	Every		0.9				1.7			D
E	Yellow	3.4	3.9			3.4	3.9	3.9	3.9	E
F	Red Clear	1.0	1.0			1.0	1.0	1.0	1.0	F
	Grade		-1%				0%	-2%	-1%	

Phase Timing - Bank 1
F + Phase + Row

Row	E	Row
RR-1 Delay		0
RR-1 Clear		1
EV-A Delay	0	2
EV-A Clear	0	3
EV-B Delay		4
EV-B Clear		5
EV-C Delay	0	6
EV-C Clear	0	7
EV-D Delay		8
EV-D Clear		9
RR-2 Delay		A
RR-2 Clear		B
View EV Delay	---	C
View EV Clear	---	D
View RR Delay	---	E
View RR Clear	---	F

Preempt Timing
F + E + Row

Row	F	Row
Permit	12__5678	0
Red Lock		1
Yellow Lock		2
Min Recall		3
Ped Recall		4
Peds (View)	_2___6_8	5
Rest In Walk		6
Red Rest		7
Dbl Entry		8
Max Recall		9
Soft Recall	_2___6__	A
Max 2		B
Cond Serv		C
Ped Lock	12345678	D
Yellow Start	_2___6__	E
1st Phases	_____7_	F

Phase Functions <F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	6	C + 0 + 0
Zone Number	6	C + 0 + 1
Area Number	0	C + 0 + 2
Area Address	196	C + 0 + 3
QuicNet Channel	DIGI62:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2___6_8	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	_234____

Disable Communication Ports
D + D + 9

Timing Sheet By: JD/AM
Approved By: mm
Drawing Number: 14896-3-D
Timing Implemented On:

INTERSECTION: RALPHS DWY @ SPORTS ARENA

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	1 8
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration <E Page>

E + F + ROW

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	8
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: RALPHS DWY @ SPORTS ARENA

223 Program

Coordination Timing By: AM
Implemented On: 3/10/03

Row	Plan Name --->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
	Column # --->	1	2	3	4	5	6	7	8	9
0	Cycle Length			105						
1	Phase 1 - ForceOff			60						
2	Phase 2 - ForceOff			0						
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff			60						
6	Phase 6 - ForceOff			0						
7	Phase 7 - ForceOff			15						
8	Phase 8 - ForceOff			45						
9	Ring Offset									
A	Offset A			25						
B	Offset B									
C	Offset C									
D	Permissive			10						
E	Hold Release			255						
F	Ped Shift			0						

Coordination <C Page>

C + Plan + ROW

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	11 : 00	3	A	_23456_
1	17 : 30	E	A	1234567
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E
Plan 1	_2___6__
Plan 2	
Plan 3	_2___6__
Plan 4	
Plan 5	
Plan 6	
Plan 7	
Plan 8	
Plan 9	
Coord Ped*	
NEMA Hold	

Sync Phases

C + E + FUNCTION #

Row		F
0	Free Lag	_2___6_8
1	Plan 1 - Lag	_2___6_8
2	Plan 2 - Lag	
3	Plan 3 - Lag	_2___6_8
4	Plan 4 - Lag	
5	Plan 5 - Lag	
6	Plan 6 - Lag	
7	Plan 7 - Lag	
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	Coord Max *	
B	Coord Lag *	
C		
D		
E		
F		

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

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2070 Controller TSCP Timing Chart

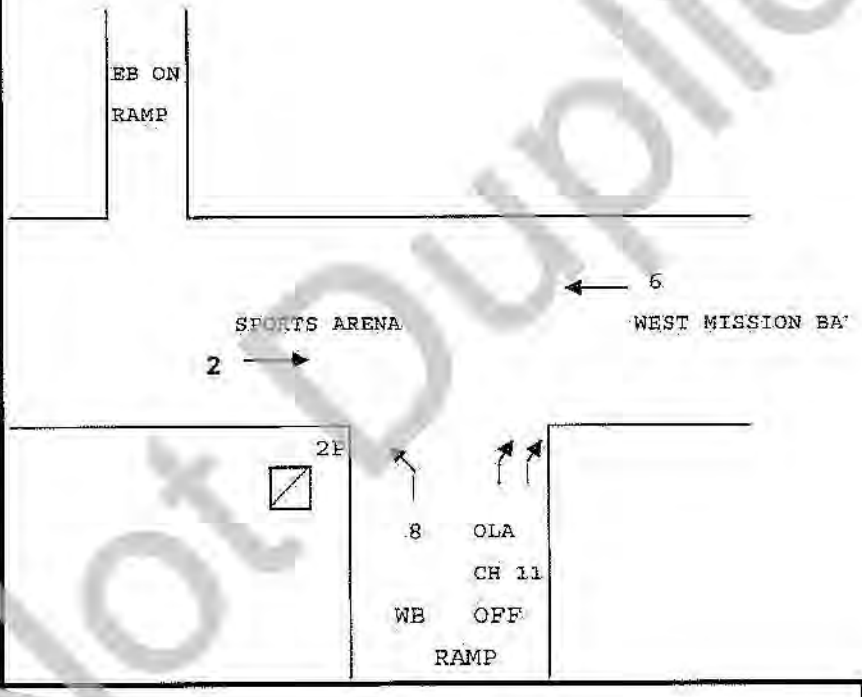
TSCP: 3.10 PAGE 1

Location: I-8 WB @ Sports Arena / Mission Bay Dr.
System:
Master At: Standalone
District: 11
I/C:
Designed By:
Installed By:
Service Info:

Timing Change:	Date Start:	Date End:	Designed:	Installed:
				1/6/2023

		FLASH
PHASE	1)	[ ]
	2) NB Sports Arena	[ ]
	3)	[ ]
	4)	[ ]
	5)	[ ]
	6) SB W Mission Bay	[ ]
	7)	[ ]
	8) WB Off Ramp	[ ]
OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout



Comments and Notes:
Ped Measurment (FT)
02 = 113

Bike Measurment (FT)
02 = 154 06 = 140

RAM Checksum

Page 2:	5BCA	Page 8:	85AF
Page 3:	E4BF	Page 9:	A35C
Page 4:	F29E	Page 10:	023B
Page 5:	191A	Page 11:	C838
Page 6:	191A	Page 12:	7617
Page 7:	9F86	Page 13:	84E7

Post Mile 3 WB @ Sports Arena/Mission Bay

Printed 12/2023

Do Not Duplicate

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CONFIGURATION PHASE FLAGS

Cabinet (9-3)
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	1 2 . . . 6 . 8
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	. . . . .
Yellow	 8
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. . . . .
Max Green 2	1 2 . . . 6 . .
Max Green 3	1 2 . . . 6 . .

Startup (2-1-1-5)	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . . .
Vehicle Calls	1 8
Pedestrian Calls	. 2 . . . . .
Yellow Start Overlaps	. . . . .
Startup All-Red	6.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlaps	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlaps	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. 2 . . . . .

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . . .
P5	. . . . .
P6	. . . . .
P7	. . . . .
P8	. . . . .

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	1 . . . . 6 . 8	. . . . .	. . . . .	. 2 . . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

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Location: I-8 WB @ Sports Arena / Mission Bay Dr.

TSCP 3.10

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	10	0	0	0	0
Flash Don't Walk	0	32	0	10	0	0	0	0
Minimum Green	5	17	10	10	10	16	10	5
Det Limit	0	0	10	10	10	0	10	0
Max Initial	0	0	10	10	10	0	10	0
Max Green 1	40	40	50	50	50	65	50	35
Max Green 2	15	25	50	50	50	80	50	0
Max Green 3	20	20	50	50	50	100	50	0
Extension	2.0	2.0	5.0	5.0	5.0	2.0	5.0	2.0
Maximum Gap	2.0	2.0	5.0	5.0	5.0	2.0	5.0	2.0
Minimum Gap	2.0	2.0	5.0	5.0	5.0	2.0	5.0	2.0
Add Per Vehicle	0.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Yellow	5.5	5.5	5.0	5.0	5.0	5.5	5.0	5.5
All-Red	2.0	2.0	1.0	1.0	1.0	2.0	1.0	2.0
Ped/Bike (2-3)	**-1-**	**-2-**	**-3-**	**-4-**	**-5-**	**-6-**	**-7-**	**-8-**
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	5	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.5	5.0	5.0	5.0	5.0	5.0
Red	2.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

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Location: I-8 WB @ Sports Arena / Mission Bay Dr.

TSCP 3.10

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor			.....											
Plan 2	Green Factor			.....											
Plan 3	Green Factor			.....											
Plan 4	Green Factor			.....											
Plan 5	Green Factor			.....											
Plan 6	Green Factor			.....											
Plan 7	Green Factor			.....											
Plan 8	Green Factor			.....											
Plan 9	Green Factor			.....											

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	.....	.....	.....	.....	.....	.....	.....	.....
Plan 2	.....	.....	.....	.....	.....	.....	.....	.....
Plan 3	.....	.....	.....	.....	.....	.....	.....	.....
Plan 4	.....	.....	.....	.....	.....	.....	.....	.....
Plan 5	.....	.....	.....	.....	.....	.....	.....	.....
Plan 6	.....	.....	.....	.....	.....	.....	.....	.....
Plan 7	.....	.....	.....	.....	.....	.....	.....	.....
Plan 8	.....	.....	.....	.....	.....	.....	.....	.....
Plan 9	.....	.....	.....	.....	.....	.....	.....	.....

Master Timer Sync (7-A)

Enable in Plans	
1-9	.....
11-19	.....
21-29	.....

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free

Lag	Omit
.2.4.6.8	.....
Veh Min	**Veh Max**
.2...6..	.....
Ped	**Bike**
.....	.....
Cond	**Cond Grn**
.....	10

MANUAL COMMANDS

Manual Plan (4-1)

Plan	OffSet
	A

Plan: 1-29
254 = Flash
255 = Free
Offset A, B, or C

Special Function Override (4-2)

#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

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Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

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Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

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TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

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HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Daylight Saving (8-1)

Enabled	YES	Month	Sunday
	Start	MAR	2nd
	End	NOV	1st

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1	1100	1900	M T W T F . .	17	1 2 . . . 6 . .
2	1100	1900	M T W T F . .	24	1 . . . . .
3	1100	1930	. . . . . S S	18	1 2 . . . 6 . .
4	1100	1930	. . . . . S S	24	1 . . . . .
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

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RAILROAD PREEMPTION

RR 1

Timing (3-1-1)	
Clear 1	15
Clear 2	5
Clear 3	
Hold	
Min Gr	
Delay	
Exit	
Ped Clr	

Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
.2..5...	.....	.....	.....	.....	.2.4.6.8	.....	.....	.....
.2..5...	.....	.....	.....	.....	.2.4.6.8	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
1..4..78	.....	.....	.....	...4...8	.2...6..	.....	.....	.....

Exit Parameters (3-1-5)

Phase Green	Ovrlap Green	Veh Permit/Call	Ped Permit/Call
.2...6..	.....	12345678	.2.4.6.8

Configuration (3-1-6)

	PR	XR	Gate	Isld	APP	Sign	Sign	Max On	Latching
1								5	NO
2									

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x, 12.x, 13.x, 14.x, 15.x, 16.x, 17.x, 18.x x=1 to 8

RR 2

Timing (3-2-1)	
Clear 1	15
Clear 2	5
Clear 3	
Hold	
Min Gr	
Delay	
Exit	
Ped Clr	

Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
...4..7.	.....	.....	.....	.....	.2.4.6.8	.....	.....	.....
...4..7.	.....	.....	.....	.....	.2.4.6.8	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
123..6..	.....	.....	.....	.2...6..	...4...8	.....	.....	.....

Exit Parameters (3-2-5)

Phase Green	Ovrlap Green	Veh Permit/Call	Ped Permit/Call
.2...6..	.....	12345678	.2.4.6.8

Configuration (3-2-6)

	PR	XR	Gate	Isld	APP	Sign	Sign	Max On	Latching
1								5	NO
2									

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x, 12.x, 13.x, 14.x, 15.x, 16.x, 17.x, 18.x x=1 to 8

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	.2..5...	.....

Port	Latching	Phase Termination
	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	...4..7.	.....

Port	Latching	Phase Termination
	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	1....6..	.....

Port	Latching	Phase Termination
	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	..3....8	.....

Port	Latching	Phase Termination
	NO	ADVANCE

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INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	RR1		Free	
Max ON		RR2		D2	
Max OFF		RR3		D3	

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	FLASHING

Y-Coordination (2-1-5-6	
Port C	Port D

OUTPUTS

Loadswitch Assignments (2-1-6)							
A	1	2	22	3	4	24	0
B	5	6	26	7	8	28	0
X	11	12	0	9	10	0	0

Loadswitch Codes:
- 0 Unused (no output)
- 1-8 Vehicle 1-8
- 9-14 Overlap A-F
- 21-28 Ped 1-8
- 41-47 Special Functions
- 41 Protected Permissive Flashing Phase 1
- 43 Protected Permissive Flashing Phase 3
- 45 Protected Permissive Flashing Phase 5
- 47 Protected Permissive Flashing Phase 7
- 51-57 Special Functions
- 71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6 Channel 9 and 10

INTERVAL CONTROL

Interval Control (3-3-1)	
	Time
Step 1	
Step 2	
Step 3	
Step 4	
Step 5	
Step 6	
Step 7	
Step 8	

Phase Control (3-3-2)		
Hold	Force	Advance
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Phase Recall (3-3-3)		
Veh Call	Ped Call	Int Call
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Phase Permitted (3-3-4)		
Phs Permit	Ped Permit	Ovrlap Permit
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Configuration (3-3-5)			
Input	Port	Delay	HRI Cross
1			
2			

HRI

HRI Configuration (3-4)			
RailRoad	0		
Line			WAYSIDE ATC
Group		Subnode	
		Device	

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TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Enable in Local Plans (3-E-3)	
Plan 1-9	.....
Plan 11-19	.....

Queue Jump (3-E-4)	
Grn Hold	Hold Phase
	.....
	.....

Input		Output	
Type	Port	Stop	Go
NONE	0.0	0	0
NONE	0.0	0	0

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	.....

Access Utilities (9-5)	
Password	
Timeout	60

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													.2...6..	.2.4.6.8	.....	.....
Plan D													.2...6..	.2.4.6.8	.....	.....

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					.....	0.0	0.0	0.0	0	0.0	0

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Appendix C

Midway Rising VMT Analysis Memo

MIDWAY RISING

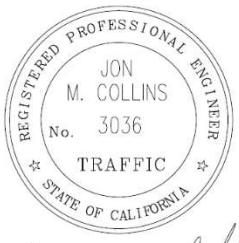
Vehicle Miles Traveled Report

PRJ #: 1106734



AUGUST 2024

Prepared By:



Kimley»Horn

EXECUTIVE SUMMARY

This Vehicle Miles Traveled (VMT) analysis has been prepared to evaluate VMT generated by the proposed Midway Rising project in the City of San Diego. This VMT analysis has been conducted in accordance with the requirements stated in the City of San Diego Transportation Study Manual (TSM), dated September 2022 and includes Project Description, VMT Thresholds, Initial VMT Screening, methodology and assumptions, VMT analysis, and VMT results for each land use proposed by the project. The last section provides VMT mitigation measures that the project will implement to address the VMT impacts for the commercial and entertainment land uses.

The Midway Rising project proposes to demolish the existing 16,000-seat San Diego Sports Arena and all commercial buildings on site and construct a mixed-use development within the Midway Pacific-Highway Community Planning Area. The new project includes residential, commercial, and entertainment land uses.

Each land use was analyzed separately for VMT. **Table 1** summarizes VMT analysis results and more details are provided after the table. Land uses with a significant transportation VMT impact were mitigated to the extent feasible, meaning the mitigation measures chosen are "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" (California Code of Regulations Title 14 §15364), but do not fully mitigate the impact.

Table 1: VMT Analysis Screening and Results

Land Use	VMT Screening	Threshold	Analysis Methodology	Exceeds Threshold?	VMT Analysis Result	VMT Mitigation
Residential	Screened out – model still run since project will exceed 2,400 trips	15% below regional VMT per capita	Model run (VMT / Resident)	No	Not Significant	N/A
Commercial	Locally serving commercial screened out only	Zero net increase in VMT	Model run with off-model calculations (VMT Net Change)	Yes	Significant Impact	Mitigated to the extent feasible
Entertainment	Not screened out	Zero net increase in VMT	*Employees*: Model run (VMT / Employee) *Spectators*: Off-model calculations (VMT Net Change)	Yes	Significant Impact	Mitigated to the extent feasible

LAND USE #1: RESIDENTIAL

Although the residential portion of the project is screened out based on the screening criteria, per the TSM, if a project is expected to generate greater than 2,400 daily unadjusted driveway trips the project should be input into the SANDAG Regional Travel Demand Model to analyze the VMT per resident. Additionally, the SANDAG model accounts for interactions between land uses; therefore, the SANDAG Series 14 ABM 2+ model was used to evaluate the VMT per resident. The analysis calculated a VMT per resident of less than 85% of the regional average for the residential portion of the project. Therefore, the **residential land use results in a less than significant transportation VMT impact**.

LAND USE #2: COMMERCIAL

The commercial component of the project was broken down into locally serving and regionally serving commercial uses. The project proposes 100,000 square feet (sf) of locally serving commercial use, which is screened out of detailed VMT analysis. The remaining 40,000 sf of regionally serving commercial use proposed on the project site was analyzed to quantify the VMT impact. (Due to limitations of the model, the only option to code the regionally serving commercial land use into the model was to input the number of restaurant employees who would serve that land use). The SANDAG Series 14 ABM 2+ model was run with and without the 40,000 sf of regionally serving retail to determine the VMT net change between the two models.

The analysis resulted in **a significant transportation VMT impact for the commercial land use**. As a result, the project will implement a retail shuttle for visitors to run between a stop on Frontier Drive within the project site and the Old Town Transit Center to encourage use of transit for accessing the site. More details regarding the implementation timeline and shuttle headways are provided in Section 7.1 of this report. **The retail shuttle is expected to mitigate the VMT impact for the commercial land use to the extent feasible**.

LAND USE #3: ENTERTAINMENT

The SANDAG Series 14 ABM 2+ model is a weekday model which includes a land use input option for the number of amusement services employees associated with a project. (Due to limitations of the model, the employees for the Entertainment land use were coded into the model as amusement service employees.) The entertainment land uses proposed for the site are expected to occur on both weekdays and weekends, and the VMT associated with this land use is expected to be driven by the number of spectators rather than the number of employees. Therefore, due to the limitations of the model, off-model calculations were performed to analyze the VMT impacts associated with the entertainment component of the project. Details of the off-model calculation methodology are provided in Section 5.3 and Section 6.3 of this report.

The analysis resulted in **a significant transportation VMT impact for the entertainment land use**. As a result, the project will extend transit subsidy passes to entertainment land use employees to help offset the net increase in trips. More details regarding the implementation timeline and details of the subsidy are provided in Section 7.2 of this report. **The transit subsidy is anticipated to mitigate the VMT impact for the entertainment land use to the extent feasible**.

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1 INTRODUCTION

In 2013, Senate Bill (SB) 743 was signed into law by California Governor Jerry Brown with a goal of reducing Greenhouse Gas (GHG) emissions, promoting the development of infill land use projects and multimodal transportation networks, and to promote a diversity of land uses within developments. One significant outcome resulting from this statute is the removal of automobile delay and congestion, commonly known as Level of Service (LOS), as the primary metric for determining significant transportation impacts under the California Environmental Quality Act (CEQA).

The Governor's Office of Planning and Research (OPR) selected Vehicle Miles Traveled (VMT) as the principal measure to replace LOS for determining significant transportation impacts. VMT is a measure of total vehicular travel that accounts for the number of vehicle trips and the length of those trips. OPR selected VMT, in part, because jurisdictions are already familiar with this metric. VMT is already used in CEQA to study other potential impacts such as GHG and air quality and is used in planning for regional Sustainable Communities Strategies (SCS).

2 PROJECT DESCRIPTION

The approximately 52.08-acre project site is located within the Midway-Pacific Highway community of the City of San Diego and is bordered by Kurtz Street to the northeast, Sports Arena Boulevard to the southwest, Hancock Street to the northwest, and commercial properties to the southeast, as shown in **Figure 1**.

2.1 LAND USES

The project proposes to demolish the existing 16,000-seat San Diego Sports Arena and all commercial buildings on site and construct:

- Residential
  - 4,627 multi-family dwelling units, including:
  - 2,627 market-rate units
  - 2,000 affordable units, including
    - 1,538 units ≤ 50% Area Median Income (AMI)
    - 462 units between 50%-80% AMI
- Commercial
  - 140,000 square feet (sf) of community retail and restaurant
  - 60,000 sf retail
  - 80,000 sf restaurant
    - 40,000 sf quality restaurant (regionally serving)
    - 40,000 sf high-turnover sit-down restaurant (locally serving)
- Entertainment
  - A new 16,000-seat Entertainment Center
  - A new 3,500-seat theater space (to be located within the privately-owned parcels area)

Figure 1 – Proposed Conceptual Site Plan



BASEMAP SOURCE: SAFDIE RABINES ARCHITECTS

2.2 CONSTRUCTION PHASING

The project will be constructed in two phases:

1. Phase 1 (anticipated to be completed in 2030) includes:
    - Demolition of the site east of proposed Frontier Drive
    - Construction of the new Entertainment Center while the existing arena remains operational
    - Construction of approximately 91,000 sf of commercial (~40,000 sf of retail and ~ 52,000 sf of restaurant)
    - Construction of the residential and commercial uses east of Frontier Drive, including approximately 10,000 sf of regionally serving restaurant
    - Construction of Frontier Drive
2. Phase 2 Buildout (anticipated to be completed in 2035) includes:
    - Demolition of the existing arena (once the new Entertainment Center is operational)
    - Demolition of the existing land uses west of Frontier Drive
    - Construction of approximately 49,000 sf of commercial (~21,000 sf of retail and ~ 28,000 sf of restaurant)
    - Construction of commercial and residential uses west of Frontier Drive, including 40,000 sf of regionally serving restaurant
    - Construction of Kemper Street

Table 2 summarizes the difference in land use changes between the two phases.

Table 2. Proposed Land Use Per Phase

Land Use		Opening Year (2030) Project Phase 1	Phase 1 to Phase 2 Net Increase	Opening Year (2035) Project Phase 2 Buildout
Entertainment (Spectators)	Entertainment Center	16,000	+0	16,000
	Theater	0	+3,500	3,500
	TOTAL	**16,000**	**+3,500**	**19,500**
Residential (Dwelling Units)	Affordable	479	+1,521	2,000
	Market Rate	386	+2,241	2,627
	TOTAL	**875**	**+3,752**	**4,627**
Commercial (Square Feet)	Retail	38,952	+21,048	60,000
	Restaurant	51,936	+28,064	80,000
	TOTAL	**90,888**	**+49,112**	**140,000**
Parking	Residential	1,535	+3,681	5,216
	Retail	280	+151	431
	Entertainment	781	+1,319	2,100
	TOTAL	**2,596**	**+5,151**	**7,747**

2.3 MULTIMODAL PROJECT FEATURES

The following multi-modal improvements are proposed as part of Phase 1 (Year 2030) of the project:

- Construct a Class I multi-use path along the project frontage (south side) on Kurtz Street from the west edge of Block H1 to Greenwood Street.
- Construct a Class I multi-use path along the east side of planned Frontier Drive when this public street is constructed.
- Construct a Class I multi-use path along the project frontage (north side) on Sports Arena Boulevard and a Class IV one-way cycle-track in the westbound direction along the project frontage from Frontier Drive to the east edge of the site.
- Relocate existing local bus stop (ID 13344) to the west side of the Sports Arena Boulevard / East Drive intersection (approximately 200' to the west of the existing stop). Provide a sign, bench, schedule display, route and system map, trash receptacle, concrete bus pad, and shelter.
- Provide event shuttle service between Old Town Transit Center and the entertainment land use for events with greater than 7,500 spectators. Event shuttle will run along Rosecrans Street, Sports Arena Boulevard, Frontier Drive, and Kurtz Street.
- Provide event shuttle service between off-site business park lot just west of the project site and the entertainment land use for events with greater than 10,000 spectators. Event shuttle will run along Sports Arena Boulevard, Frontier Drive, Kurtz Street, and Hancock Street.

The following multi-modal improvements are proposed as part of Phase 2 (Year 2035) of the project:

- Construct a Class I multi-use path along the project frontage (south side) on Kurtz Street from Hancock Street to the west edge of Block H1.
- Construct a Class I multi-use path along the south side of Kurtz Street (east of Greenwood Street) and along the southeast side of Rosecrans Street to provide a connection to the Old Town Transit Center via walking and biking. The multi-use path will be developed in coordination with the City and adjacent property owners; however, improvements are proposed within the City right-of-way, and not within private property.
- Construct a Class I multi-use path along the project frontage (north side) on Sports Arena Boulevard and a Class IV one-way cycle-track in the westbound direction along the project frontage from the west edge of the site to Frontier Drive.
- Construct Class IV one-way cycle-tracks on both sides of the Kemper Street extension within the site.
- Construct a roundabout at the intersection of Hancock Street / Kurtz Street.
- Stripe exclusive bus / right-turn only lanes on:
    - Sports Arena Boulevard between W Point Loma Boulevard and Kemper Street – westbound direction only
    - Sports Arena Boulevard between Kemper Street and Camino Del Rio West – both directions
    - Rosecrans Street between Sports Arena Boulevard and Kemper Street – both directions

  The project team will coordinate with MTS, the San Diego Association of Governments (SANDAG), and the City regarding the timeline and design details of implementation for these improvements. Developer is responsible for striping only.

- Construct a new local bus stop (ID not identified by MTS) on the west side of the Sports Arena Boulevard / Kemper Street intersection. Provide a sign, bench, schedule display, route and system map, trash receptacle, concrete bus pad, and shelter.
- Relocate existing bus stop (ID 13345) to the west side of the Sports Arena Boulevard / Frontier Drive intersection (approximately 150' to the east of existing stop) and designate stop as a future RAPID bus stop per the MTS Designing for Transit Manual (February 2018). The RAPID service is anticipated to be implemented by 2035. Provide a sign, bench, schedule display, trash receptacle, concrete bus pad, rapid shelter, and a real-time digital display. Developer to coordinate with MTS for improvements.
- Provide event shuttle service between offsite parking at SeaWorld and the entertainment land use for events with greater than 12,000 spectators. Event shuttle will run along W Mission Bay Drive, Sports Arena Boulevard, Frontier Drive, Kurtz Street and Hancock Street.

3 VMT THRESHOLDS

The City of San Diego has adopted the following VMT significance thresholds that are applicable to each land use within the project.

- **Residential**: 15% below regional mean VMT per Resident
- **Commercial (Retail/Restaurant)**: Zero net increase in VMT
- **Entertainment (Regional Recreational)**: Zero net increase in VMT

Per the City's TSM methodology both VMT metrics (VMT per Resident and net change in VMT) were used to evaluate the VMT impacts of the respective proposed land uses.

4 INITIAL VMT SCREENING

A detailed VMT analysis is required for all land development projects, except for those that meet at least one of the criteria defined in the City's TSM screening criteria. A project that meets at least one of the criteria is considered to have a less than significant VMT impact. Per the City's TSM, each component of the mixed-use project's land uses should be evaluated separately against the appropriate screening criteria. **Table 3** lists applicable screening criteria for each of the project land uses.

Table 3: VMT Analysis Screening and Results

Land Use	Applicable Screening Criteria (from TSM)	Project Screening
Residential	**Residential Project Located in a VMT Efficient Area**: The project is a residential project located in a VMT efficient area (15% or more below the base year average VMT per Resident).	The residential component of the project is in a VMT efficient area. Therefore, residential land use is **screened out**.*
	Affordable Housing Project: Affordable housing projects are defined as projects that have access to transit and that meet one of the following criteria: is affordable to persons with a household income equal to or less than 50% of the area median income, housing for senior citizens, housing for transitional foster youth, disabled veterans, or homeless persons. In accordance with the OPR Technical Advisory, deed-restricted affordable housing projects meet the City's screening criteria and would not require a VMT analysis.	The project includes 1,538 affordable housing units (≤ 50% AMI) out of the total 4,627 multi-family units. Therefore, the 1,538 affordable units are **screened out**.*
Commercial	**Locally Serving Retail Project:** Locally Serving Retail is defined in the City of San Diego TSM as retail that is less than 100,000 square feet of total gross floor area and has a market area study that shows a market capture area that is less than three miles and serves a population of roughly 25,000 or less.	Approximately 100,000 square feet of community retail and high-turnover sit-down restaurant land uses of the project are assumed to be locally serving and therefore is screened out of a detailed VMT analysis and can be presumed to have a **less than significant impact**. Quality Restaurant land use is not assumed to be locally serving and therefore is **not screened out**.
Entertainment	Screening criteria is not applicable to this land use.	Not screened out of VMT analysis.

** Although the residential portion of the project is screened out based on the screening criteria, per the TSM, if a project is expected to generate greater than 2,400 daily unadjusted driveway trips the project should be input into the SANDAG Regional Travel Demand Model to analyze the VMT per resident. Additionally, the SANDAG model accounts for interactions between land uses; therefore, the model was used to evaluate the VMT per resident.*

5 METHODOLOGY AND ASSUMPTIONS

Based on the City's TSM, VMT analysis utilized the latest available regional activity-based demand model (SANDAG Series 14 ABM2+ version 14.3.0—updated and released July 12, 2022), run in-house by Kimley-Horn. Travel demand models are broadly considered to be among the more accurate of available tools to assess VMT; however, model use is not always an ideal fit for project evaluation due to unique characteristics, data available, and planned land uses. Analysis methodology and assumptions for each of the three (3) land uses are described below.

5.1 LAND USE #1: RESIDENTIAL

- **Land Use Information**: The 2035 SANDAG Series 14 ABM 2+ model anticipated 9,657 total dwelling units would be added to the Midway-Pacific Highway (MPH) community planning area between 2008 and 2035 based on the Community Plan Update (2018). Within the MGRAs that cover the project site, the model anticipated 1,408 dwelling units by 2035, and 1,606 dwelling units by 2050. The proposed project includes 4,627 total dwelling units.
- **VMT Screening**: The residential component of the project would typically be screened out of performing VMT analysis since it is located in a VMT-efficient area with a Series 14 ABM 2+ 2016 VMT/Resident of 82.9% of the regional average by census tract.
- **Approach**: Since the project is proposing to provide a higher number of dwelling units than projected in the model, and expected to exceed 2,400 trips per day, the model was run with the proposed number of dwelling units for the site. *For the proposed residential land use, the SANDAG ABM model was used to determine VMT impacts based on the City's VMT guidelines and adopted threshold.*

5.2 LAND USE #2: COMMERCIAL

- **Land Use Information**: The site includes 140,000 square feet (sf) of total retail and restaurant space – 100,000 sf will be community/event-supportive commercial and the remaining 40,000 sf will be regionally serving restaurant space. The community/event-supportive commercial space meaning: when an event is occurring, spectators will visit retail/restaurants within the same trip, and when an event is not occurring, the space is a community asset that would be locally serving. The average retail space is estimated to be approximately 5,000 sf of gross floor area, with restaurants varying in size, but no restaurants are expected to be larger than 7,500 sf.
- **VMT Screening**: The commercial component of the project is not screened out for VMT since the total commercial area exceeds the 100,000 sf screening threshold and is not all locally serving commercial land use per the TSM.
- **Approach**: The SANDAG model does not differentiate between high turnover (locally serving) and high quality (regionally serving) restaurants, and the only option to code commercial land use is to input the number of "restaurant" employees. Therefore, to calculate net VMT (regional and citywide), the project analysis compared the VMT model results between the project scenario with all commercial land uses (i.e., 140,000 sf) against a scenario with only regionally serving restaurant space (i.e., 40,000 sf; as the 100,000 sf of community/event-supportive commercial is screened out). The Opening Year (2030) Plus Project Phase 1 scenario only proposes 10,000 sf of regionally serving restaurant land use, so VMT analysis was performed on the Opening Year (2035) Plus Project Phase 2 Buildout scenario, which includes 40,000 sf of regionally serving restaurant land use. *Therefore, the commercial land use VMT analysis was performed for the 40,000 sf of regional serving restaurant land use using a net VMT calculation approach.*

5.3 LAND USE #3: ENTERTAINMENT

- **Land Use Information:** Both the existing Sports Arena and proposed Entertainment Center include 16,000 seats. Currently, the typical event size is 7,500 spectators, while full concerts are the maximum event with 10,500 spectators. The proposed Entertainment Center typical attendance will include approximately 14,500 spectators due to the interior layout of the arena for concerts. The proposed Entertainment Center combined with the proposed 3,500-seat theater (to be constructed in 2035; therefore, included in the 2035 and 2050 With Project Scenarios) will be able to hold a maximum event with approximately 19,500 spectators. The number of annual events is anticipated to increase for the proposed project as compared to the existing number of events held at the site.
- **VMT Screening:** The entertainment land use is not screened out of VMT analyses, as the screening criteria is not applicable to this land use.
  - **Approach**: Given that the entertainment land use trips are anticipated to primarily occur Friday-Sunday and the SANDAG Travel Demand Model is a weekday model, the proposed land use type would not be fully represented by land use input options within the SANDAG Travel Demand Model. The only option for coding this land use into the model is to input the number of "amusement" employees. Thus, an alternative method based on available existing spectator travel data was established.
    - The existing vehicle trips and vehicle miles traveled to the Arena were determined using the big data platform Streetlight. Streetlight data provides existing travel data such as trip origins and trip lengths for all days of the week, including weekends. This existing data was annualized based on expected event frequency.
    - The project VMT was then calculated proportionally to the existing travel data based on the increased number of annual events anticipated for the project. The net change in VMT between the existing and proposed entertainment land uses was calculated to quantify the VMT impact of the entertainment land use.

    The Governor's Office of Planning and Research (OPR) has established that a broad range of analysis tools may be acceptable for the purposes of VMT analysis including travel demand, sketch, and spreadsheet models, while other research and data are all acceptable uses to estimate VMT. *Therefore, the entertainment land use VMT was analyzed using off-model calculation methodologies*.

5.4 VMT ANALYSIS SCENARIOS AND MODELS

The following scenarios were developed as part of the VMT analysis:

- 2016 Base Year (Existing Conditions)
- Opening Year (2030) Base (No Project)
- Opening Year (2030) Plus Project Phase 1
- Opening Year (2035) Base (No Project)
- Opening Year (2035) Plus Project Buildout
- Horizon Year (2050) Base (No Project)
- Horizon Year (2050) Plus Project Buildout

For the Opening Year (2030), Opening Year (2035), and Horizon Year (2050) scenarios, SANDAG ABM2+ Series 14.3.0 2025 Base, 2035 Base, and 2050 Base (i.e., SANDAG 'Vision') scenario models were used, respectively.

Model assumptions:

- Land use inputs per the Midway-Pacific Highway Community Plan Update were maintained in the model except for the project MGRAs listed on the following page.
- NAVWAR project is included in the model at different phases in Opening Year (2030), Opening Year (2035), and Horizon Year (2050) model scenarios.
- Separate model runs were conducted for all Opening Year (2035) and Horizon Year (2050) model scenarios.
- For the Opening Year (2030) Plus Project Phase 1 and Opening Year (2030) Base scenarios, VMT results were derived by interpolating 2025 and 2035 model results, as a 2030 SANDAG model scenario was not available.
- The socio-economic characteristics for the proposed household and population were determined based on the characteristics of the traffic analysis zones representing the project in the travel demand model for the respective analysis years.

The SANDAG travel demand model uses Traffic Analysis Zones (TAZs) and Master Geographic Reference Areas (MGRAs) which represent different types of land uses that generate trips throughout the day on a typical weekday. TAZs are geographic areas used for transportation planning and analysis purposes, while MGRAs are a disaggregated geographic area within each TAZ with model detailed information about the different land use components used in the model. The daily travel forecasts including trip generation, distribution and mode of travel are estimated at the level of MGRAs, while the vehicular traffic is assigned to the roadway network at the TAZ level.

The project study area covers the following MGRAs and TAZs (project site breakdown shown on **Figure A** in **Attachment A**):

MGRAs	TAZs
3025	3346
3032	3382
3035	
3040	

MGRA 3032 includes the privately-owned parcels portion of the site plan which is not currently owned by the City or the Midway Rising development but is part of the Specific Plan and is expected to become part of the development in the future. Therefore, VMT associated with this land use must also be analyzed.

Additionally, a portion of MGRA 3035 extends across Sports Arena Boulevard outside the project boundaries. It was assumed that all housing was planned for the north side of Sports Arena Boulevard. Employee numbers within this MGRA were evaluated on a scenario-by-scenario basis based on the existing land uses on the south side of Sports Arena Boulevard and the number of expected employees for the proposed Project were coded into each of the base models. The model considers several employment types as part of the input data including retail, amusement (for the entertainment land use), professional services, restaurants and bars, health services, building maintenance which are related to the proposed Project.

5.5 PROJECT LAND USE INPUTS

To evaluate the project's VMT, land use inputs were updated from baseline to plus project scenarios. To represent the project, adjustments were made to number of households, household income, population, and number of employees that were estimated for the proposed project as stated above and further described below.

5.5.1 HOUSEHOLDS

Table 4 provides a summary of households added to each of the 4 MGRAs to represent the project. For buildings that straddle two different MGRA's, the number of households in the building were coded into the MGRA where the majority of the building is located. Housing units proposed for the site will replace the number of households projected in the SANDAG model.

Table 5 provides a summary of the number of dwelling units per building and which MGRA the buildings were assumed to be located within.

Table 4. Proposed Project Dwelling Units per MGRA

MGRA	Market Rate Units	Affordable Units
3025	1,864	1,643
3032	377	0
3035	0	130
3040	386	227
Total	**2,627**	**2,000**

Table 5. Proposed Project Dwelling Units per Building

Building	Market Rate Units	Affordable Units	MGRA
A1	419	-	3025
A2	419	-	3025
A3	421	-	3025
B1	-	270	3025
B2	-	227	3040
C1	-	270	3025
C2	316	-	3025
D1	289	-	3025
D2	-	243	3025
E1	-	284	3025
E2	-	227	3025
F	386	-	3040
G	-	241	3025
H1	-	130	3035
H2	-	108	3025
Privately-Owned Parcels	377	-	3032
TOTAL	**2,627**	**2,000**	
	4,627		

5.5.2 HOUSEHOLD INCOME

The SANDAG model contains household income categories i1 through i10 identified in 2010 dollars. These income thresholds were increased to 2023 dollars using the US Bureau of Labor Statistics CPI Inflation Calculator to allow modelled income categories to be compared with affordable housing thresholds. **Table 6** summarizes the household income level inputs for the SANDAG model in 2010 and 2023 dollars.

Table 6. SANDAG Model Household Income Categories

SANDAG HH Income Category	Household income	
	(2010)	(2023)
i1	< $15,000	< $21,000
i2	$15,000-$29,999	$21,000-$42,000
i3	$30,000-$44,999	$42,000-$63,000
i4	$45,000-$59,999	$63,000-$84,000
i5	$60,000-$74,999	$84,000-$105,000
i6	$75,000-$99,999	$105,000-$140,000
i7	$100,000-$124,999	$140,000-$175,000
i8	$125,000-$149,999	$175,000-$210,000
i9	$150,000-$199,999	$210,000-$280,000
i10	> $200,000	> $280,000

The % AMI levels for the affordable housing on site were converted to annual income levels based on the San Diego Housing Commission Income and Rent Calculations, and the number of households were distributed into SANDAG's 2023 household income levels.

Affordable housing income values fell into SANDAG household income levels i1 through i6, as shown in **Table 7.** The market rate housing income levels were then distributed among income categories i7 through i10 based on the 2050 baseline model distribution of households as shown in **Table 8.**

The household income levels were distributed to the appropriate MGRA based on the location of affordable and market rate housing buildings per the site plan.

Table 7. Affordable Housing Income Levels

# Bedrooms	Qualifying Income Levels	# of Units	Annual Income*	SANDAG HH Income Category
1 bedroom	80%	55	$88,200	i5
1 bedroom	60%	126	$66,180	i4
1 bedroom	50%	299	$55,150	i3
1 bedroom	40%	304	$44,100	i3
1 bedroom	30%	145	$33,100	i2
1 bedroom	20%**	189	$22,067	i2
2 bedroom	80%	48	$99,250	i5
2 bedroom	60%	84	$74,460	i4
2 bedroom	50%	120	$62,050	i3
2 bedroom	40%	113	$49,600	i3
2 bedroom	30%	118	$37,250	i2
2 bedroom	20%**	5	$24,833	i2
3 bedroom	80%	52	$110,250	i6
3 bedroom	60%	98	$82,680	i4
3 bedroom	50%	79	$68,900	i4
3 bedroom	40%	83	$55,100	i3
3 bedroom	30%	83	$41,350	i2

*** Escalated per CPI Inflation Calculator**

**** 20% AMI calculated based on straight line interpolation from 30% AMI values.**

Table 8. Market Rate Housing Income Levels

SANDAG HH Income Category	SANDAG 2050 Base Model Values		Project Values
	HH	% Distribution	
i7	101	23%	595
i8	91	20%	536
i9	121	27%	713
i10	133	30%	783
TOTAL	**446**	**100%**	**2,627**

5.5.3 POPULATION

The project population inputs for the Opening Year (2030), Opening Year (2035), and Horizon Year (2050) scenarios were calculated based on the average persons per household densities by each income categories in the project MGRA's from the SANDAG ABM2+ model (version 14.3.0) using 2025, 2035, and 2050 base model scenarios. The following calculations show the general methodology adopted to derive populations for the model:

$$Population\ (2035\ |2050\ Base) = \#\ Households\ (2035\ |\ 2050\ Base)\ \times Household\ Density$$

5.5.4 EMPLOYMENT

The number of employees for the project proposed land uses were developed based on:

- Retail – ITE trip generation rates per employee
- Restaurant – ITE trip generation rates per employee
- Entertainment Center and event theater – applicant's past experience with similar size event spaces

Although the proposed restaurant will include both quality restaurants and high-turnover restaurants per the ITE Trip Generation Manual, the quality restaurant use does not include a trip generation rate per employee for a full day. Therefore, for the purposes of estimating the number of restaurant employees, all restaurant space was assumed to be high-turnover sit-down restaurant. The ITE trip generation rates per 1,000 square feet (ksf) and per employee for high-turnover sit-down restaurant (Land Use 932) and Shopping Center (820) were used to develop a rate for employees per ksf. **Table 9** summarizes the calculations and resulting number for retail and restaurant employees.

Table 9. ITE Retail / Restaurant Employee Estimates

Land Use (Code No.)	Area	Unit	ITE Rates[1]			Estimated # Employees[3]
			Trip Gen Rate / ksf[4]	Trip Gen Rate / Emp	Emp / ksf[2]	
High-Turnover Restaurant (932)	80	ksf	112.18	21.26	5.28	422
Shopping Center (820)	60	ksf	37.75	16.11	2.34	141

Notes:

1. Institute of Transportation Engineers (ITE), 11th Edition, 2021
2. Employee / ksf = (Trip Generation Rate / ksf) / (Trip Generation Rate / Employee)
3. Estimated Number of Employees = (Employee / ksf) x Area (ksf)
4. Ksf = 1,000 square feet (sf)

The commercial and entertainment land uses were distributed to the appropriate MGRA based on the location of these uses per the site plan. Based on data from similar size venues managed by the applicant, 885 employees would be present for a typical event at the Entertainment Center and 1,080 employees would be present for a combined full capacity event at both venues.

Model land use inputs are summarized in **Attachment A**.

5.5.5 ROADWAY NETWORK

The following roadway network modifications were analyzed as part of the Local Mobility Analysis (LMA). Figure 1 – Proposed Conceptual Site Plan labels each block within the site.

The roadway network under Opening Year (2030) Plus Project Phase 1 of the project includes the construction (by the project) of:

- Frontier Drive between Sports Arena Boulevard and Kurtz Street, with the exception of the multi-use path on the east side along the privately-owned parcel frontage. During this interim phase, pedestrians and bicyclists will be encouraged to travel through the open space area of the site.
- The intersection of Frontier Drive/Sports Arena Boulevard (southbound approach) and the intersection of Frontier Drive/Kurtz Street.
- Block F and G driveways on Sports Arena Boulevard.
- Block F driveway on Frontier Drive.
- Block H driveways on Kurtz Street.
- Entertainment Center access driveways on Kurtz Street and Sports Arena Boulevard.

The roadway network under Opening Year (2035) Plus Project Phase 2 Buildout includes the roadway network under Plus Project Phase 1 scenario plus the construction (by the project) of:

- Kemper Street between Sports Arena Boulevard and Kurtz Street
- The intersection of Kemper Street/Sports Arena Boulevard and the intersection of Kemper Street/Kurtz Street (southbound approach);
- Roundabout at the intersection of Hancock Street/Kurtz Street;
- Access points on the west side of Frontier Drive and both sides of Kemper Street;
- Entertainment Center operations access driveways on Kurtz Street and Sports Arena Boulevard.
- Multi-use urban paths on Kurtz Street (between Hancock and the east side of the privately-owned parcel and between Greenwood Street and Rosecrans Steet) and on Rosecrans Street (between Kurtz Street and Pacific Highway);
- Elimination of eastbound exclusive right turn lane at the intersection of Kurtz Street and Camino del Rio West to accommodate proposed multi-use path
- Conversion of Kurtz Street from one-way to two-way between Hancock Street and Sherman Street
- Bus only lanes on Sports Arena Boulevard – right-most through lane converted to right-turn only pocket and through lane for buses only
- Bus only lanes on Rosecrans Street – right-most through lane converted to right-turn only pocket and through lane for buses only

The SANDAG model roadway network does not include minor roadways. Accordingly, the model does not incorporate the Greenwood Street extension, Kemper Street extension, or Frontier Drive within the site as envisioned in the Midway-Pacific Highway Community Plan. The City and SANDAG agreed during the scoping phase that the exclusion of these minor roadway segments would not be expected to affect VMT results because the area surrounding these segments has a well-developed grid of streets, which provides multiple route options for drivers. This grid system allows vehicles to easily navigate around any single street, minimizing the impact of changes to one part of the network. Additionally, the City and SANDAG agreed during the scoping phase that the conversion of Kurtz Street to two-way and the bus only lanes on Sports Arena Boulevard and Rosecrans Street would

also not be expected to affect VMT because adjacent streets such as Hancock Street and Sherman Street offer alternative routes for vehicles in case of potential congestion due to the proposed modifications. Drivers can use these parallel roads to reach their destinations without significant deviation from their original path.

5.5.6 TRANSIT NETWORK

In the SANDAG 2025 Base model—used for analyzing Opening Year (2030) scenarios—the transit network within proximity to the project site and within the study area includes:

- MTS Green Line (0.75 mile walking distance from NE edge of project site to nearest stop)
- MTS UC San Diego Blue Line (0.75 mile walking distance from NE edge of project to nearest stop)
- MTS Route 35: Old Town Transit Center – Ocean Beach (0.1 mile, or approximately 530 ft, walking distance to SW edge of project site to nearest stop)
- MTS Route 8: Old Town – Balboa Avenue Transit Center (stop located at project frontage)
- MTS Route 9: Pacific Beach via SeaWorld – Old Town via SeaWorld (stop located at project frontage)

Under Opening Year (2035) Plus Project Phase 2, the transit network within proximity to the project includes the transit under Plus Project Phase 1 (2030) plus the implementation of:

- MTS *Rapid* 28: Shelter Island – Old Town Transit Center (0.35, or approximately 1,850 ft, mile walking distance to NE edge of project site to nearest stop)
- MTS *Rapid* 10: La Mesa to Ocean Beach (BRT along Sports Arena Boulevard) (0.75 mile walking distance to NE edge of project site to nearest stop)

6 VMT ANALYSIS AND RESULTS

6.1 LAND USE #1: RESIDENTIAL LAND USE

The project is located in Census Tract 65 with a SANDAG Series 14 ABM2+ 2016 residential VMT per capita of 15.7 miles, which is 82.9% of the 2016 regional average of 18.9 miles per resident, less than the 85% CEQA significance threshold. However, as stated in the previous sections, a project-specific analysis using the in-house Kimley-Horn model was performed for the residential land use.

Table 10 summarizes the VMT per Resident for the proposed project for each scenario. As shown in the table, VMT per Resident for all the project scenarios is below the City's threshold for residential land uses.

Table 10. Project VMT Results – *Residential Land Use*

Category	2016 Base Year	Opening Year (2030) Base	Opening Year (2030) Plus Project Phase 1	Opening Year (2035) Base	Opening Year (2035) Plus Project Phase 2 Buildout	Horizon Year (2050) Base	Horizon Year (2050) Plus Project Buildout
Project VMT per Resident	-	11.3	11.5	10.8	8.6	9.6	10.6
VMT per Resident Thresholds (85% of Regional Average)				16.1			

For the Opening Year (2030) Plus Project Phase 1 scenario, the project's VMT per Resident is below the City's threshold.

For the Opening Year (2035) Plus Project Phase 2 Buildout scenario, the project's VMT per Resident is below the City's threshold.

For the Horizon Year (2050) Plus Project Buildout scenario, the project's VMT per Resident is below the City's threshold.

Based on the above results, the residential land use results in a **less than significant transportation VMT impact**.

6.2 LAND USE #2: COMMERCIAL LAND USE

Per Section 4, 40,000 square feet of the commercial land uses were not screened out for VMT analysis, as they are considered regionally serving. Per Section 5, to evaluate the VMT impacts for these commercial land uses, separate model runs for the Opening Year (2035) Plus Project Phase 2 Buildout and Horizon Year (2050) Plus Project Buildout scenarios were conducted *with and without* the 40,000 square feet of commercial land uses. Per Section 5, the only option to input the 40,000 sf of regionally serving restaurant is to code the number of restaurant employees into the model; the model does not differentiate between regionally-serving and locally-serving retail. The net change in VMT was determined by comparing the VMT results to the San Diego region and City of San Diego.

The net change in VMT for the regionally serving commercial use is expected to be directly proportional to the amount of regionally serving retail included on the site since this use is pulling from regional trips rather than local trips. In the Opening Year (2035) Plus Project Phase 2 Buildout scenario, 40,000 square feet of regionally serving commercial is anticipated to be built, whereas in Opening Year (2030) Plus Project Phase 1 scenario, approximately 100,000 square feet of commercial will be built. Therefore, only the 2035 net change was analyzed, as the 2030 net change would be proportionally lower.

The net change in VMT for the project scenario is summarized in **Table 11.**

Table 21. Project VMT Results – *Commercial Land Use*

Category	Opening Year (2035) Plus Project Phase 2 Buildout	Horizon Year (2050) Plus Project Buildout
Total VMT – With 140,000 SqFt Commercial		
Regional Total VMT	90,829,639	94,084,949
Citywide Total VMT	41,736,405	42,208,331
Total VMT – With 100,000 SqFt Commercial		
Regional Total VMT	90,797,016	94,099,578
Citywide Total VMT	41,701,051	42,201,878
Net Change in VMT (difference between 140,000 SqFt and 100,000 SqFt)		
Regional Net Change in VMT	+32,623	-14,628
Citywide Net Change in VMT	+35,355	+6,453

The difference in the effect of the 40,000 sf of commercial land use between the Opening Year (2035) Plus Project Phase 2 Buildout and the Horizon Year (2050) Plus Project Buildout scenarios are a result of interactions between the household densities, roadway networks, and transit network inputs that vary between the 2035 and 2050 base models.

The net change in VMT shown in **Table 11** would only reflect *the additional trips that are generated by the quality restaurants (i.e., 40,000 sf of regionally serving land use)*. The model has two limitations that were accounted for using post-processing adjustment factors:

1. The model does not account for quality restaurant trips that were already planned by the visitors regardless of the new restaurant.

   Adjustment: A 10% reduction in VMT was applied to account for trips that were already planned for a quality restaurant, and now the quality restaurant is located closer to home.

2. While the model is sensitive to internal capture trips between typical mixed-use land uses such as residential and commercial, the model is not sensitive to the directly linked trips between the commercial and entertainment land uses (thereby double counting the VMT between commercial and entertainment land uses). As previously mentioned, the model can only input "amusement" land use employees, and cannot input spectators, number of events, or event sizes. Therefore, it would not assume spectators will travel for an event and a quality (regionally serving) restaurant in the same trip.

   Adjustment: A 13% adjustment in VMT to address the internal capture trips between entertainment and regionally serving restaurant uses. The adjustment was based on the 98 events that are anticipated to have over 5,000 attendees throughout the year. Accordingly, there are 98 days out of 365 that would have higher number of attendees and have 50% of commercial trips linked to entertainment trips; therefore, a 13% reduction was applied (98/365×0.50). Essentially, this assumes that 50% of trips going to the regionally serving restaurant uses on site are also attendees of the event on these 98 high-attendance event days.

The adjusted net change in VMT for the Opening Year (2035) Plus Project scenario is summarized in **Table 12.**

Table 32. Adjusted Project VMT Results – *Commercial Land Use*

Category	Opening Year (2035) Plus Project Buildout	Horizon Year (2050) Plus Project Buildout
Net Change in VMT (per Table 10)		
Regional Net Change in VMT	+32,623	-14,628
Citywide Net Change in VMT	+35,355	+6,453
Adjusted Net Change in VMT		
Percentage of Linked Trips to Arena	-13%	-13%
Percentage of Trips already planned	-10%	-10%
Regional Net Change in VMT	+24,981	-14,628*
Citywide Net Change in VMT	+27,073	+4,941

Note: * Regional net change in VMT is negative in 2050 so adjustments were not applied.

Based on the above results, the commercial land use (specifically quality restaurants) results in a **significant transportation VMT impact**.

6.3 LAND USE #3: ENTERTAINMENT LAND USE

As mentioned earlier, the VMT related to the entertainment land use was calculated separately using an off-model analysis. VMT estimated for the entertainment land use using off-model analysis was considered as net increase in regional VMT in addition to the total net change observed from the travel demand model as reported in **Table 11**. The off-model VMT analysis for the entertainment land use is discussed in the next section.

The proposed entertainment land use was separately evaluated quantitatively for net change in VMT. The change in VMT for the entertainment land use was estimated using two distinct factors:

- Existing travel behavior at the existing Sports Arena based on the Big Data platform Streetlight, and
- Estimated number of attendees under the Plus Project scenarios.

Streetlight data utilized for this project included trip origins at the Census blockgroup level for 10 event days between 6:00 PM and 10:00 PM at the existing Sports Arena in 2019[1]. The event days consisted of both weekdays and weekends, with data taken during two San Diego Seals games, four San Diego Gulls games, and four concerts with approximate attendance of 10,450 attendees.

Average trip length was calculated using the vehicle trips and travel distances gathered for the trip origins for all 166 events throughout the year. This database was utilized for the probable origins of spectators and average distance traveled for the new events planned for the entertainment land use.

6.3.1 EXISTING ARENA VMT

Total existing annual vehicle trips for the existing Sports Arena were calculated using the number of attendees for each type of event throughout the year, average vehicle occupancy factor, and estimated mode share for the Arena trips.

- Attendees: Number of total annual attendees at Sports Arena for the year 2023 was obtained using the turnstile attendance data provided by Sports Arena operations division.
- Vehicle Occupancy: The average occupancy factor was estimated based on available arena/stadium traffic studies including the Honda Center in Anaheim, Petco Park in San Diego, Snapdragon Stadium in San Diego, Truist Park in Atlanta, and the Georgia Dome in Athens, GA, as well as informational reports by ITE and FHWA.
- Mode Share: The mode share percentages for the existing Arena trips were estimated based on regional transit mode share from the SANDAG/SanGIS Regional Data Warehouse, and assume 1% transit trips, 1% transportation network company (TNC) trips and 5% non-motorized trips that are expected to arrive from the nearby commercial uses.

[1] This dataset is representative of conditions prior to the onset of the effects of COVID-19 including any resulting governmental restrictions and more closely represents normal travel behavior than what is observed using other Big Data sources for post-COVID years.

- Annual Existing VMT: The total number of annual vehicle trips for each event type was multiplied by the average trip distance to Sports Arena determined from the Streetlight data, to estimate the total existing annual VMT attributed to the Sports Arena.

6.3.2 EXISTING ENTERTAINMENT VENUE VMT

SOMA is an existing music venue holding up to 2,300 people with surface parking available. It is located on Sports Arena Blvd adjacent to Sports Arena and hosts about 113 events a year. The total existing annual vehicle trips for the existing SOMA venue were calculated using the number of SOMA events recorded for 2023, venue capacity, vehicle occupancy factor, and estimated mode share. SOMA is of similar size and location to the proposed theater.

- Attendees: Number of total annual attendees at SOMA for the year 2023 was obtained using the number of events in 2023 and a proportion of the spectator capacity.
- Vehicle Occupancy: The average vehicle occupancy factor was assumed to be 2.5 persons per vehicle based on informational reports from ITE and FHWA and references to similar areas/stadiums which found an average occupancy rate of 3.0 for spectators and 1.0 for employees.
- Mode Share: Due to similar accessibility as the Sports Arena, the mode share percentages for SOMA were estimated assuming 1% transit trips, 1% transportation network company (TNC) trips and 5% non-motorized trips that are expected to arrive from the nearby commercial uses.
- Annual Existing VMT: The total number of annual vehicle trips for all SOMA events in 2023 was multiplied by the average trip distance to SOMA determined from the Streetlight data to estimate the total existing annual VMT attributed to SOMA.

6.3.3 ESTIMATED ENTERTAINMENT VMT

Similar to the existing conditions for Sports Arena, total future annual vehicle trips for the entertainment land use (including both Entertainment Center and Theater) were calculated using the number of attendees for each type of event throughout the year, average vehicle occupancy factor and estimated mode share. The average vehicle occupancy factor for the future entertainment land use was kept the same as existing conditions. However, the mode share for the future trips to the entertainment land use was assumed based on future transit availability, number of available parking spaces compared to the increased future attendees, and increased TNC trips in the future. The estimated mode share for the proposed entertainment land use is explained in detail in the Local Mobility Analysis (LMA), and summarized here:

- Attendees: The number of and size of events expected to occur at the entertainment land use was determined by historical attendance data for each type of event and expected increase in number of annual events. These estimates were developed and verified by the project team.
- Vehicle Occupancy: The average occupancy factor was determined from the available arena/stadium traffic studies including the Honda Center in Anaheim, Petco Park in San Diego, Snapdragon Stadium in San Diego, Truist Park in Atlanta, and the Georgia Dome in Athens, GA, as well as informational reports by ITE and FHWA.

- Mode Share: Mode share was developed based on vehicle-to-transit conversion potential for the entertainment land use from Streetlight to identify trip origin census tracts that could access the site via a 15-minute transit ride rather than a vehicle trip based on the existing transit network.
- Future VMT: The total number of future annual vehicle trips was multiplied by the average trip distance to get the total future annual VMT exclusively for the proposed entertainment land use.

6.3.4 NET CHANGE IN ENTERTAINMENT VMT

The change in annual VMT between existing and future entertainment land use operations was calculated to estimate the net increase in annual VMT. The net increase in annual VMT was then divided by the total number of annual events expected in the future to yield a *daily increase in VMT* due to the proposed entertainment land use. Detailed VMT calculation worksheets for the entertainment land use are included in **Attachment B**.

Table 13 summarizes the net increase in daily VMT calculated using the off-model quantitative VMT analysis.

Table 43. Project VMT Results – *Entertainment Land Use*

Category	Existing	Future
Annual VMT	8,880,880	9,720,025
Total Annual Events	130	166
Annual VMT Net Increase	**839,145**	
Average Daily VMT Net Increase	**2,299**	

Note: VMT/Event assumed to be equivalent to VMT/Day

Based on the above results, the entertainment land use results in a **significant transportation VMT impact**.

6.4 EMPLOYMENT BASED VMT

All previous sections of this report evaluate the VMT for all the project land uses based on their primary source of VMT generating component:

- Population for residential land use,
- Visitors/customers for commercial land use, and
- Attendees/spectators for entertainment land use.

However, the project also includes employees for each of the non-residential land uses (commercial and entertainment), which can be evaluated using the SANDAG travel demand model. Therefore, as a "reasonableness check", the project's VMT per Employee metric was also evaluated using the travel demand model results derived for the non-residential component, and the results were used for VMT mitigation calculations as discussed in the next section. Detailed VMT calculations for the employment based VMT analysis are included in **Attachment B**. **Table 14** summarizes the VMT per employee.

Table 54. Project VMT per Employee Results – *All Non-Residential Land Use*

Category	2016 Base Year	Opening Year (2030) Base	Opening Year (2030) Plus Project Phase 1	Opening Year (2035) Base	Opening Year (2035) Plus Project Phase 2 Buildout	Horizon Year (2050) Base	Horizon Year (2050) Plus Project Buildout
Project VMT per Employee	-	14.4	14.0	12.5	8.6	11.4	7.2
VMT per Employee Thresholds (85% of Regional Average)				16.7			

7 VMT MITIGATION MEASURES

The project has a significant transportation VMT impact based on the VMT analysis for the project's proposed commercial and entertainment land uses. The VMT mitigation measures discussed below are included in the project's Transportation Demand Management (TDM) plan, along with other VMT reducing measures not associated with mitigating the VMT impacts discussed in this report.

7.1 COMMERCIAL LAND USE

As shown in Table 11, it is anticipated that the proposed commercial land uses, specifically the 40,000 square feet of regionally serving restaurant will cause a net increase in VMT as compared to the existing commercial land use on the site. The project proposes to implement a daily retail shuttle between Frontier Drive and the Old Town Transit Center for the first 10 years of the project opening Phase 1, which is anticipated to occur in 2030. The shuttle would operate between 12:00 PM and 10:00 PM using one vehicle at 20- or 30-minute headways. This shuttle, in combination with the 10-minute combined bus headways of MTS Routes 8 & 9 for the existing local bus routes, would incentivize visitors to utilize transit to access the project site. The 10-minute combined bus headways of routes 8 and 9 are a result of the alternating arrival times of the two bus routes at the Old Town Transit Center (shown in **Attachment C**). **The retail shuttle is expected to mitigate the VMT impact for the commercial land use to the extent feasible.**

7.2 ENTERTAINMENT LAND USE

It is anticipated that the proposed entertainment land uses would cause a net increase in VMT as compared to the existing entertainment land use due to the anticipated increase in number of events per year and attendees per event. Based on the model, the VMT per employee is not the cause of the VMT impact; rather, the VMT impact is caused by attendees as discussed in the off-model calculations. The project proposes to implement an employee transit subsidy (CAPCOA strategy T-09) for the Entertainment Center employees to offset the net increase in VMT for the project. The transit subsidy would be offered to all employees at 50% off the current monthly pass rate for the first 10 years of the project opening Phase 1, which is anticipated to occur in 2030.

Table 15 summarizes the VMT reduction anticipated for the overall entertainment land use VMT by implementing an employee transit subsidy for the Entertainment Center. As shown in the table, **the measure is anticipated to mitigate the VMT impact for the entertainment land use to the extent feasible.**

Table 65. Entertainment VMT Mitigation

Category	Average Daily VMT
Average Daily VMT Net Increase	2,299
Transit Subsidy VMT Reduction	**-6,124***
Total Average Daily VMT Change After Mitigation	**-3,825**

* Assumes that 50% of the expected 885 entertainment employees for the entertainment center and the theater would take transit.

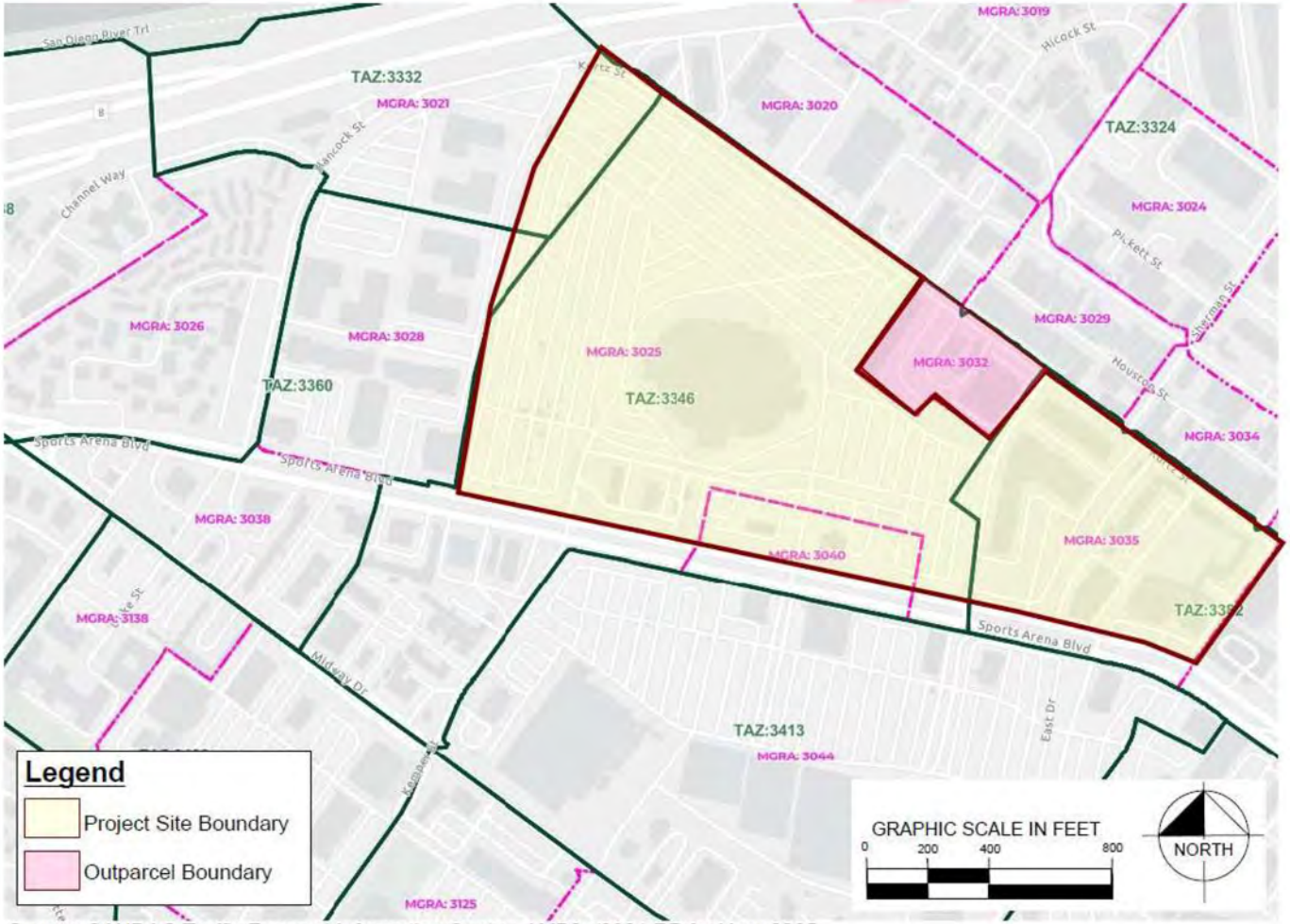
8 ATTACHMENTS

Attachment A: SANDAG Model Data

Attachment B: Entertainment Center VMT Calculations

Attachment C: MTS Bus Routes 8 and 9 Schedules

ATTACHMENT A: SANDAG MODEL DATA



Source: SANDAG Traffic Forecast Information Center; AMB2+/2021 RP for Year 2025

SANDAG Model Input Data

SANDAG Model Scenario Name	SANDAG 2016				SANDAG 2025 Vision				SANDAG 2035 Vision				SANDAG 2C50 Vision				SANDAG 2035 Vision				SANDAG 2035 Vision				SANDAG 2050 Vision			
VMT Memo Scenario Name	2016 Base Year				Opening Year (2030) Base				Opening Year (2035) Base				Horizon Year (2050) Base				Opening Year (2030) Plus Project Phase 1				Opening Year (2035) Plus Project Buildout				Horizon Year (2050) Plus Project Buildout			
mgra	3025	3040	3035	3032	3025	3040	3035	3032	3025	3040	3035	3032	3025	3040	3035	3032	3025	3040	3035	3032	3025	3040	3035	3032	3025	3040	3035	3032
taz	3346	3346	3382	3346	3346	3346	3382	3346	3346	3346	3382	3346	3346	3346	3382	3346	3346	3346	3382	3346	3346	3346	3382	3346	3346	3346	3382	3346
hh	0	0	0	0	160	0	0	8	1332	0	0	76	1511	0	0	95	349	386	130	0	3507	613	130	377	3507	613	130	377
hh_sf	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
hh_mf	0	0	0	0	160	0	0	8	1332	0	0	76	1511	0	0	95	349	386	130	0	3507	613	130	377	3507	613	130	377
hh_mh	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
gq_civ	14	0	0	0	15	0	0	0	15	0	0	0	15	0	0	0	15	0	0	0	15	0	0	0	15	0	0	0
gq_mil	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
i1	0	0	0	0	29	0	0	1	167	0	0	14	202	0	0	9	44	0	16	0	207	28	16	0	207	28	16	0
i2	0	0	0	0	18	0	0	2	215	0	0	18	232	0	0	19	50	0	19	0	237	33	19	0	237	33	19	0
i3	0	0	0	0	23	0	0	0	187	0	0	11	198	0	0	14	160	0	60	0	755	104	60	0	755	104	60	0
i4	0	0	0	0	15	0	0	1	167	0	0	7	166	0	0	11	68	0	25	0	318	44	25	0	318	44	25	0
i5	0	0	0	0	13	0	0	0	120	0	0	0	142	0	0	8	18	0	7	0	84	12	7	0	84	12	7	0
i6	0	0	0	0	7	0	0	1	93	0	0	4	125	0	0	7	9	0	3	0	42	6	3	0	42	6	3	0
i7	0	0	0	0	15	0	0	1	87	0	0	4	101	0	0	5	0	87	0	0	422	87	0	85	422	87	0	85
i8	0	0	0	0	14	0	0	0	84	0	0	2	91	0	0	4	0	79	0	0	380	79	0	77	380	79	0	77
i9	0	0	0	0	10	0	0	1	113	0	0	5	121	0	0	11	0	105	0	0	506	105	0	102	506	105	0	102
i10	0	0	0	0	16	0	0	1	99	0	0	11	133	0	0	7	0	115	0	1	556	115	0	113	556	115	0	113
hhs	0	0	0	0	2,625	0	0	2	2,504	0	0	2.25	2,378	0	0	2.221	2,378	0	0	2.221	2,673	2,744	2,231	2,936	2,44	2,512	2,177	2,653
pop	14	0	0	0	435	0	0	16	3350	0	0	171	3608	0	0	211	833.35	921.7	310.42	0	9388	1682	290	1107	8571	1540	283	1000
hhp	0	0	0	0	420	0	0	16	3335	0	0	171	3593	0	0	211	3593	0	0	211	9373	1682	290	1107	8556	1540	283	1000
emp_ag	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
emp_const_non_bldg_prod	0	0	0	4	0	0	0	3	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
emp_const_non_bldg_office	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
emp_utilities_prod	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
emp_utilities_office	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
emp_const_bldg_prod	0	0	0	27	0	0	0	29	0	0	0	29	0	0	0	29	0	0	0	0	0	0	0	0	0	0	0	0
emp_const_bldg_office	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0
emp_mfg_prod	9	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0
emp_mfg_office	13	0	0	0	12	0	0	0	12	0	0	0	12	0	0	0	12	0	0	0	12	0	0	0	12	0	0	0
emp_whsle_whs	8	0	0	0	8	0	0	0	8	0	0	0	8	0	0	0	8	0	0	0	8	0	0	0	8	0	0	0
emp_trans	0	0	0	97	0	0	0	97	0	0	0	97	0	0	0	97	0	0	0	0	0	0	0	0	0	0	0	0
emp_retail	37	0	86	0	38	0	86	0	38	0	86	0	40	0	86	0	71	14	12	7	93	25	12	10	93	25	12	10
emp_prof_bus_svcs	44	0	0	20	146	8	38	19	310	17	120	19	486	28	205	19	44	0	0	0	44	0	0	0	44	0	0	0
emp_prof_bus_svcs_bldg_maint	42	0	0	0	99	2	17	1	212	5	32	1	331	8	49	1	15	5	5	0	65	10	5	5	65	10	5	5
emp_pvt_ed_k12	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
emp_pvt_ed_post_k12_oth	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0
emp_health	14	0	0	0	178	14	55	0	494	50	169	0	845	75	286	0	14	0	0	0	14	0	0	0	14	0	0	0
emp_personal_svcs_office	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
emp_amusement	32	0	0	0	32	0	0	0	32	0	0	0	32	0	0	0	0	0	885	0	0	0	885	125	0	0	885	125
emp_hotel	0	0	0	0	0	0	0	0	9	0	0	0	24	0	0	0	24	0	0	0	24	0	0	0	24	0	0	0
emp_restaurant_bar	119	110	0	0	119	110	0	0	119	110	0	0	119	110	0	0	204	98	38	22	280	75	36	30	280	75	36	30
emp_personal_svcs_retail	9	0	0	0	9	0	0	0	9	0	0	0	9	0	0	0	9	0	0	0	9	0	0	0	9	0	0	0
emp_religious	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
emp_pvt_hh	0	0	0	0	2	0	0	0	19	0	0	1	21	0	0	1	5	5	2	0	49	9	2	5	49	9	2	5
emp_state_local_gov_ent	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
emp_fed_non_mil	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
emp_fed_mil	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
emp_state_local_gov_blue	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
emp_state_local_gov_white	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
emp_public_ed	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
emp_own_occ_dwell_mgmt	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
emp_fed_gov_accts	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
emp_st_lcl_gov_accts	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
emp_cap_accts	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
emp_total	329	110	86	160	655	134	196	160	1274	182	407	161	1939	221	626	161	418	122	942	29	610	119	940	175	610	119	940	175
enrollgradekto8	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
enrollgrade9to12	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
collegeenroll	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
othercollegeenroll	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
adultschenrl	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
ech_dist	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801
hch_dist	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801	432801
pseudomsa	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
parkarea	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
hstallsoth	0	0	0	0	155	9	56	0	414	26	134	0	224	14	73	0	224	14	73	0	414	26	134	0	224	14	73	0
hstallssam	0	0	0	0	155	9	56	0	414	26	134	0	224	14	73	0	224	14	73	0	414	26	134	0	224	14	73	0
hparkcost	0	0	0	0	1.6224	1.6224	1.6224	1.6224	2.6364	2.6364	2.6364	2.6364	4.8673	4.8673	4.8673	4.8673	4.8673	4.8673	4.8673	4.8673	2.6364	2.6364	2.6364	2.6364	4.8673	4.8673	4.8673	4.8673
numfreehrs	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
dstallsoth	0	0	0	0	155	9	56	0	414	26	134	0	224	14	73	0	224	14	73	0	414	26	134	0	224	14	73	0
dstallssam	0	0	0	0	155	9	56	0	414	26	134	0	224	14	73	0	224	14	73	0	414	26	134	0	224	14	73	0
dparkcost	0	0	0	0	16.224	16.224	16.224	16.224	20.2804	20.28	20.28	20.28	27.581	27.581	27.581	27.581	27.581	27.581	27.581	27.581	20.28	20.28	20.28	20.28	27.5813	27.5813	27.5813	27.5813
mstallsoth	0	0	0	0	155	9	56	0	414	26	134	0	224	14	73	0	224	14	73	0	414	26	134	0	224	14	73	0
mstallssam	0	0	0	0	155	9	56	0	414	26	134	0	224	14	73	0	224	14	73	0	414	26	134	0	224	14	73	0
mparkcost	0	0	0	0	11.062	11.062	11.062	11.062	12.9057	12.906	12.906	12.906	16.593	16.593	16.593	16.593	16.593	16.593	16.593	16.593	12.906	12.906	12.906	12.906	16.593	16.593	16.593	16.593
zip09	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110	92110
parkactive	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
openspaceparkpreserve	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
beachactive	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
budgetroom	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
economyroom	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
luxuryroom	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
midpriceroom	321	0	0	0	368	0	0	0	393	0	0	0	415	0	0	0	415	0	0	0	393	0	0	0	415	0	0	0
upscaleroom	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
hotelroomtotal	321	0	0	0	368	0	0	0	393	0	0	0	415	0	0	0	415	0	0	0	393	0	0	0	415	0	0	0
luz_id	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
truckregiontype	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
district27	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
milestocoast	2.3047	2.4106	2.5871	2.5011	2.3047	2.4106	2.5871	2.5011	2.3047	2.4106	2.5871	2.5011	2.3047	2.4106	2.5871	2.5011	2.3047	2.4106	2.5871	2.5011	2.3047	2.4106	2.5871	2.5011	2.3047	2.4106	2.5871	2.5011
acres	45.963	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.9625	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.9625	4.089	13.3409	3.2928
effective_acres	45.963	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.9625	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.9625	4.089	13.3409	3.2928
land_acres	45.963	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.9625	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.963	4.089	13.341	3.2928	45.9625	4.089	13.3409	3.2928
MicroAccessTime	10	10	10	10	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
remoteAVParking	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
refueling_stations	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0
totint	66	75	64	46	66	75	64	46	69	77	64	51	69	77	64	51	69	77	64	51	69	77	64	51	69	77	64	51
duden	3.5116	1.7485	0.8706	2.2531	7.1958	6.6544	6.4928	8.3582	14.0815	15.19	16.966	18.515	14.918	16.28	18.216	19.99	14.918	16.28	18.216	19.99	21.777	22.485	23.903	28.015	22.1407	23.1264	24.7257	28.9065
empden	19.021	21.118	19.616	28.242	20.963	23.102	21.161	30.101	25.679	27.056	23.892	31.669	29.196	30.714	26.665	36.259	29.196	30.714	26.665	36.259	25.249	26.648	23.504	31.138	26.5588	28.2139	24.2883	33.0031
popden	7.4109	4.0672	2.0903	4.3034	16.976	16.169	17.209	19.75	33.0927	36.225	42.974	43.832	34.845	38.133	43.95	46.825	34.845	38.133	43.95	46.825	54.48	56.498	62.252	70.236	52.955	55.2993	60.2735	69.182
retempden	10.019	10.51	9.2231	12.115	10.035	10.546	9.2878	12.233	9.5917	10.347	9.4278	11.599	9.6825	10.474	9.6045	11.835	9.6825	10.474	9.6045	11.835	10.089	10.819	9.8761	12.213	10.175	10.9411	10.0485	12.4433
totintbin	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
empdenbin	2	2	2	2	2	2	2	3	2	2	2	3	2	3	2	3	2	3	2	3	2	2	2	3	2	2	2	3
dudenbin	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
PopEmpDenPerMi	16917	16118	13892	20829	24281	25133	24550	31905	37613.9	40500	42794	48321	40986	44062	45194	53173	40986	44062	45194	53173	51027	53214	54884	64879	50888.87	53448.5	54119.53	65398.49

ATTACHMENT B: ENTERTAINMENT VMT CALCULATIONS

Existing Sports Arena Utilization

TYPICAL PECHANGA ARENA UTILIZATION *

Pechanga Arena

	Average	Event Days **		Ave Turnstile Attendance	
	Events/Yr	Weekends	Weekdays	Per Event	Annual
Tenant Events					
San Diego Gulls	35	23	12	4,800	168,275
San Diego Seals	10	10	0	2,930	29,300
San Diego Sockers	15	14	1	1,760	26,450
San Diego Strike Force	7	6	1	955	6,682
Non-Tenant Events					
Concert - Large	18	10	8	9,026	162,468
Concert - Small	12	9	3	4,770	57,242
Family Shows	13	6	3	3,142	40,850
Ice Shows	14	6	2	3,342	46,792
Motorsports	3	2	0	7,087	21,261
Boxing	1	1	0	5,372	5,372
Other Sports	1	1	0	7,009	7,009
Other	1	1	0	2,618	2,618
TOTAL	**130**	**89**	**30**		**574,319**

* Assumes stable, post-COVID, operations based on past 10 years of attendance

** Weekend events are events on Friday, Saturday or Sundays

Existing SOMA Utilization

TYPICAL SOMA ESTIMATED UTILIZATION

SOMA

Ticketed Events	Events/Year	Average Paid Attendance*	Total Paid Attendance
Ticketed Events	113	2,000	226,000
TOTAL	**113**	**2,000**	**226,000**

* Maximum capacity is 2,800 (2,300 main stage, 500 side stage)

Future Entertainment Center Utilization

FUTURE ESTIMATED UTILIZATION * San Diego Entertainment Center					
		Paid Attendance		Turnstile Attendance**	
	Events/Yr	Per Event	Annual	Per Event	Annual
Tenant Events					
San Diego Gulls	38	8,500	323,000	8,040	305,520
San Diego Seals	9	6,500	58,500	6,140	55,260
San Diego Sockers*	0	0	0	0	0
San Diego Strike Force*	0	0	0	0	0
Non-Tenant Events					
Concert - Full	25	14,500	362,500	14,470	361,750
Concert - Half	25	7,500	187,500	7,125	178,125
Family Shows	8	3,500	28,000	3,325	26,600
Ice Shows	6	3,000	18,000	2,850	17,100
Motorsports	1	4,000	4,000	3,800	3,800
Boxing	1	8,000	8,000	7,940	7,940
Wrestling	2	4,000	8,000	3,800	7,600
Rodeos	1	3,000	3,000	2,850	2,850
High School Sports	5	1,500	7,500	1,425	7,125
Other Sports	2	4,000	8,000	3,800	7,600
Graduations & Trade Shows	10	0	0	2,030	20,300
Private / Catered Events	25	0	0	280	7,000
TOTAL	**158**		**1,016,000**		**1,008,570**

* The San Diego Sockers and Strike Force will use the Frontwave Arena (currently under construction) in Oceanside, CA starting in 2024

** Turnstile attendance informed by historical comparable arena operations.

Source: CSL.

Future Theater Utilization

Future Estimated Utilization Theater			
Ticketed Events	**Events/Year**	**Average Paid Attendance**	**Total Paid Attendance**
Ticketed Events			
Large Shows	20	3,300	66,000
Medium Shows	25	2,600	65,000
Small Shows	25	2,000	50,000
TOTAL	**70**	**7900**	**181,000**

Existing Sports Arena VMT

Existing Arena	2	**- Twoway Trip Factor**					
VMT Calculations	16.3	**- Average Trip Distance from Streelight Data, miles (2019)**					
		Mode Share					
	Auto%	**Transit%**	**TNC%**	**Other%**	**Veh Occ**	**Annual Vehicle Trips**	**Annual VMT**
Tenant Events							
San Diego Gulls	93%	1%	1%	5%	3.00	109,940	1,790,917
San Diego Seals	93%	1%	1%	5%	3.00	19,143	311,834
San Diego Sockers	93%	1%	1%	5%	3.00	17,281	281,502
San Diego Strike Force	93%	1%	1%	5%	3.00	4,366	71,115
Non-Tenant Events							
Concert - Full	93%	1%	1%	5%	3.00	106,146	1,729,114
Concert - Half	93%	1%	1%	5%	3.00	37,398	609,215
Family Shows	93%	1%	1%	5%	3.00	26,689	434,758
Ice Shows	93%	1%	1%	5%	3.00	30,571	497,998
Motorsports	93%	1%	1%	5%	3.00	13,891	226,277
Boxing	93%	1%	1%	5%	3.00	3,510	57,173
Other Sports	93%	1%	1%	5%	3.00	4,579	74,595
Other	93%	1%	1%	5%	3.00	1,710	27,863
						Annual Existing	**6,112,362**
						Avg VMT per Event	**47,018**
						Average Daily VMT	**16,746**

Existing SOMA VMT

	SOMA	2	**- Twoway Trip Factor**					
	VMT Calculations	16.3	**- Average Trip Distance from Streelight**					
			Mode Share					
		Auto%	**Transit%**	**TNC%**	**Other%**	**Occ**	**Annual Vehicle Trips**	**Annual VMT**
	Large Shows	93%	1%	1%	5%	2.5	169,952	2,768,518
							Annual Future	**2,768,518**
							Avg VMT Per Event	**24,500**
							Avg Daily VMT	**7,585**

Entertainment Center VMT

Entertainment Center	2	**- Twoway Trip Factor**					
VMT Calculations	16.3	**- Average Trip Distance from Streelight Data, miles (2019)**					
		Mode Share					
	Auto%	**Transit%**	**TNC%**	**Other%**	**Veh Occ**	**Annual Vehicle Trips**	**Annual VMT**
Tenant Events							
San Diego Gulls	56%	20%	15%	9%	3.00	144,613	2,355,743
San Diego Seals	71%	5%	15%	9%	3.00	31,682	516,106
San Diego Sockers	71%	5%	15%	9%	3.00	0	0
San Diego Strike Force	71%	5%	15%	9%	3.00	0	0
Non-Tenant Events							
Concert - Full	56%	20%	15%	9%	3.00	171,228	2,789,310
Concert - Half	56%	20%	15%	9%	3.00	84,313	1,373,451
Family Shows	71%	5%	15%	9%	3.00	15,251	248,433
Ice Shows	71%	5%	15%	9%	3.00	9,804	159,707
Motorsports	71%	5%	15%	9%	3.00	2,179	35,490
Boxing	56%	20%	15%	9%	3.00	3,758	61,222
Wrestling	71%	5%	15%	9%	3.00	4,357	70,981
Rodeos	71%	5%	15%	9%	3.00	1,634	26,618
High School Sports	71%	5%	15%	9%	3.00	4,085	66,545
Other Sports	71%	5%	15%	9%	3.00	4,357	70,981
Graduations & Trade Shows	71%	5%	15%	9%	3.00	11,639	189,594
Private / Catered Events	71%	5%	15%	9%	3.00	4,013	65,377
						Annual Future	**8,029,558**
						Avg VMT Per Event	**50,820**
						Average Daily VMT	**21,999**

Theater VMT

	Theater	2	**- Twoway Trip Factor**					
	VMT Calculations	16.3	**- Average Trip Distance from Streelight**					
Category		**Mode Share**						
		Auto%	**Transit%**	**TNC%**	**Other%**	**Occ**	**Annual Vehicle Trips**	**Annual VMT**
3	Large Shows	71%	5%	15%	9%	3	37,840	616,414
3	Medium Shows	71%	5%	15%	9%	3	37,267	607,074
3	Small Shows	71%	5%	15%	9%	3	28,667	466,980
							Annual Future	**1,690,468**
							Avg VMT Per Event	**24,150**
							Avg Daily VMT	**4,631**

Entertainment Employee VMT with Subsidy

ENTERTAINMENT LAND USE EMPLOYEE VMT							
Event List	**Events/Year**	**Employees**	**Two-Way Trip Factor**	**Vehicle Occupancy**	**Annual Vehicle Trips**	**Average Trip Distance**	**Total VMT**
ENTERTAINMENT CENTER							
San Diego Gulls	38	850	2	1	64,600	15.94	1,029,724
San Diego Seals	9	850	2	1	15,300	15.94	243,882
Concert - Full	25	835	2	1	41,750	15.94	665,495
Concert - Half	25	835	2	1	41,750	15.94	665,495
Family Shows	8	805	2	1	12,880	15.94	205,307
Ice Shows	6	805	2	1	9,660	15.94	153,980
Motorsports	1	805	2	1	1,610	15.94	25,663
Boxing	1	850	2	1	1,700	15.94	27,098
Wrestling	2	805	2	1	3,220	15.94	51,327
Rodeos	1	805	2	1	1,610	15.94	25,663
High School Sports	5	805	2	1	8,050	15.94	128,317
Other Sports	2	805	2	1	3,220	15.94	51,327
Graduations & Trade Shows	10	805	2	1	16,100	15.94	256,634
Private / Catered Events	25	50	2	1	2,500	15.94	39,850
THEATER							
Large Shows	20	125	2	1	5,000	15.94	79,700
Medium Shows	25	125	2	1	6,250	15.94	99,625
Small Shows	25	125	2	1	6,250	15.94	99,625
FULL TIME EMPLOYEES	**Working days/Yr**						
	250	78	2	1	39,000	15.94	621,660
						Annual Employee VMT	4,470,373
						Daily Employee VMT	12,248
						Daily VMT Saved by 50% Transit Usage	6,124

ATTACHMENT C: MTS BUS ROUTES 8 AND 9 SCHEDULES

Appendix D

Existing Traffic Count Data

Prepared by National Data & Surveying Services

W Mission Bay Dr & I-8 WB Off Ramp

Peak Hour Turning Movement Count

ID: 23-040224-001
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND — W Mission Bay Dr

AM	0	1288	0	0	1698	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND — I-8 WB Off Ramp

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND — I-8 WB Off Ramp

PM	NOON	AM	
0	0	1322	2
0	0	0	0
0	0	751	2
0	0	0	0
0	0	0	
PM	NOON	AM	

NORTHBOUND — W Mission Bay Dr

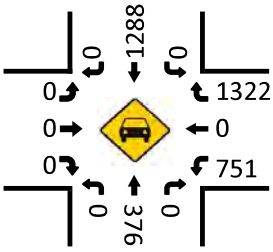
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	2039	0	0	376	0	AM

	0	4	0	0
	0	0	3	0

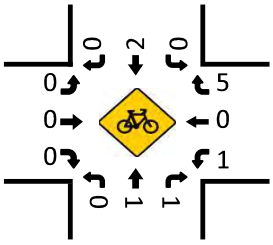
CONTROL: Signalized

TEV	3737	0	0
	AM	NOON	PM
PHF	0.95		

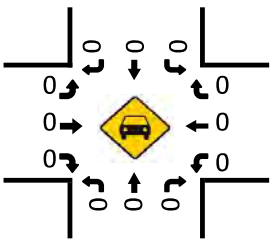
Totals (AM)



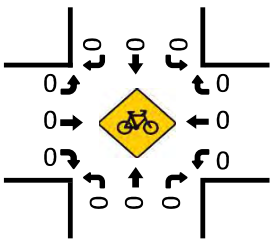
Total Bikes (AM)



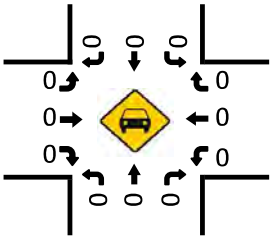
Totals (NOON)



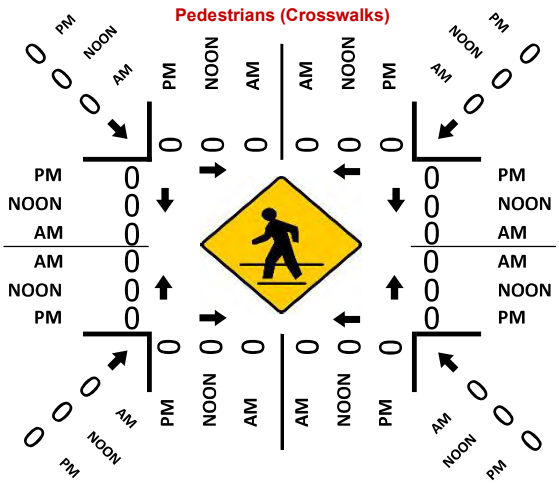
Total Bikes (NOON)



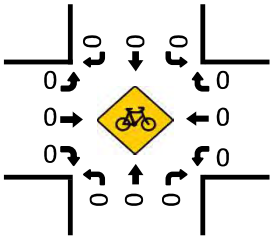
Totals (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sports Arena Blvd/Midway Dr & W Point Loma Blvd/Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040225-002
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS	COUNT PERIODS
08:45 AM - 09:45 AM	7:00 AM - 10:00 AM
NONE	NONE
NONE	NONE

SOUTHBOUND — Sports Arena Blvd/Midway Dr

AM	156	300	259	0	965	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	0.5	1.5	1	0		

EASTBOUND — W Point Loma Blvd/Sports Arena Blvd

AM	NOON	PM		
476	0	0		
0	0	0	0	
326	0	0	1.5	
193	0	0	0.5	
193	0	0	1	
AM	NOON	PM		

WESTBOUND — W Point Loma Blvd/Sports Arena Blvd

PM	NOON	AM	
0	0	341	1
0	0	166	2
0	0	16	1
0	0	0	0
0	0	468	
PM	NOON	AM	

NORTHBOUND — Sports Arena Blvd/Midway Dr

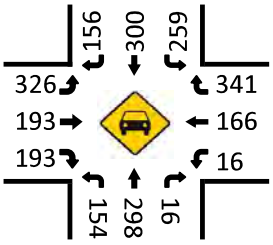
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	509	0	154	298	16	AM
		0	1	1.5	0.5	

CONTROL

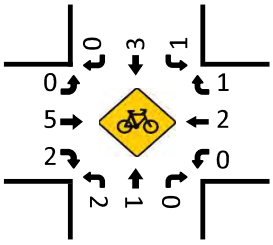
Signalized

TEV	2418	0	0
	AM	NOON	PM
PHF	0.97		

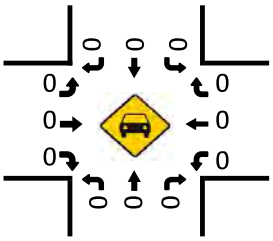
Totals (AM)



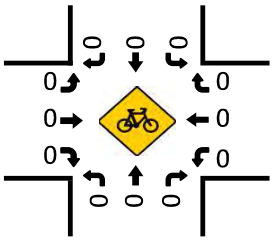
Total Bikes (AM)



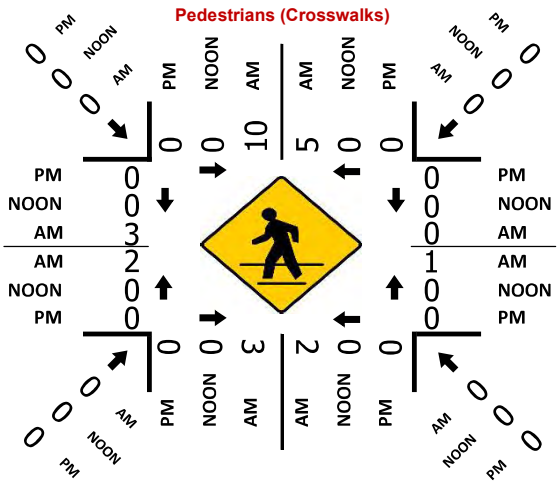
Totals (NOON)



Total Bikes (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
10
5
0
0
0
0
0
0
0
0
3
2
0
0
0
0
0
0
0
0
0
0
0

Prepared by National Data & Surveying Services

Hancock St & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040224-003
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	09:00 AM - 10:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND (Hancock St)

	L	T	R	U	Total	
AM	76	0	47	0	127	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM		
517	0	0		
14	0	0	0	
82	0	0	1	
403	0	0	2	
12	0	0	0	

WESTBOUND (Sports Arena Blvd)

	PM	NOON	AM
0	0	0	45
3	0	0	427
1	0	0	4
0	0	0	1
	0	0	452

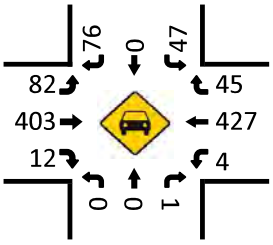
NORTHBOUND (Hancock St)

	L	T	R	U	Total	
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	16	0	0	0	1	AM

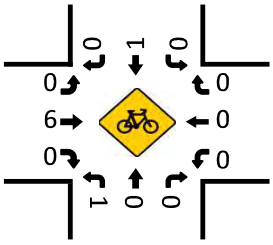
0	2	0	0
0	0	0	0

CONTROL			
Signalized			
TEV	1112 AM	0 NOON	0 PM
PHF	0.94		

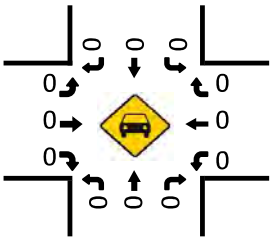
Totals (AM)



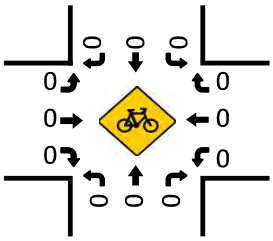
Total Bikes (AM)



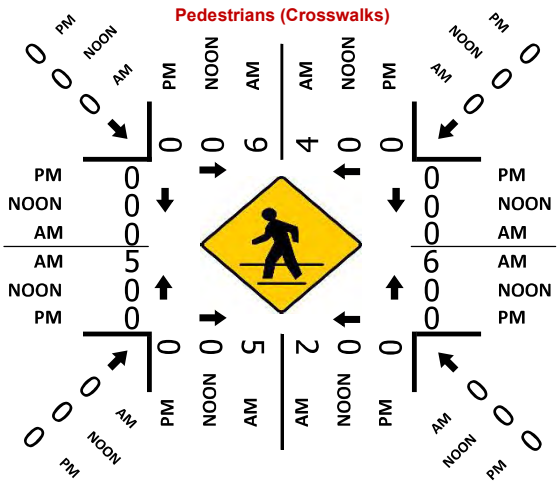
Totals (NOON)



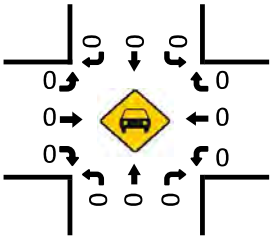
Total Bikes (NOON)



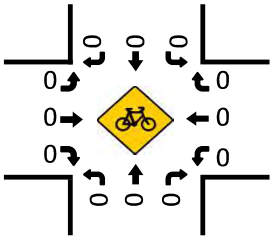
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Kemper St & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040224-032
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
09:00 AM - 10:00 AM	7:00 AM - 10:00 AM
NONE	NONE
NONE	NONE

CONTROL: Signalized

	TEV	AM	NOON	PM
	1275	0	0	
PHF	0.97			

SOUTHBOUND (Kemper St)

AM	67	26	27	0	129	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	1	0.5	0.5	0		

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM		
484	0	0		
5	0	0	0	
46	0	0	2	
300	0	0	2	
109	0	0	0	
AM	NOON	PM		

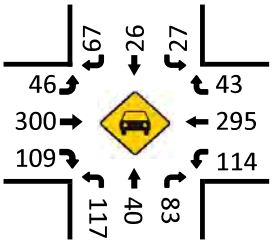
WESTBOUND (Sports Arena Blvd)

PM	NOON	AM		
0	0	43	0	
0	0	295	3	
0	0	114	1	
0	0	3	0	
0	0	413		
PM	NOON	AM		

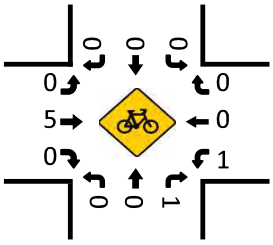
NORTHBOUND (Kemper St)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	249	0	117	40	83	AM
		0	1	1	0	

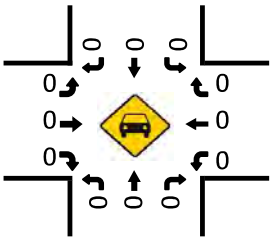
Totals (AM)



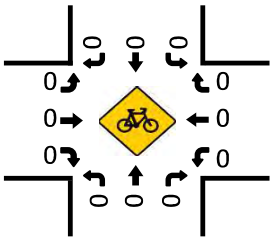
Total Bikes (AM)



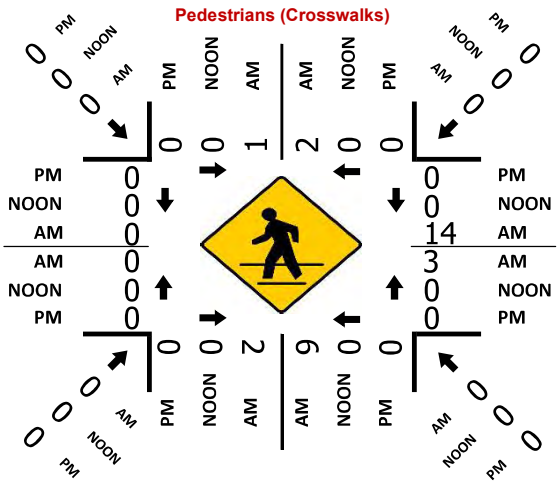
Totals (NOON)



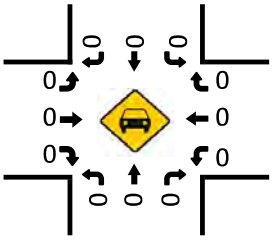
Total Bikes (NOON)



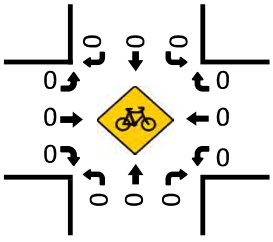
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

West Dr & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040224-033
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	09:00 AM - 10:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND (West Dr)

AM	31	9	44	0	99	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM		
456	0	0	⇦	
9	0	0	↶	0
23	0	0	↱	2
371	0	0	→	2
53	0	0	↴	0
AM	NOON	PM		

WESTBOUND (Sports Arena Blvd)

PM	NOON	AM		
0	0	67	↰	0
0	0	364	←	3
0	0	78	↰	1
0	0	4	↶	0
0	0	464	⇨	
PM	NOON	AM		

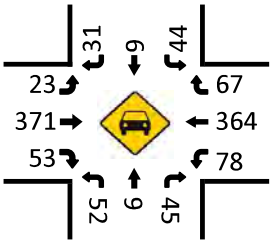
NORTHBOUND (West Dr)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	141	1	52	9	45	AM

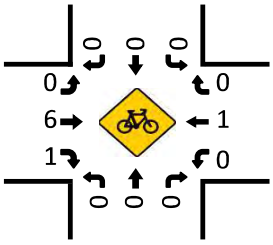
CONTROL: Signalized

TEV	1160	0	0
	AM	NOON	PM
PHF	0.96		

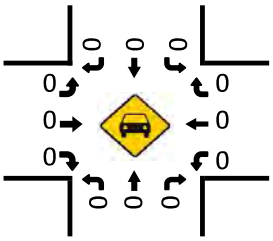
Totals (AM)



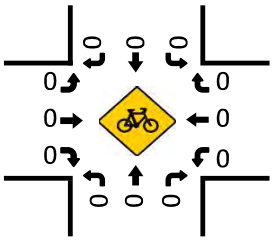
Total Bikes (AM)



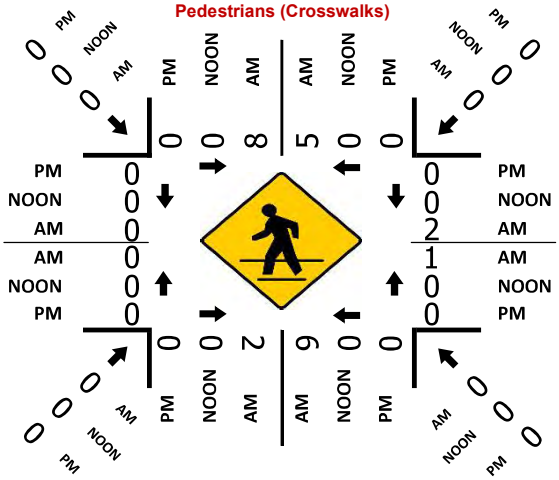
Totals (NOON)



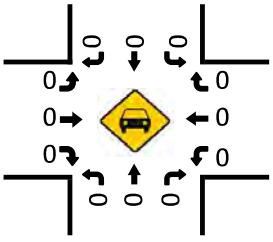
Total Bikes (NOON)



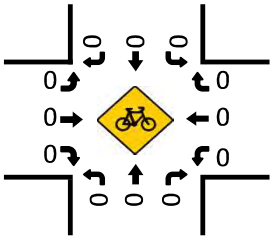
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Target Department Store Dwy & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040224-034
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
09:00 AM - 10:00 AM	7:00 AM - 10:00 AM
NONE	NONE
NONE	NONE

SOUTHBOUND (Target Department Store Dwy)

AM	6	0	1	0	27	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM		
519	0	0		
2	0	0	0	
21	0	0	1	
443	0	0	3	
20	0	0	0	
AM	NOON	PM		

WESTBOUND (Sports Arena Blvd)

PM	NOON	AM	
0	0	6	0
0	0	511	3
0	0	104	1
0	0	7	0
0	0	491	
PM	NOON	AM	

NORTHBOUND (Target Department Store Dwy)

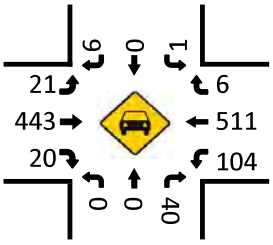
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	124	0	0	0	40	AM

CONTROL			
1-Way Stop(NB)			
TEV	1161	0	0
	AM	NOON	PM
PHF	0.88		

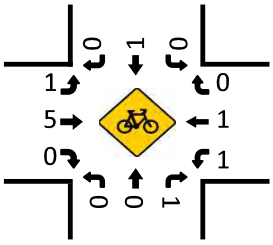
0 1 0 0 (SB turning movements)

0 0 0 1 (NB turning movements)

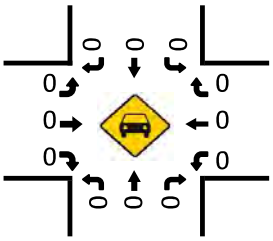
Totals (AM)



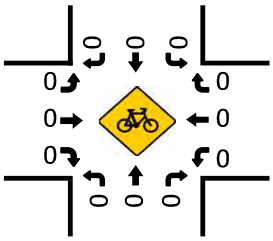
Total Bikes (AM)



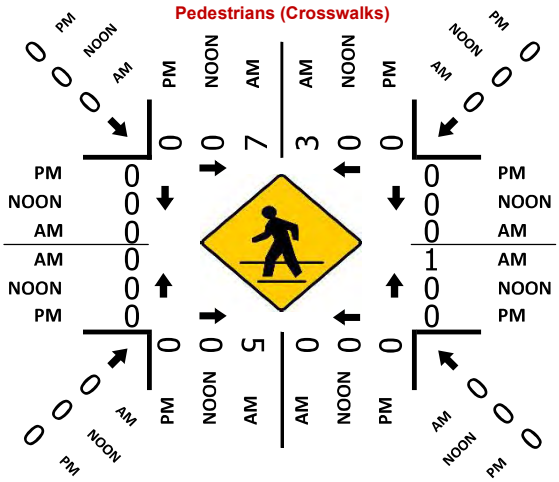
Totals (NOON)



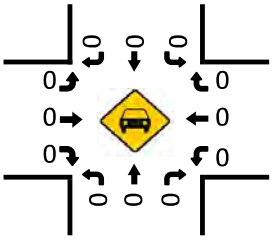
Total Bikes (NOON)



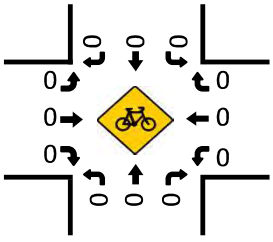
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

East Dr & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040224-004
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	09:00 AM - 10:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND (East Dr)

AM	1	0	0	0	56	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM		
596	0	0	⇦	
2	0	0	↶	0
16	0	0	↱	1
455	0	0	→	3
13	0	0	↴	0
AM	NOON	PM		

WESTBOUND (Sports Arena Blvd)

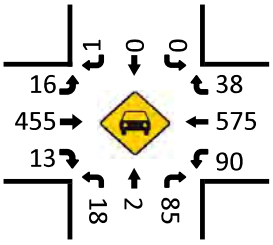
PM	NOON	AM		
0	0	38	↰	0
0	0	575	←	3
0	0	90	↰	1
0	0	49	↶	0
0	0	589	⇨	
PM	NOON	AM		

NORTHBOUND (East Dr)

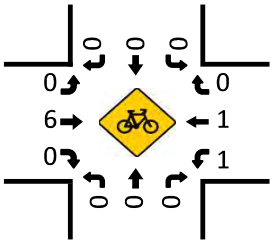
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	103	0	18	2	85	AM

CONTROL			
Signalized			
TEV	1344	0	0
	AM	NOON	PM
PHF	0.89		

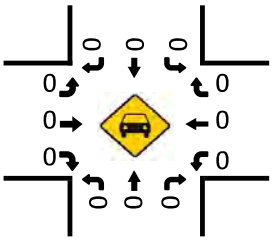
Totals (AM)



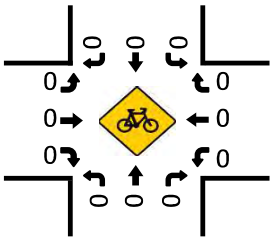
Total Bikes (AM)



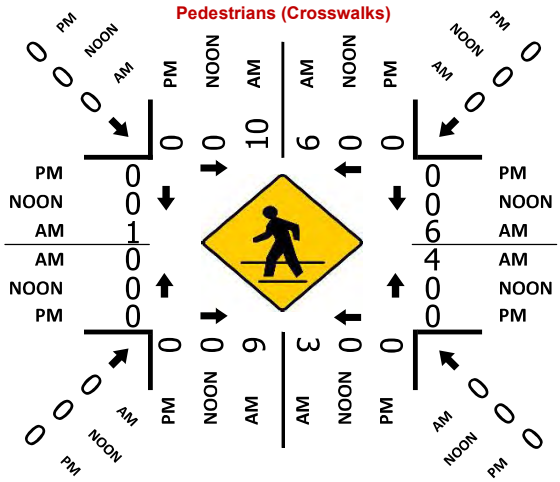
Totals (NOON)



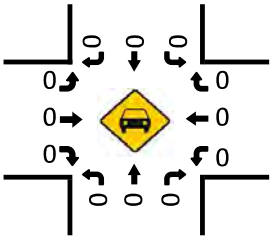
Total Bikes (NOON)



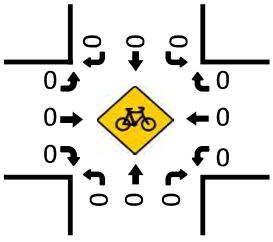
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Kemper St & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040224-024
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS: 08:15 AM - 09:15 AM | NONE | NONE

COUNT PERIODS: 7:00 AM - 10:00 AM | NONE | NONE

CONTROL: Signalized

	AM	NOON	PM
TEV	1449	0	0
PHF	0.99		

SOUTHBOUND (Kemper St)

	L	T	R	U	Total	
AM	55	77	30	0	198	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Midway Dr)

	AM	NOON	PM	
Left	18	0	0	0
Thru	57	0	0	1
Right	373	0	0	2
U-turn	90	0	0	1
Total	513	0	0	

WESTBOUND (Midway Dr)

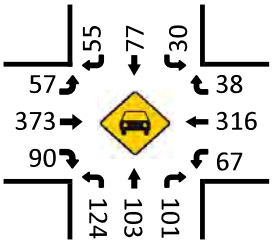
	AM	NOON	PM	
U-turn	0	0	38	0
Left	0	0	316	2
Thru	0	0	67	2
Right	0	0	0	0
Total	0	0	504	

NORTHBOUND (Kemper St)

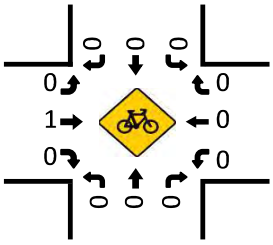
	L	T	R	U	Total	
AM	234	0	124	103	101	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Lane-use arrows: 1 | 1 | 1 | 0 (SB) — 0 | 1.5 | 0.5 | 1 (NB)

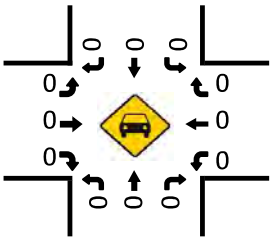
Totals (AM)



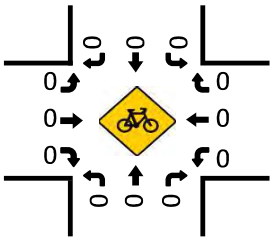
Total Bikes (AM)



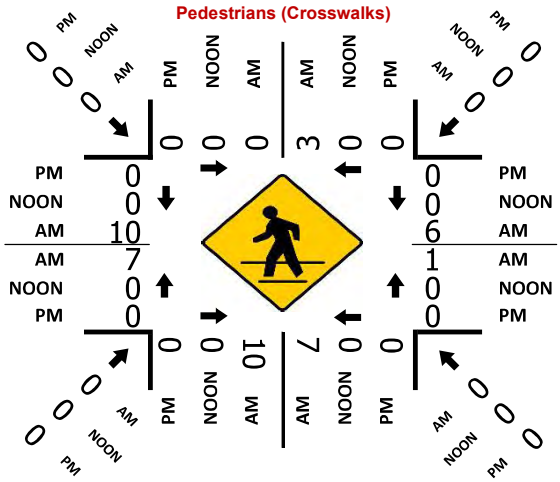
Totals (NOON)



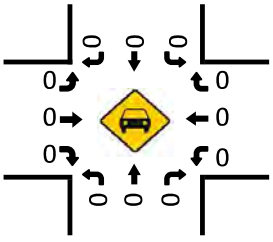
Total Bikes (NOON)



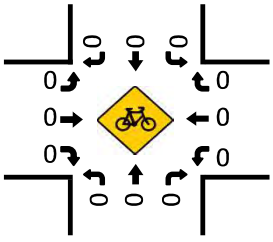
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

East Dr & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040224-023
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	08:15 AM - 09:15 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

CONTROL: Signalized

		AM	NOON	PM
TEV	1549	0	0	
PHF		0.94		

SOUTHBOUND (East Dr)

	Left	Thru	Right	U-Turn	Total	
AM	36	4	56	0	206	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Midway Dr)

	AM	NOON	PM	
Left	727	0	0	0
Thru	33	0	0	1
Right	521	0	0	2
U-Turn	11	0	0	0

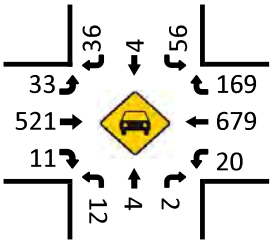
WESTBOUND (Midway Dr)

	AM	NOON	PM	
U-Turn	169	0	0	0
Left	679	0	0	2
Thru	20	0	0	1
Right	581	0	0	0

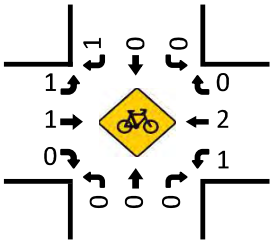
NORTHBOUND (East Dr)

	Left	Thru	Right	U-Turn	Total	
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	35	0	12	4	2	AM

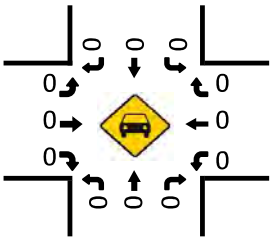
Totals (AM)



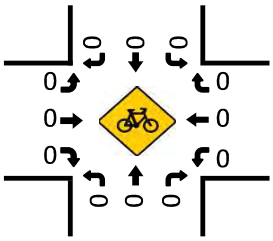
Total Bikes (AM)



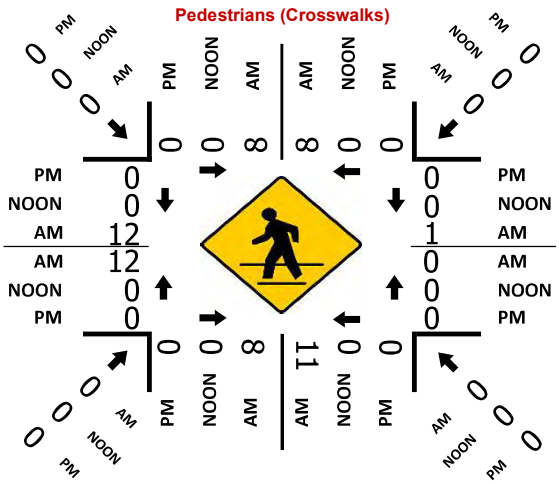
Totals (NOON)



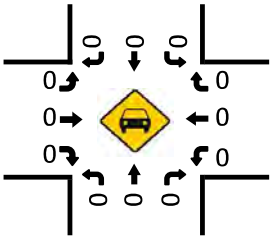
Total Bikes (NOON)



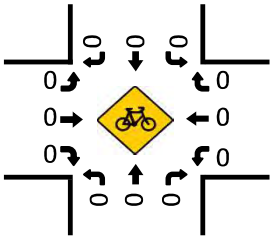
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Hancock St & Channel Way

Peak Hour Turning Movement Count

ID: 23-040224-005
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS: 09:00 AM - 10:00 AM | NONE | NONE

COUNT PERIODS: 7:00 AM - 10:00 AM | NONE | NONE

SOUTHBOUND (Hancock St)

AM	30	86	0	0	106	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Channel Way)

AM	NOON	PM	
54	0	0	
0	0	0	0
13	0	0	0
0	0	0	1
26	0	0	0
AM	NOON	PM	

WESTBOUND (Channel Way)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

NORTHBOUND (Hancock St)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	116	4	24	93	0	AM

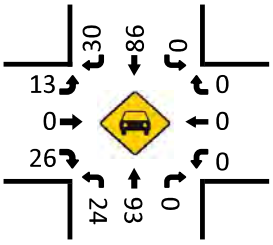
	0	1	1	0

CONTROL

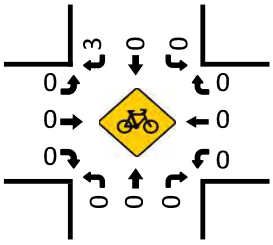
3-Way Stop(NB/SB/EB)

TEV	276	0	0
	AM	NOON	PM
PHF	0.93		

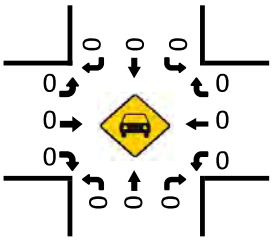
Totals (AM)



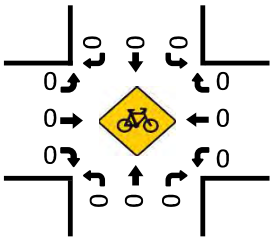
Total Bikes (AM)



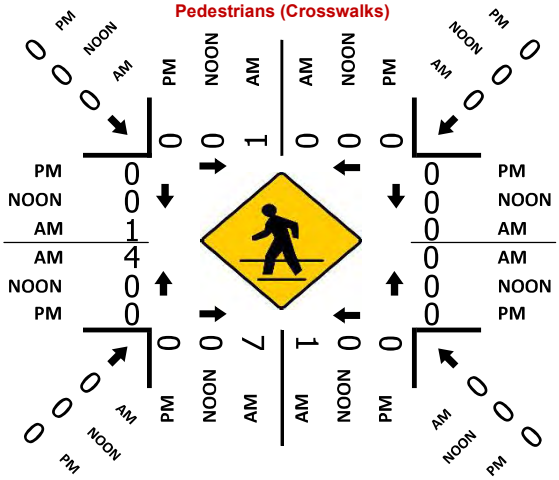
Totals (NOON)



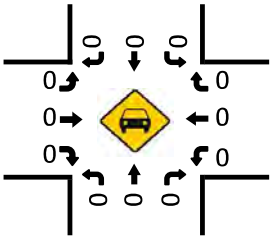
Total Bikes (NOON)



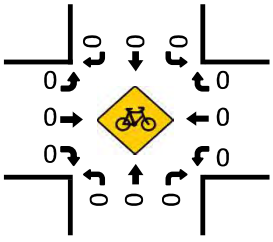
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Kurtz St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040224-006
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	NOON	PM
09:00 AM - 10:00 AM	NONE	NONE

COUNT PERIODS

AM	NOON	PM
7:00 AM - 10:00 AM	NONE	NONE

CONTROL: 1-Way Stop(WB)

	AM	NOON	PM
TEV	318	0	0
PHF	0.96		

SOUTHBOUND (Kurtz St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Hancock St)

AM	NOON	PM	
127	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
111	0	0	1

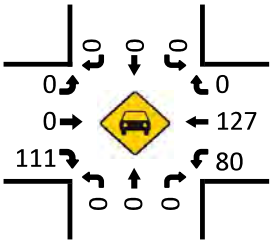
WESTBOUND (Hancock St)

PM	NOON	AM	
0	0	0	0
0	0	127	1
0	0	80	1
0	0	0	0
0	0	0	

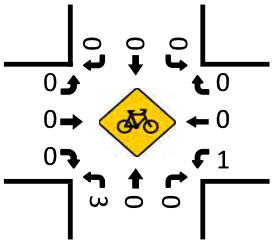
NORTHBOUND (Kurtz St)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	191	0	0	0	0	AM

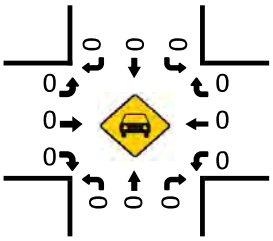
Totals (AM)



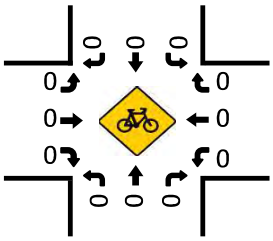
Total Bikes (AM)



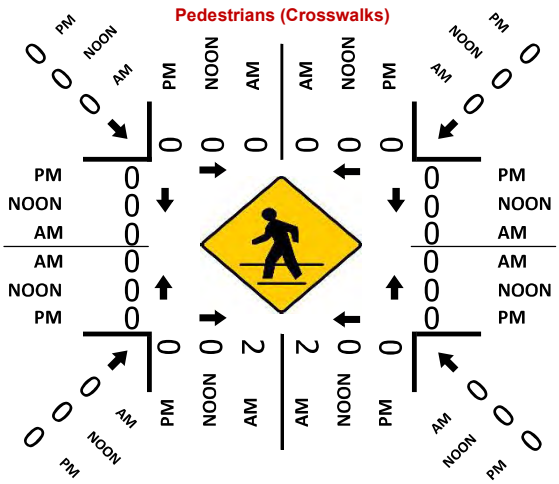
Totals (NOON)



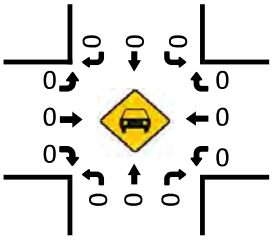
Total Bikes (NOON)



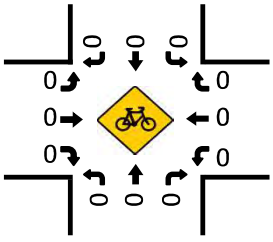
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sherman St & Kurtz St

Peak Hour Turning Movement Count

ID: 23-040224-007
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	09:00 AM - 10:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

CONTROL: 2-Way Stop(SB/EB)

	AM	NOON	PM
TEV	307	0	0
PHF	0.90		

SOUTHBOUND (Sherman St)

	L	T	R	U	Total	
AM	0	0	93	0	71	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Kurtz St)

	L	T	R	U	Total	
AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

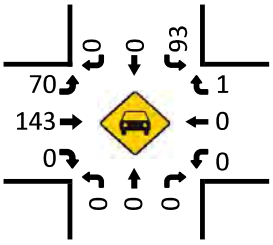
WESTBOUND (Kurtz St)

	L	T	R	U	Total	
PM	0	0	1	0	1	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

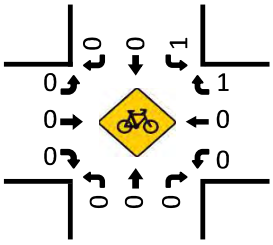
NORTHBOUND (Sherman St)

	L	T	R	U	Total	
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

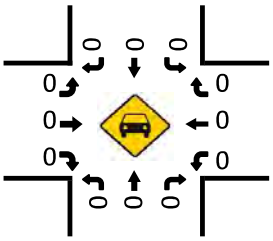
Totals (AM)



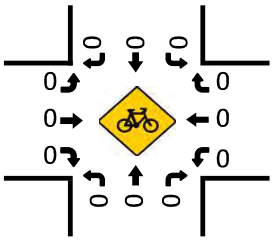
Total Bikes (AM)



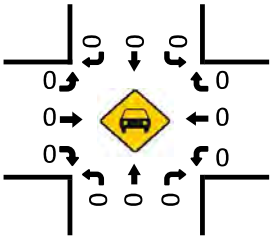
Totals (NOON)



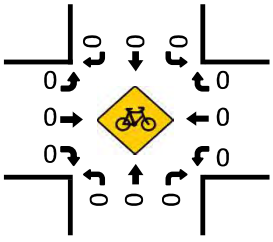
Total Bikes (NOON)



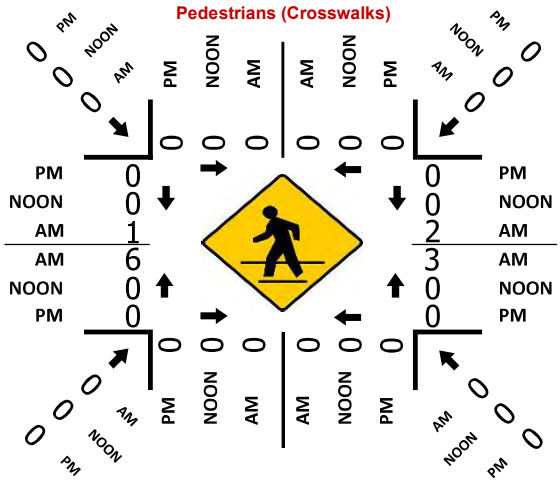
Totals (PM)



Total Bikes (PM)



Pedestrians (Crosswalks)



Prepared by National Data & Surveying Services

Greenwood St & Kurtz St

Peak Hour Turning Movement Count

ID: 23-040224-009
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	09:00 AM - 10:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND — Greenwood St

AM	0	0	44	0	14	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

0 1 0 0

EASTBOUND — Kurtz St

AM	NOON	PM	
0	0	0	
0	0	0	0
14	0	0	0
208	0	0	2
0	0	0	0
AM	NOON	PM	

WESTBOUND — Kurtz St

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	252	
PM	NOON	AM	

CONTROL

1-Way Stop (SB)

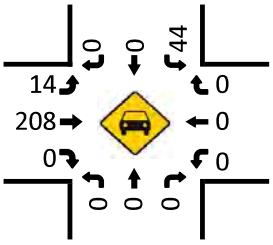
TEV	266	0	0
	AM	NOON	PM
PHF	0.85		

0 0 1 0

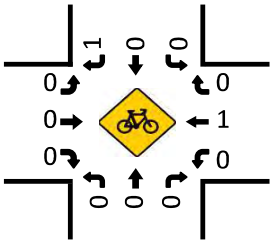
NORTHBOUND — Greenwood St

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

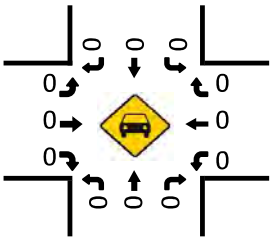
Totals (AM)



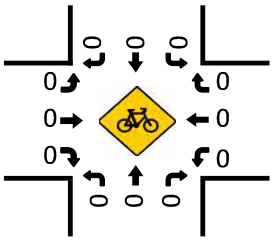
Total Bikes (AM)



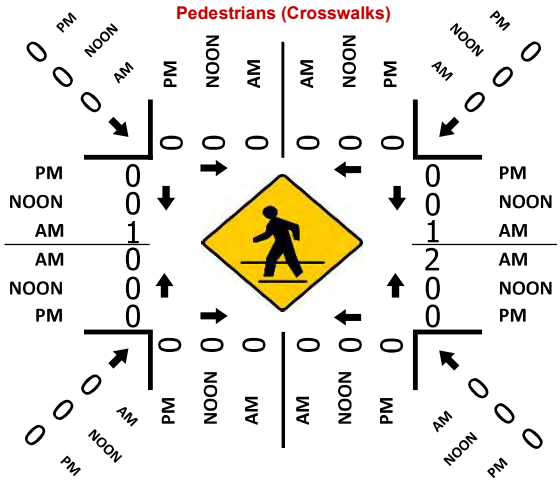
Totals (NOON)



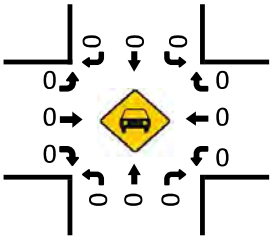
Total Bikes (NOON)



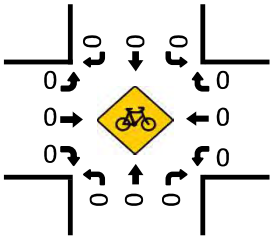
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sherman St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040224-026
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	09:00 AM - 10:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

CONTROL

3-Way Stop(NB/SB/WB)

	AM	NOON	PM
TEV	440	0	0
PHF	0.89		

SOUTHBOUND (Sherman St)

	L	T	R	U	Total	
AM	10	44	0	0	79	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Hancock St)

	L	T	R	U	Total	
AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

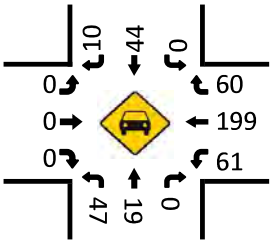
WESTBOUND (Hancock St)

	L	T	R	U	Total	
AM	0	0	60	0	60	AM
NOON	0	0	199	0	199	NOON
PM	0	0	61	0	61	PM

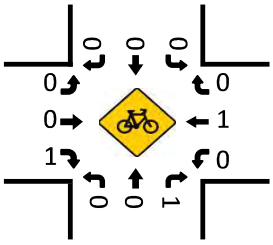
NORTHBOUND (Sherman St)

	L	T	R	U	Total	
AM	105	0	47	19	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

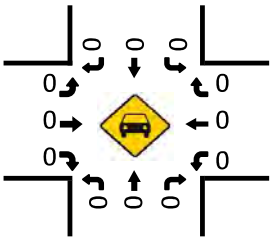
Totals (AM)



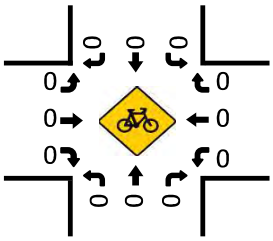
Total Bikes (AM)



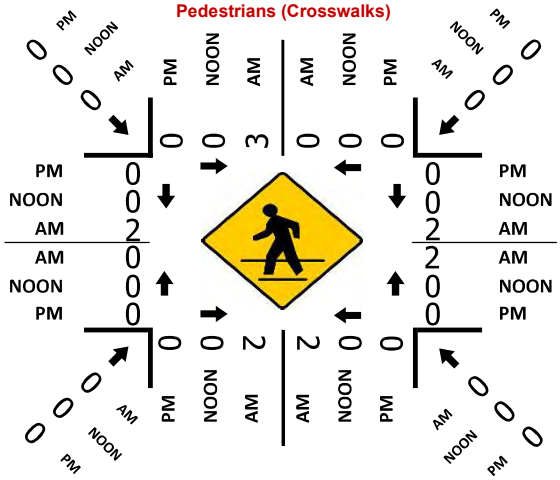
Totals (NOON)



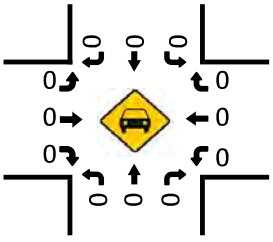
Total Bikes (NOON)



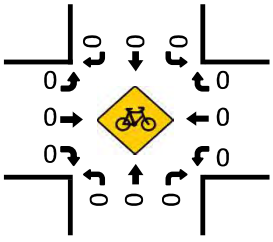
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Greenwood St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040224-008
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: NONE

COUNT PERIODS

AM: 7:00 AM - 10:00 AM
NOON: NONE
PM: NONE

CONTROL: 2-Way Stop(NB/SB)

	AM	NOON	PM
TEV	430	0	0
PHF	0.90		

SOUTHBOUND (Greenwood St)

	L	T	R	U	Total	
AM	81	38	0	0	27	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Hancock St)

	L	T	R	U	Total	
AM	346	0	0			AM
NOON	0	0	0			NOON
PM	0	0	0			PM
	0	1	0	0		

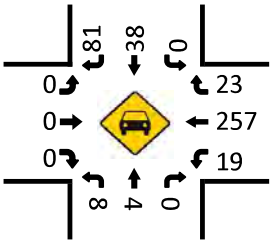
WESTBOUND (Hancock St)

	L	T	R	U	Total	
PM	0	0	23			PM
NOON	0	0	257			NOON
AM	0	0	19			AM
	0.5	1	0.5	0		

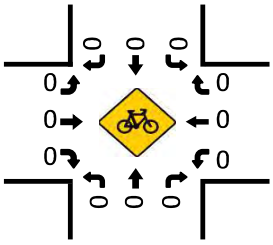
NORTHBOUND (Greenwood St)

	L	T	R	U	Total	
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	57	0	8	4	0	AM
	0	0	1	0		

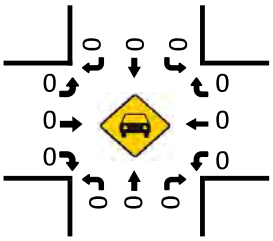
Totals (AM)



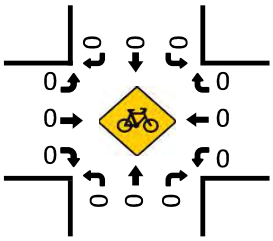
Total Bikes (AM)



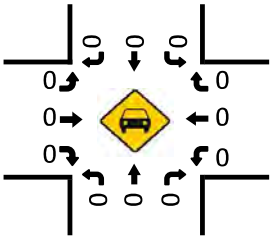
Totals (NOON)



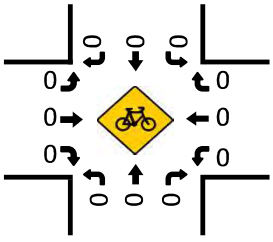
Total Bikes (NOON)



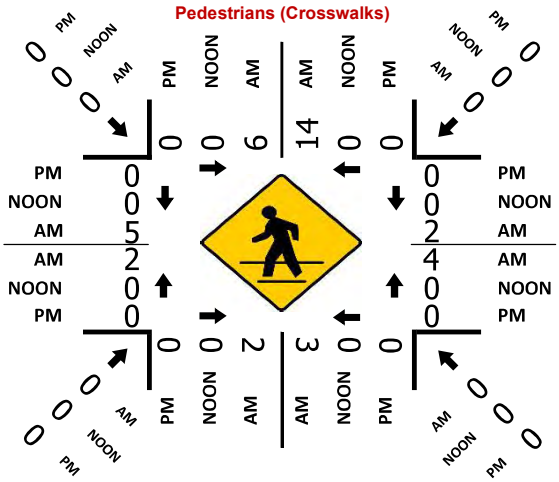
Totals (PM)



Total Bikes (PM)



Pedestrians (Crosswalks)


0
0
0
0
0
0
0
0
0
0
0

Prepared by National Data & Surveying Services

Rosecrans St/Camino Del Rio W & Sports arena Blvd/Rosecrans St

Peak Hour Turning Movement Count

ID: 23-040224-019
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
08:15 AM - 09:15 AM	7:00 AM - 10:00 AM
NONE	NONE
NONE	NONE

SOUTHBOUND — Rosecrans St/Camino Del Rio W

AM	348	1499	0	0	1655	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	1	3	0	0		

EASTBOUND — Sports arena Blvd/Rosecrans St

AM	NOON	PM	
755	0	0	
0	0	0	0
208	0	0	1.5
163	0	0	1.5
139	0	0	1
AM	NOON	PM	

WESTBOUND — Sports arena Blvd/Rosecrans St

PM	NOON	AM	
0	0	11	0.5
0	0	223	1
0	0	201	1.5
0	0	0	0
0	0	413	
PM	NOON	AM	

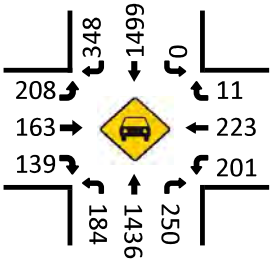
CONTROL: Signalized

TEV	4684	0	0
	AM	NOON	PM
PHF	0.95		

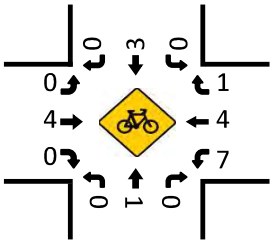
NORTHBOUND — Rosecrans St/Camino Del Rio W

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	1861	22	184	1436	250	AM
		0	2	3	1	

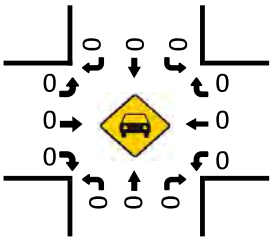
Totals (AM)



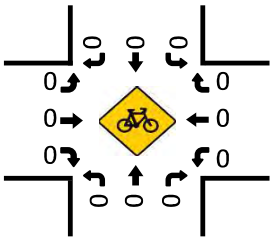
Total Bikes (AM)



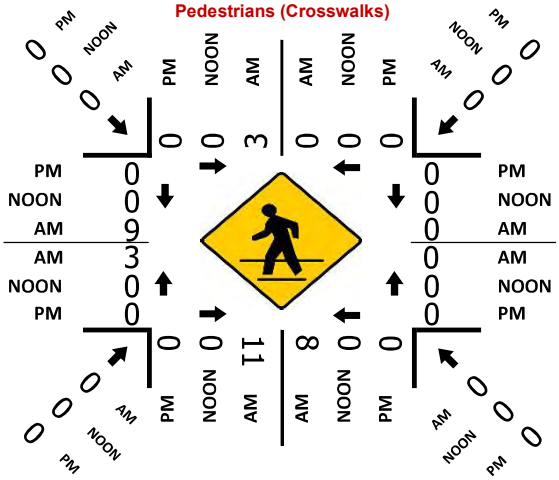
Totals (NOON)



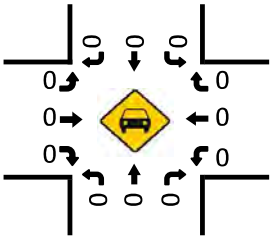
Total Bikes (NOON)



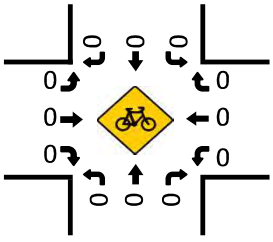
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Pacific Hwy & Kurtz St

Peak Hour Turning Movement Count

ID: 23-040224-016
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS: 07:45 AM - 08:45 AM | NONE | NONE

COUNT PERIODS: 7:00 AM - 10:00 AM | NONE | NONE

SOUTHBOUND (Pacific Hwy)

AM	8	379	0	0	236	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Southbound turning movements: 0 | 3 | 0 | 0

EASTBOUND (Kurtz St)

AM	NOON	PM		
265	0	0		
0	0	0	↶	0
0	0	0	↱	0
0	0	0	→	1
238	0	0	↳	0
AM	NOON	PM		

WESTBOUND (Kurtz St)

PM	NOON	AM		
0	0	0	↰	0
0	0	0	←	0
0	0	0	↰	0
0	0	0	↶	0
0	0	0		
PM	NOON	AM		

CONTROL

1-Way Stop(EB)

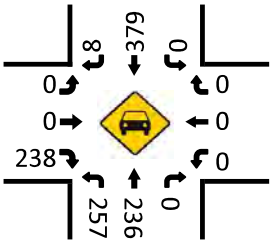
TEV	1118	0	0
	AM	NOON	PM
PHF	0.94		

Northbound turning movements: 0 | 1 | 3 | 0

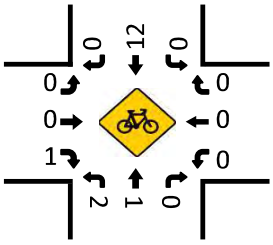
NORTHBOUND (Pacific Hwy)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	617	0	257	236	0	AM

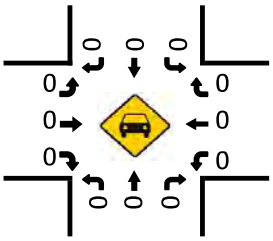
Totals (AM)



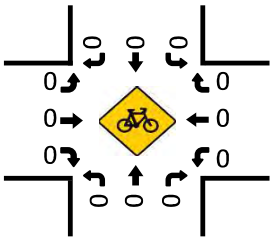
Total Bikes (AM)



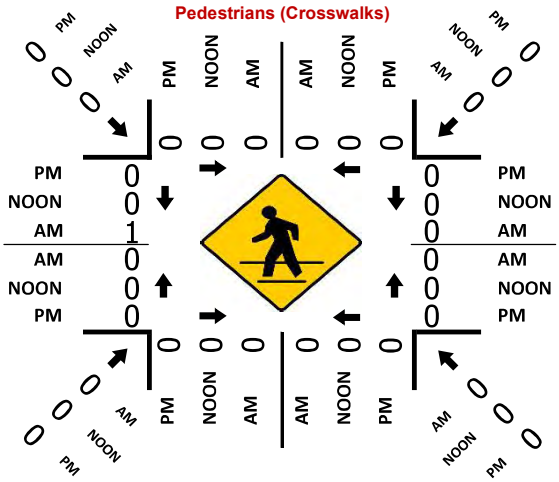
Totals (NOON)



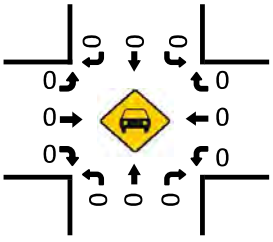
Total Bikes (NOON)



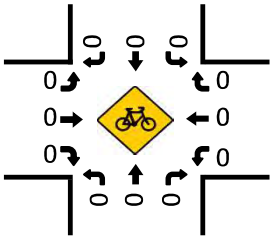
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sea World Dr & Friars Rd

Peak Hour Turning Movement Count

ID: 23-040224-027
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND (Sea World Dr)

AM	0	758	105	1	891	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Friars Rd)

AM	NOON	PM		
0	0	0		
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
AM	NOON	PM		

WESTBOUND (Friars Rd)

PM	NOON	AM	
0	0	0	1.5
0	0	0	0
0	0	0	1.5
0	0	0	0
0	0	378	
PM	NOON	AM	

NORTHBOUND (Sea World Dr)

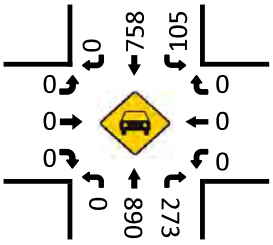
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	758	0	0	890	273	AM

	0	2	2	0
	0	0	2	1

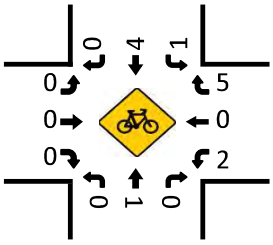
CONTROL: Signalized

TEV	2027	0	0
	AM	NOON	PM
PHF	0.97		

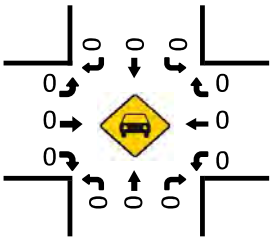
Totals (AM)



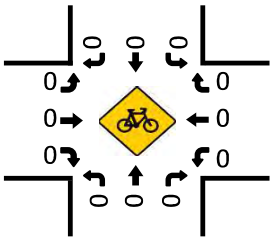
Total Bikes (AM)



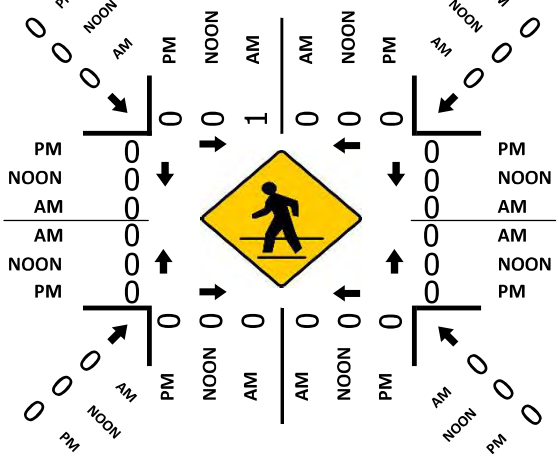
Totals (NOON)



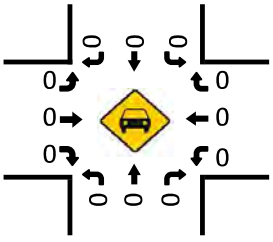
Total Bikes (NOON)



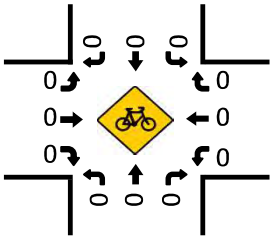
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sea World Dr & Pacific Hwy

Peak Hour Turning Movement Count

ID: 23-040224-028
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND — Sea World Dr

AM	155	796	91	1	947	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	1	2	1	0		

EASTBOUND — Pacific Hwy

AM	NOON	PM	
234	0	0	
0	0	0	0
60	0	0	2
30	0	0	1
48	0	0	1
AM	NOON	PM	

WESTBOUND — Pacific Hwy

PM	NOON	AM	
0	0	55	1
0	0	31	1
0	0	24	1
0	0	0	0
0	0	140	
PM	NOON	AM	

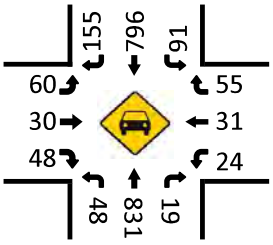
NORTHBOUND — Sea World Dr

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	868	0	48	831	19	AM
		0	2	2	0	

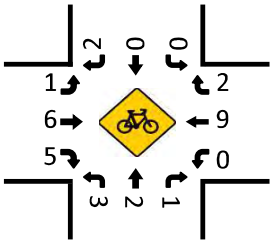
CONTROL: Signalized

TEV	2189	0	0
	AM	NOON	PM
PHF	0.98		

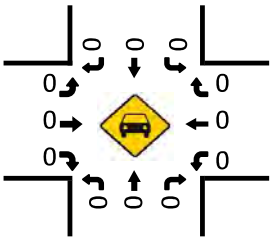
Totals (AM)



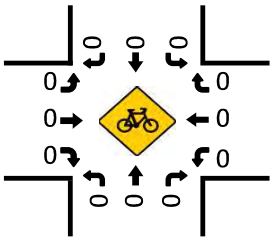
Total Bikes (AM)



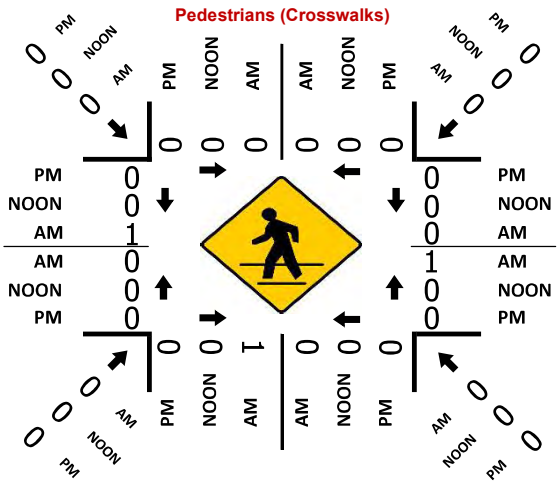
Totals (NOON)



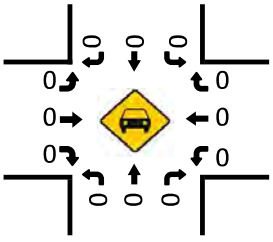
Total Bikes (NOON)



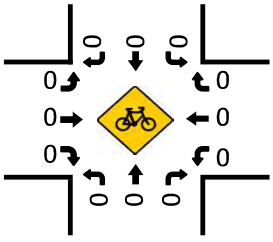
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sports Arena Blvd & I-8 EB On-Ramp

Peak Hour Turning Movement Count

ID: 23-040224-036
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

Sports Arena Blvd

SOUTHBOUND

AM	0	1079	1	0	399	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	0	3	0	0		

EASTBOUND (I-8 EB On-Ramp)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (I-8 EB On-Ramp)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	588	
PM	NOON	AM	

CONTROL

No Control

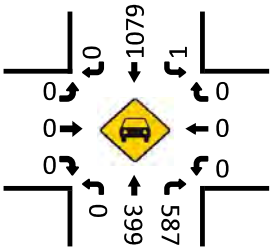
TEV	2067	0	0
	AM	NOON	PM
PHF	0.94		

	0	0	1.5	1.5		
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	1080	1	0	399	587	AM

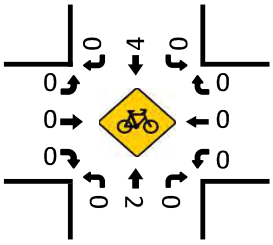
NORTHBOUND

Sports Arena Blvd

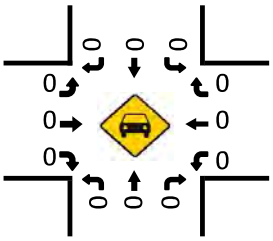
Totals (AM)



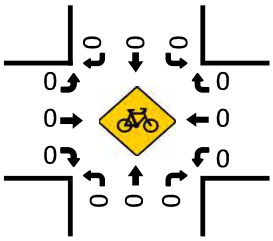
Total Bikes (AM)



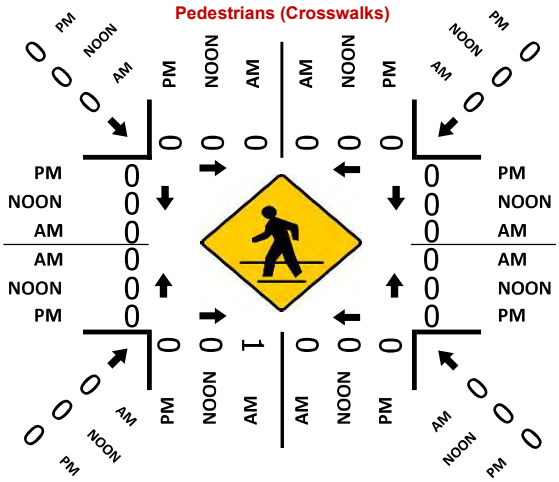
Totals (NOON)



Total Bikes (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
0
0
0
0
0
0
0
0
0

Prepared by National Data & Surveying Services

Camino Del Rio W & Greenwood St/Moore St

Peak Hour Turning Movement Count

ID: 23-040225-010
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS	
AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS	
AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND (Camino Del Rio W)

	Left	Thru	Right	U-Turn	Total	
AM	84	2194	0	0	1731	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Greenwood St/Moore St)

	Left	Thru	Right	
AM	84	0	0	
NOON	0	0	0	
PM	0	0	0	
AM	0	0	0	0
NOON	0	0	0	0
PM	1	0	0	1
AM	4	0	0	0
NOON				
PM				

WESTBOUND (Greenwood St/Moore St)

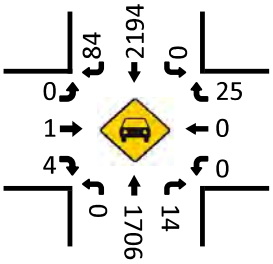
	Left	Thru	Right	
PM	0	0	25	
NOON	0	0	0	
AM	0	0	0	
PM	0	0	0	0
NOON	0	0	0	1
AM	0	0	0	0
PM	0	0	15	
NOON				
AM				

NORTHBOUND (Camino Del Rio W)

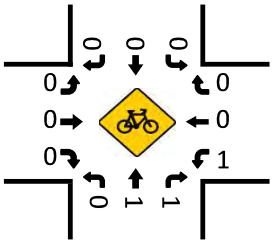
	Left	Thru	Right	U-Turn	Total	
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	2198	0	0	1706	14	AM

CONTROL				
2-Way Stop(EB/WB)				
TEV	4028	0	0	
	AM	NOON	PM	
PHF	0.96			

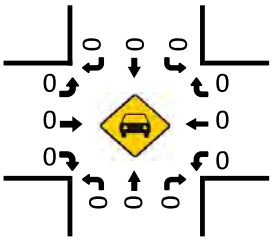
Totals (AM)



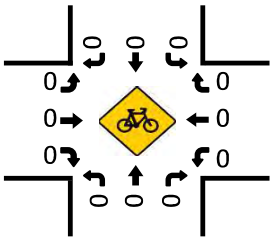
Total Bikes (AM)



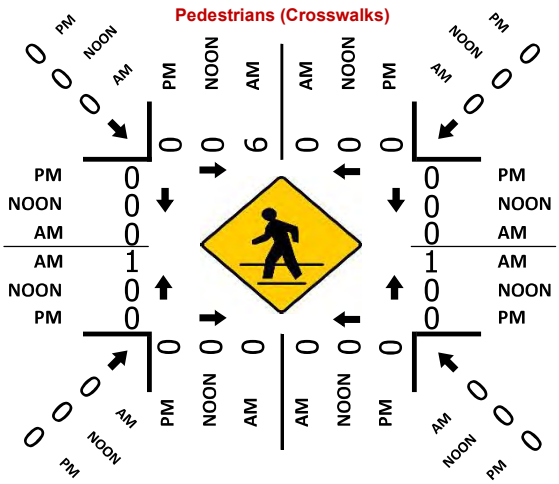
Totals (NOON)



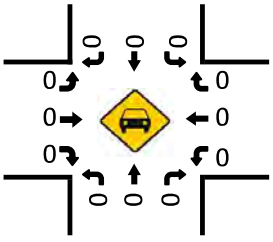
Total Bikes (NOON)



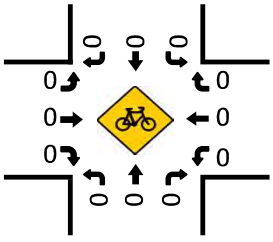
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Camino Del Rio W/Riley St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040225-011
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND — Camino Del Rio W/Riley St

AM	92	2112	0	0	1724	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	1	3	0	0		

EASTBOUND — Hancock St

AM	NOON	PM		
248	0	0		
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
AM	NOON	PM		

WESTBOUND — Hancock St

PM	NOON	AM		
0	0	78	0	
0	0	115	1.5	
0	0	25	0.5	
0	0	0	0	
0	0	46		
PM	NOON	AM		

CONTROL

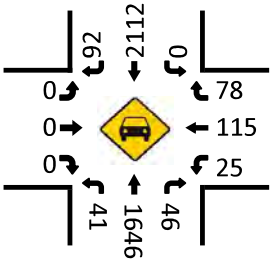
Signalized

TEV	4162	0	0
	AM	NOON	PM
PHF	0.96		

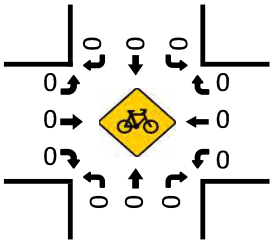
NORTHBOUND — Camino Del Rio W/Riley St

	0	1	3	0		
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	2144	7	41	1646	46	AM

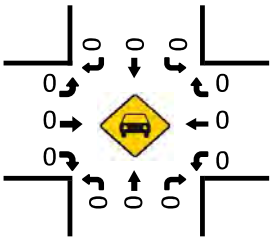
Totals (AM)



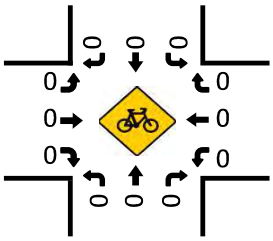
Total Bikes (AM)



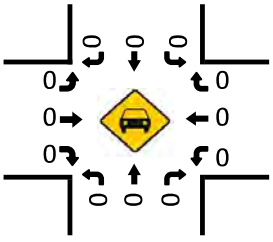
Totals (NOON)



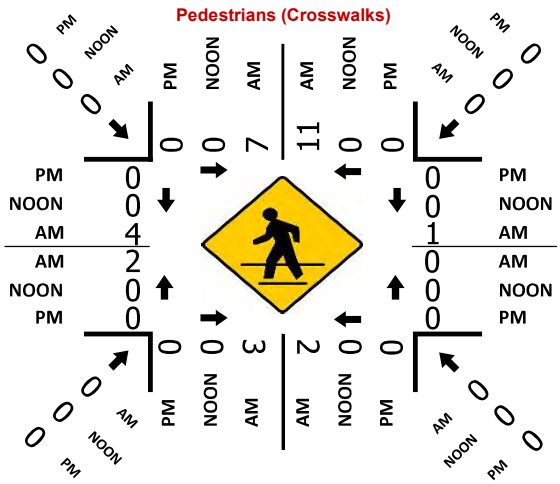
Total Bikes (NOON)



Totals (PM)



Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
0
0
7
11
0
0
0
0
0
0
0
4
1
2
0
0
0
0
0
0
0
3
2
0
0
0
0
0
0
0
0
0
0
0

Prepared by National Data & Surveying Services

Camino Del Rio W & Kurtz St/Gaines St

Peak Hour Turning Movement Count

ID: 23-040225-012
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND — Camino Del Rio W

AM	0	2021	88	24	1738	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Kurtz St/Gaines St

AM	NOON	PM		
0	0	0		
0	0	0	0	
106	0	0	1.5	
70	0	0	0.5	
35	0	0	1	
AM	NOON	PM		

WESTBOUND — Kurtz St/Gaines St

PM	NOON	AM	
0	0	1	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	172	
PM	NOON	AM	

NORTHBOUND — Camino Del Rio W

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	2056	0	0	1607	14	AM

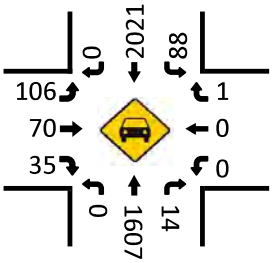
	0	4	1	0
	0	0	3	0

CONTROL

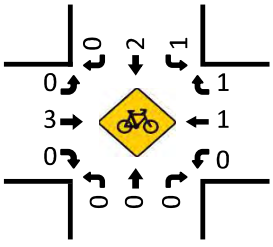
Signalized

TEV	3966	0	0
	AM	NOON	PM
PHF	0.95		

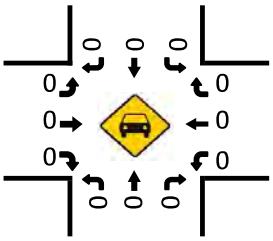
Totals (AM)



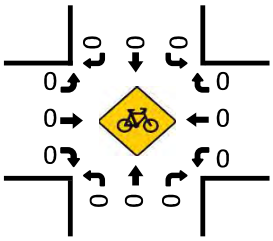
Total Bikes (AM)



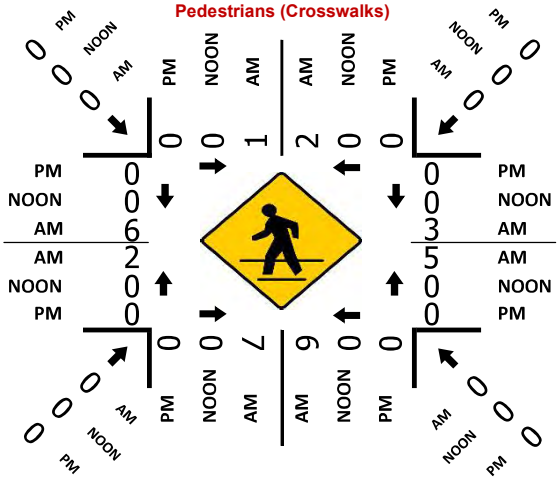
Totals (NOON)



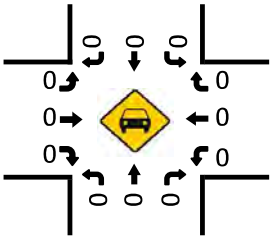
Total Bikes (NOON)



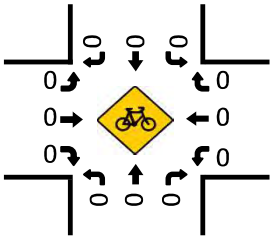
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040225-020
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND (Rosecrans St)

AM	189	1568	148	19	1892	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Midway Dr)

AM	NOON	PM		
835	0	0		
1	0	0	0	
156	0	0	2	
219	0	0	2	
166	0	0	1	
AM	NOON	PM		

WESTBOUND (Midway Dr)

PM	NOON	AM		
0	0	172	1	
0	0	381	2	
0	0	127	1	
0	0	0	0	
0	0	440		
PM	NOON	AM		

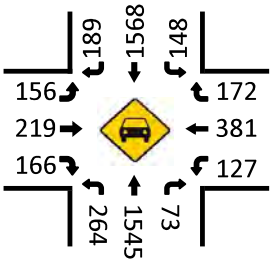
NORTHBOUND (Rosecrans St)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	1901	40	264	1545	73	AM

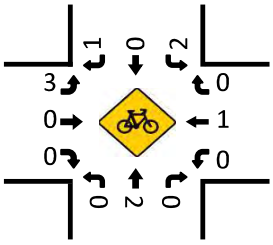
CONTROL: Signalized

TEV	5068	0	0
	AM	NOON	PM
PHF	0.94		

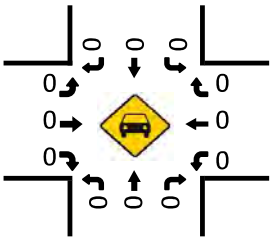
Totals (AM)



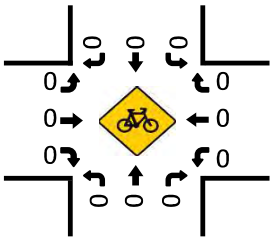
Total Bikes (AM)



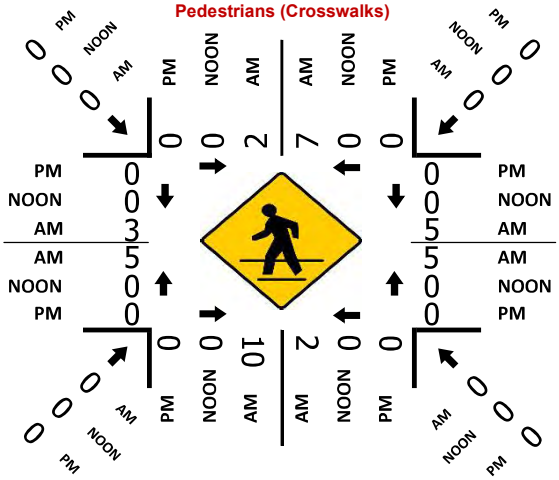
Totals (NOON)



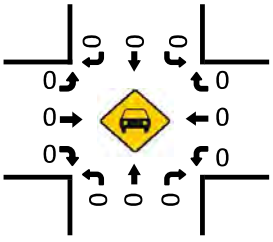
Total Bikes (NOON)



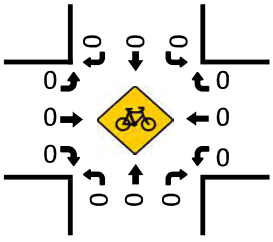
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & N Evergreen St

Peak Hour Turning Movement Count

ID: 23-040225-022
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND (Rosecrans St)

AM	70	1717	99	36	1980	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

0 3 1 0

EASTBOUND (N Evergreen St)

AM	NOON	PM	
91	0	0	
0	0	0	0
108	0	0	0
10	0	0	1
12	0	0	0

WESTBOUND (N Evergreen St)

	PM	NOON	AM
0	0	0	82
1	0	0	15
0	0	0	61
0	0	0	0
	0	0	132

CONTROL

Signalized

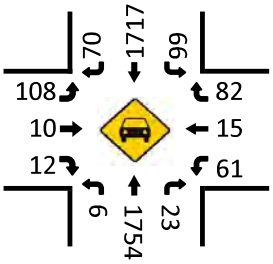
TEV	4006	0	0
	AM	NOON	PM
PHF	0.92		

0 1 3 0

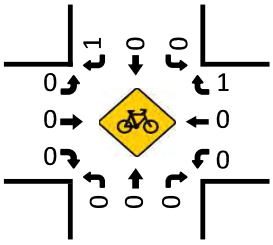
NORTHBOUND (Rosecrans St)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	1803	13	6	1754	23	AM

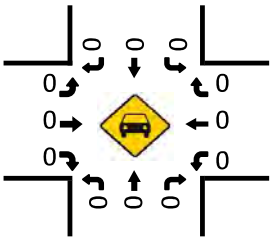
Totals (AM)



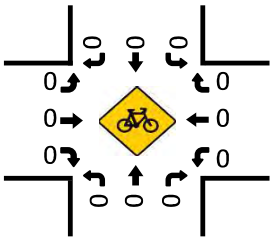
Total Bikes (AM)



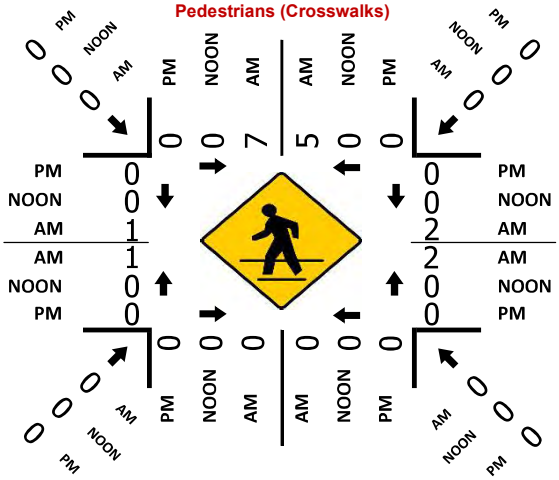
Totals (NOON)



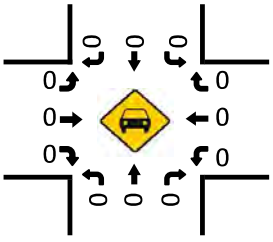
Total Bikes (NOON)



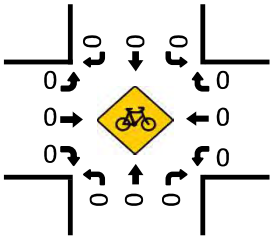
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & Lytton St

Peak Hour Turning Movement Count

ID: 23-040225-021
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

CONTROL: Signalized

	AM	NOON	PM
TEV	5247	0	0
PHF	0.94		

SOUTHBOUND (Rosecrans St)

	Left	Thru	Thru	Right	Total	
AM	259	1394	149	19	1815	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	1	2	2	0		

EASTBOUND (Lytton St)

AM	NOON	PM	
557	0	0	
0	0	0	0
351	0	0	1
287	0	0	0.5
13	0	0	0.5
AM	NOON	PM	

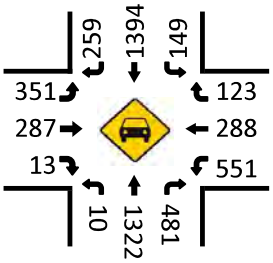
WESTBOUND (Lytton St)

PM	NOON	AM	
0	0	123	1
0	0	288	1
0	0	551	2
0	0	0	0
0	0	917	
PM	NOON	AM	

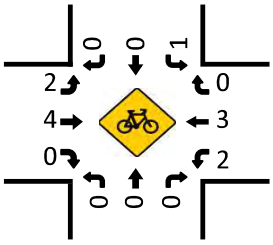
NORTHBOUND (Rosecrans St)

	Left	Thru	Thru	Right	Total	
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	1958	0	10	1322	481	AM
	0	1	3	1		

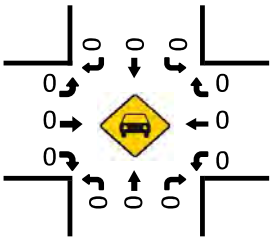
Totals (AM)



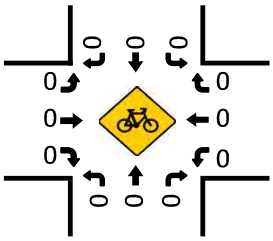
Total Bikes (AM)



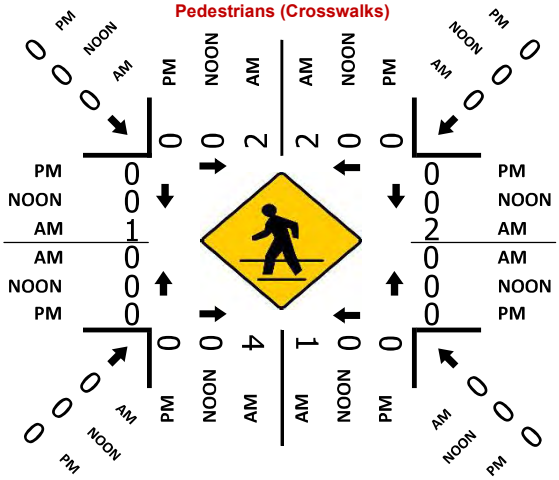
Totals (NOON)



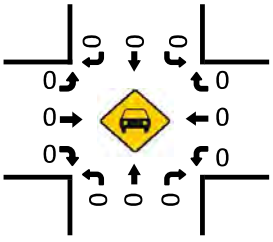
Total Bikes (NOON)



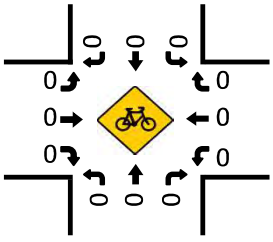
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & Kurtz St

Peak Hour Turning Movement Count

ID: 23-040225-013
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND (Rosecrans St)

AM	0	253	37	0	476	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Kurtz St)

AM	NOON	PM		
2	0	0		
0	0	0	0	
33	0	0	1	
128	0	0	0.5	
5	0	0	0.5	
AM	NOON	PM		

WESTBOUND (Kurtz St)

PM	NOON	AM	
0	0	142	1
0	0	2	0
0	0	139	1
0	0	0	0
0	0	279	
PM	NOON	AM	

NORTHBOUND (Rosecrans St)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	397	0	0	301	114	AM

CONTROL

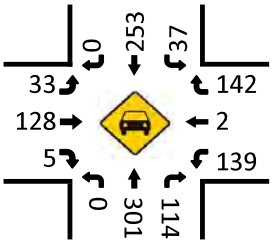
Signalized

TEV	1154	0	0
	AM	NOON	PM
PHF	0.91		

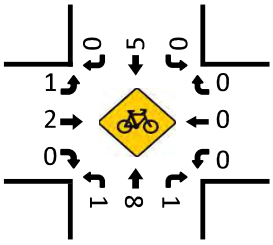
0 2 1 0

0 0 2 0

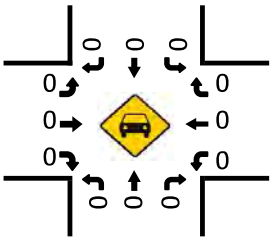
Totals (AM)



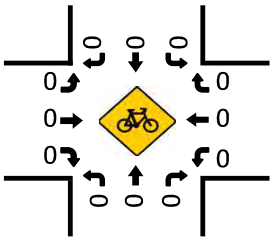
Total Bikes (AM)



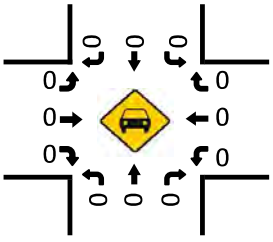
Totals (NOON)



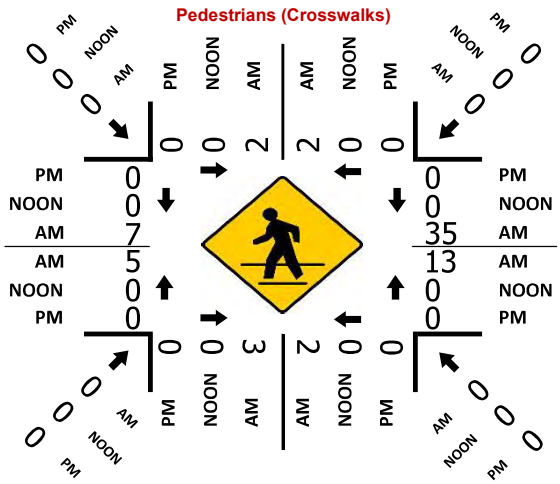
Total Bikes (NOON)



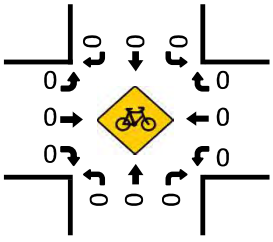
Totals (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040225-014
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM: 08:00 AM - 09:00 AM
NOON: 11:45 AM - 12:45 PM
PM: NONE

COUNT PERIODS

AM: 7:00 AM - 10:00 AM
NOON: 11:00 AM - 01:00 PM
PM: NONE

SOUTHBOUND (Rosecrans St)

AM	56	286	0	1	339	AM
NOON	51	312	0	0	539	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Hancock St)

AM	NOON	PM	
187	178	0	
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
AM	NOON	PM	

WESTBOUND (Hancock St)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

NORTHBOUND (Rosecrans St)

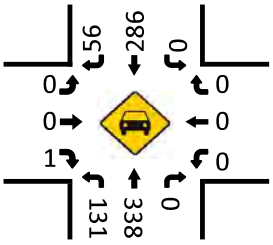
PM	0	0	0	0	PM
NOON	319	7	127	539	0	NOON
AM	290	3	131	338	0	AM

0 2 0 0 (SB turning movements)

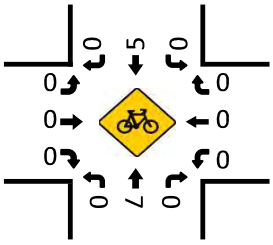
0 1 2 0 (NB turning movements)

CONTROL			
No control			
TEV	816 AM	1036 NOON	0 PM
PHF	0.94	0.96	

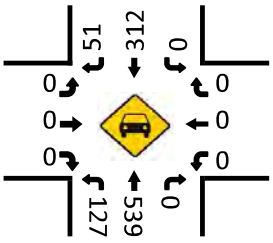
Totals (AM)



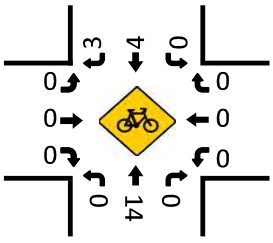
Total Bikes (AM)



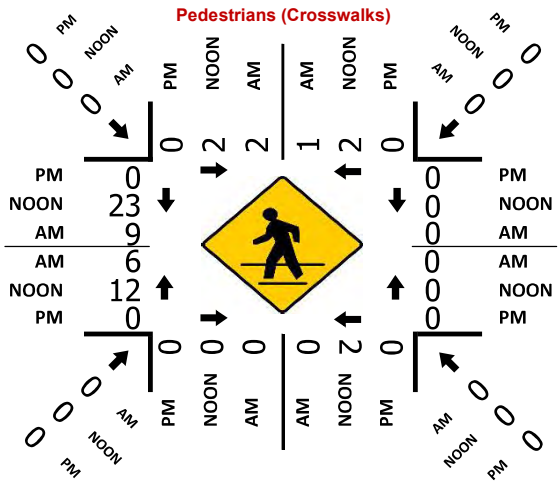
Totals (NOON)



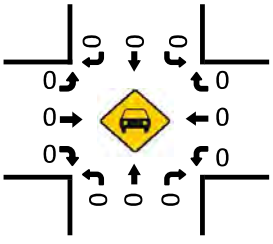
Total Bikes (NOON)



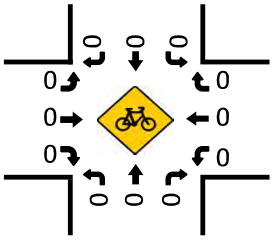
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Pacific Hwy & Rosecrans St/Taylor St

Peak Hour Turning Movement Count

ID: 23-040225-015
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS		COUNT PERIODS
AM	08:00 AM - 09:00 AM	7:00 AM - 10:00 AM
NOON	NONE	NONE
PM	NONE	NONE

CONTROL: Signalized

	AM	NOON	PM
TEV	1223	0	0
PHF	0.94		

SOUTHBOUND (Pacific Hwy)

	Left	Thru	Thru	Right	Total	
AM	43	55	41	1	184	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM
	1	2	2	0		

EASTBOUND (Rosecrans St/Taylor St)

AM	NOON	PM	
366	0	0	
0	0	0	0
32	0	0	1
219	0	0	4
61	0	0	1
AM	NOON	PM	

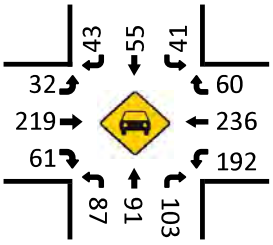
WESTBOUND (Rosecrans St/Taylor St)

PM	NOON	AM	
0	0	60	1
0	0	236	1
0	0	192	2
0	0	2	0
0	0	365	
PM	NOON	AM	

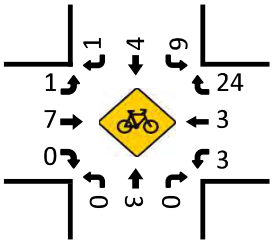
NORTHBOUND (Pacific Hwy)

	Left	Thru	Thru	Right	Total	
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	308	0	87	91	103	AM
	0	1	2	2		

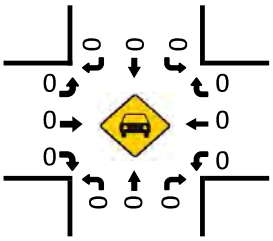
Totals (AM)



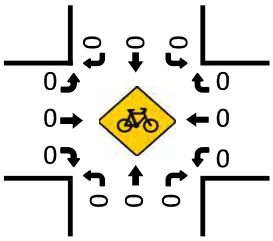
Total Bikes (AM)



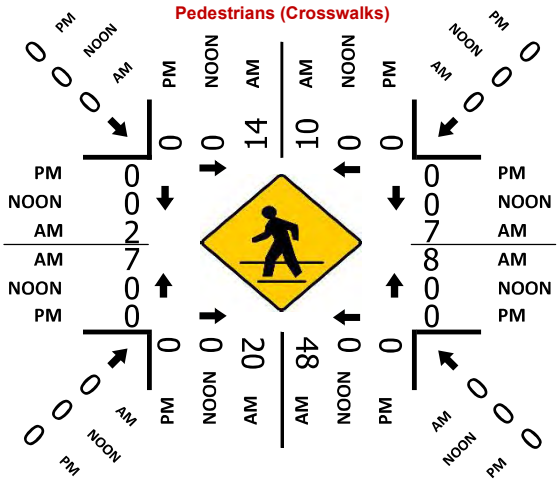
Totals (NOON)



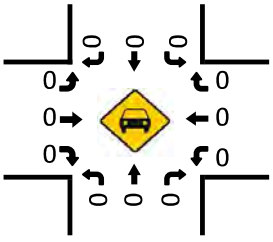
Total Bikes (NOON)



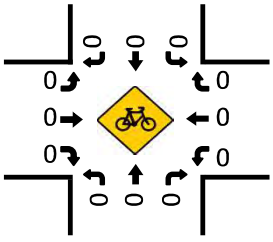
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Pacific Hwy & Enterprise St

Peak Hour Turning Movement Count

ID: 23-040225-031
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

SOUTHBOUND (Pacific Hwy)

AM	94	341	81	3	553	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Enterprise St)

AM	NOON	PM		
387	0	0		
0	0	0	0	
7	0	0	1	
11	0	0	1	
8	0	0	1	
AM	NOON	PM		

WESTBOUND (Enterprise St)

	PM	NOON	AM
1	0	0	4
1	0	0	4
1	0	0	17
0	0	0	0
	0	0	279
	PM	NOON	AM

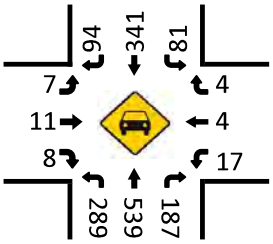
NORTHBOUND (Pacific Hwy)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	430	64	289	539	187	AM

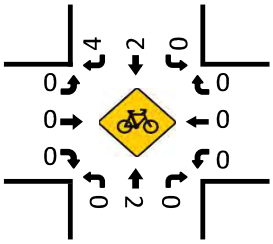
CONTROL: Signalized

TEV	1649	0	0
	AM	NOON	PM
PHF	0.95		

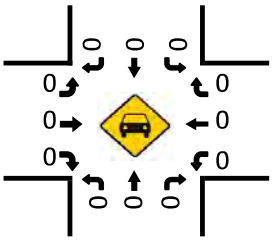
Totals (AM)



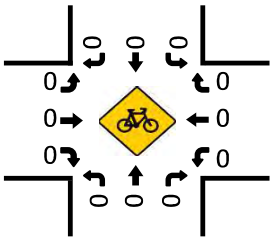
Total Bikes (AM)



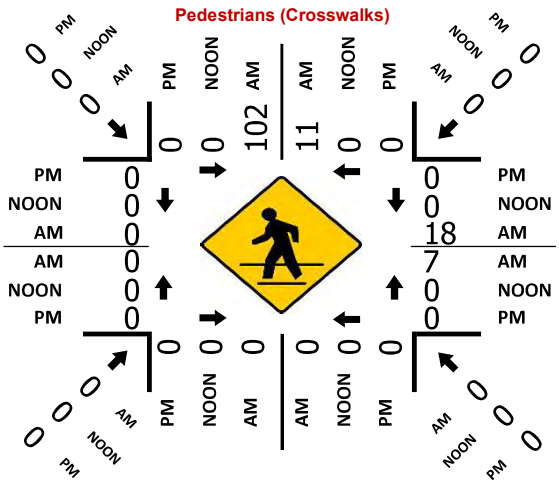
Totals (NOON)



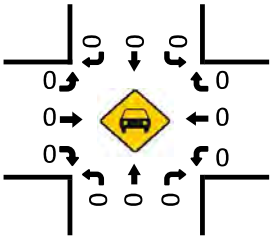
Total Bikes (NOON)



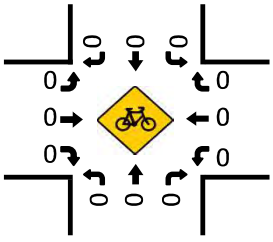
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Enterprise St & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040225-018
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM	08:30 AM - 09:30 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

Enterprise St

SOUTHBOUND

AM	164	0	0	0	21	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Midway Dr)

AM	NOON	PM		
713	0	0		
0	0	0	0	
0	0	0	0	
414	0	0	2	
0	0	0	0	
AM	NOON	PM		

WESTBOUND (Midway Dr)

PM	NOON	AM	
0	0	21	0
0	0	549	2
0	0	0	0
0	0	0	0
0	0	414	
PM	NOON	AM	

CONTROL

1-Way Stop(SB)

TEV	1148	0	0
	AM	NOON	PM
PHF	0.96		

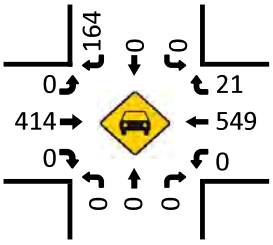
1	0	0	0	
0	0	0	0	

NORTHBOUND

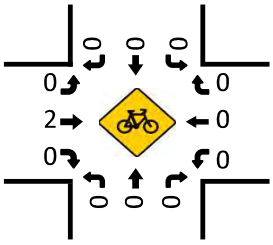
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

Enterprise St

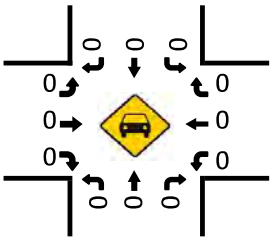
Totals (AM)



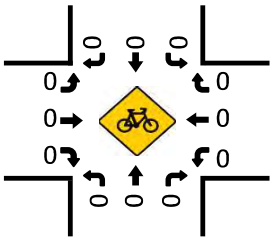
Total Bikes (AM)



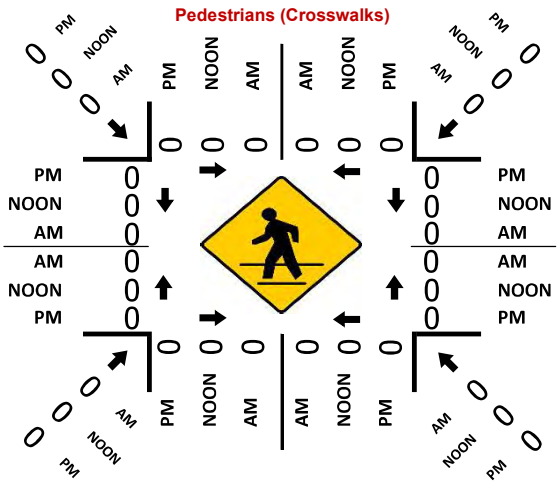
Totals (NOON)



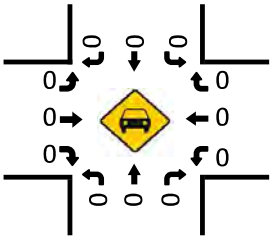
Total Bikes (NOON)



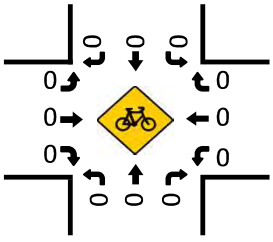
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Barnett Ave & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040225-017
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	NONE
PM	NONE

COUNT PERIODS

AM	7:00 AM - 10:00 AM
NOON	NONE
PM	NONE

Barnett Ave

SOUTHBOUND

AM	470	1348	0	0	1284	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

1 2 0 0

EASTBOUND

AM	NOON	PM	
470	0	0	
0	0	0	0
304	0	0	2
0	0	0	0
53	0	0	1
AM	NOON	PM	

WESTBOUND

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

CONTROL
Signalized

TEV	3155	0	0
	AM	NOON	PM
PHF	0.96		

0 0 2 0

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	1401	0	0	980	0	AM

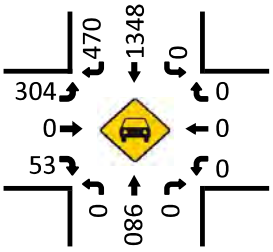
NORTHBOUND

Barnett Ave

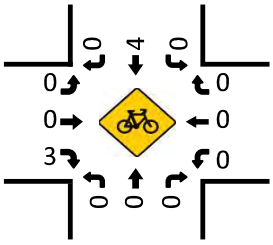
Midway Dr

Midway Dr

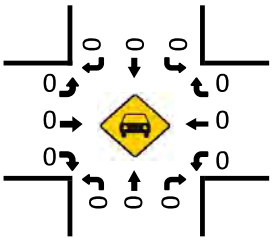
Totals (AM)



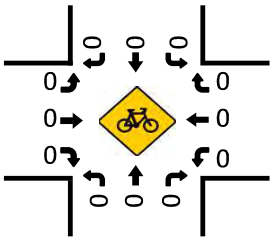
Total Bikes (AM)



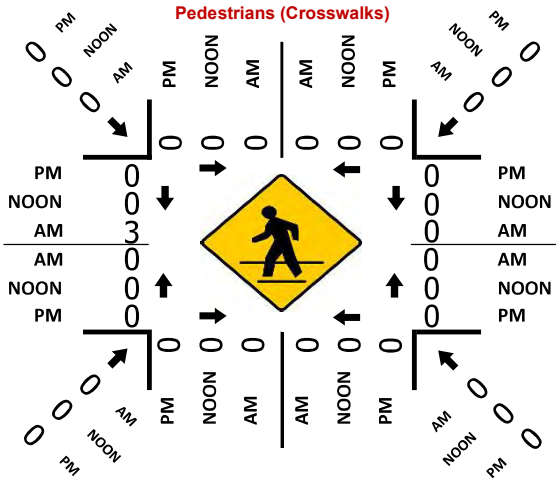
Totals (NOON)



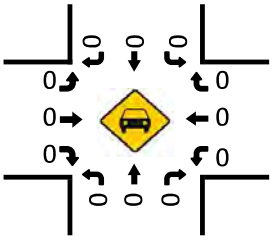
Total Bikes (NOON)



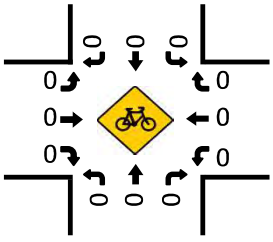
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

I-5 SB Ramps & Sea World Dr

Peak Hour Turning Movement Count

ID: 23-040225-029
City: San Diego

Day: Tuesday
Date: 10/24/2023

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: 11:30 AM - 12:30 PM
PM: NONE

COUNT PERIODS

AM: 7:00 AM - 10:00 AM
NOON: 11:00 AM - 01:00 PM
PM: NONE

SOUTHBOUND (I-5 SB Ramps)

AM	601	0	237	0	0	AM
NOON	662	2	212	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Sea World Dr)

AM	NOON	PM		
957	1042	0		
0	0	0	0	
0	0	0	0	
982	667	0	2	
60	147	0	1	

WESTBOUND (Sea World Dr)

	PM	NOON	AM
0	0	0	0
2	0	380	356
2	0	243	337
0	0	0	1
	0	879	1220

NORTHBOUND (I-5 SB Ramps)

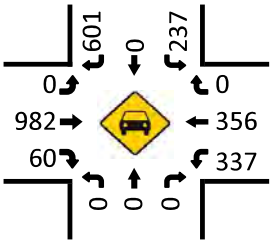
PM	0	0	0	0	0	PM
NOON	392	0	0	0	0	NOON
AM	397	0	0	0	0	AM

	1	0	1	0
	0	0	0	0

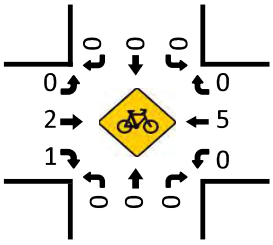
CONTROL: Signalized

TEV	2574 AM	2313 NOON	0 PM
PHF	0.97	0.95	

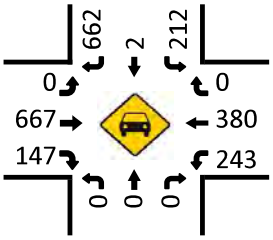
Totals (AM)



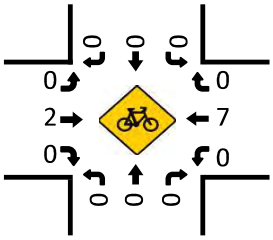
Total Bikes (AM)



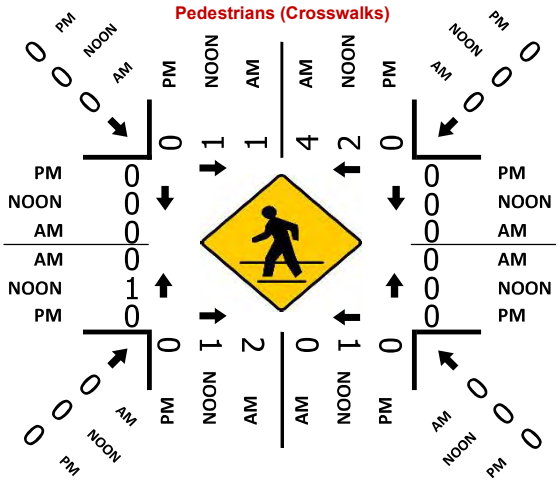
Totals (NOON)



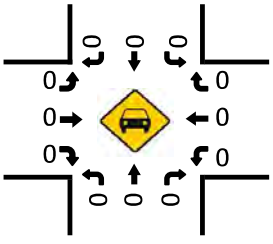
Total Bikes (NOON)



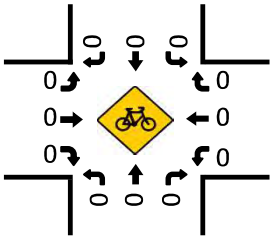
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

W Mission Bay Dr & I-8 WB Off Ramp

Peak Hour Turning Movement Count

ID: 23-040200-001
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	NONE
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	NONE
NOON	NONE
PM	3:00 PM - 07:00 PM

SOUTHBOUND (W Mission Bay Dr)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	1888	0	0	2055	PM

EASTBOUND (I-8 WB Off Ramp)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

WESTBOUND (I-8 WB Off Ramp)

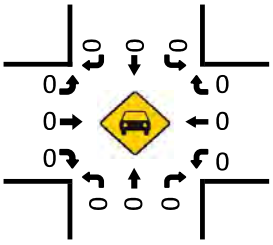
PM	NOON	AM	
1493	0	0	2
0	0	0	0
812	0	0	2
0	0	0	0
0	0	0	

NORTHBOUND (W Mission Bay Dr)

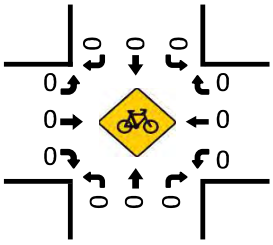
PM	2700	0	0	562	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
Signalized			
TEV	0 AM	0 NOON	4755 PM
PHF			0.98

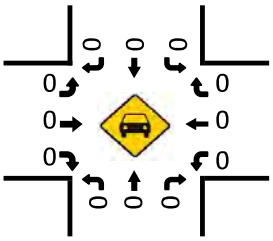
Totals (AM)



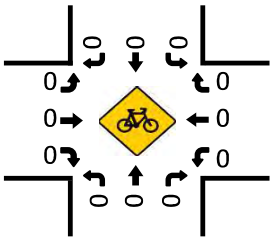
Total Bikes (AM)



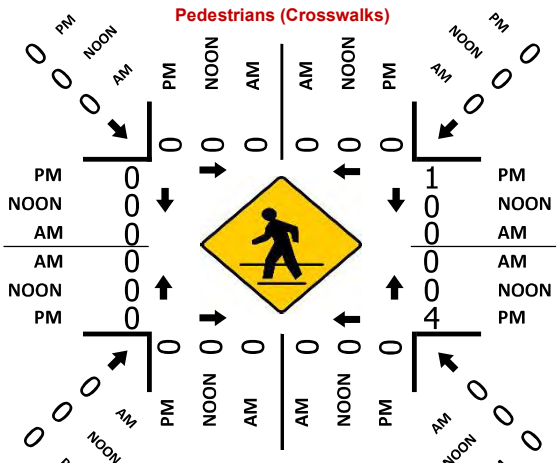
Totals (NOON)



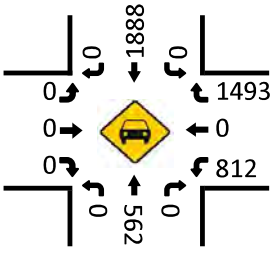
Total Bikes (NOON)



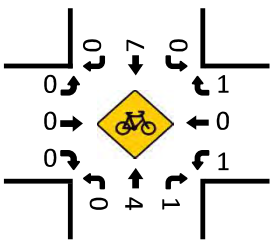
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sports Arena Blvd/Midway Dr & W Point Loma Blvd/Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040200-002
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:15 PM - 05:15 PM	3:00 PM - 07:00 PM

SOUTHBOUND — Sports Arena Blvd/Midway Dr

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	328	470	473	3	1148	PM
	0.5	1.5	1	0		

EASTBOUND — W Point Loma Blvd/Sports Arena Blvd

AM	NOON	PM	
0	0	887	
0	0	0	0
0	0	302	1.5
0	0	234	0.5
0	0	274	1

WESTBOUND — W Point Loma Blvd/Sports Arena Blvd

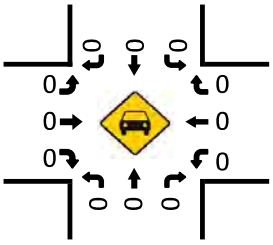
	PM	NOON	AM
1	428	0	0
2	273	0	0
1	26	0	0
0	0	0	0
	739	0	0
	0	1	1.5	0.5

NORTHBOUND — Sports Arena Blvd/Midway Dr

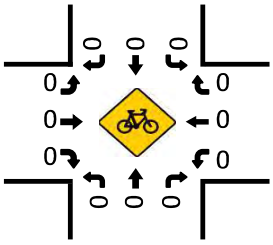
PM	770	0	286	415	32	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
Signalized			
TEV	0 AM	0 NOON	3544 PM
PHF			0.98

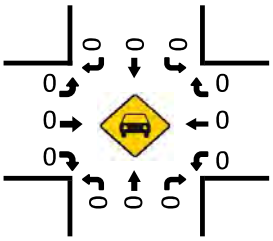
Totals (AM)



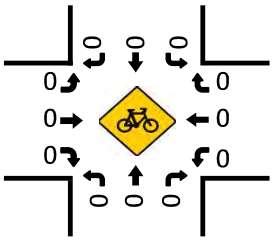
Total Bikes (AM)



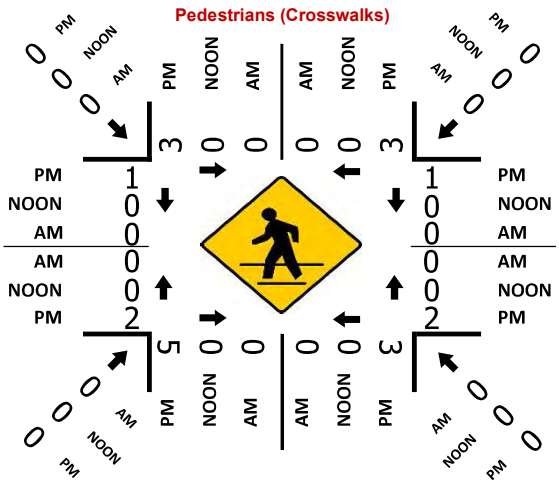
Totals (NOON)



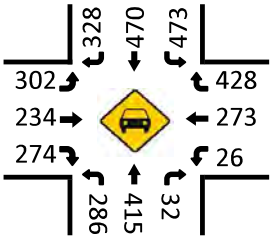
Total Bikes (NOON)



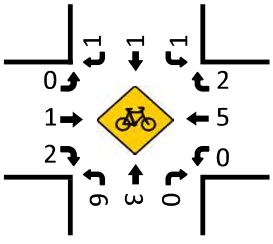
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Hancock St & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040200-003
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Hancock St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	116	0	65	0	218	PM

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM	
0	0	659	
0	0	9	0
0	0	136	1
0	0	639	2
0	0	0	0

WESTBOUND (Sports Arena Blvd)

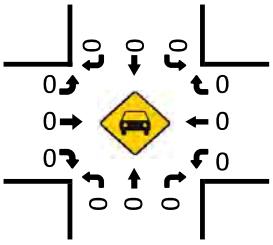
PM	NOON	AM	
82	0	0	0
534	0	0	3
6	0	0	1
12	0	0	0
716	0	0	

NORTHBOUND (Hancock St)

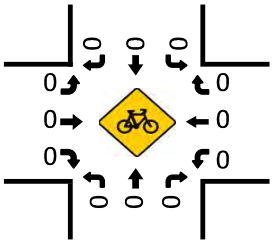
PM	6	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
Signalized			
TEV	0 AM	0 NOON	1599 PM
PHF			0.99

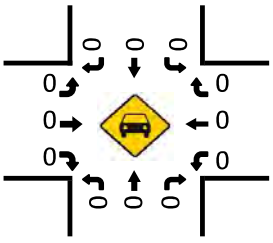
Totals (AM)



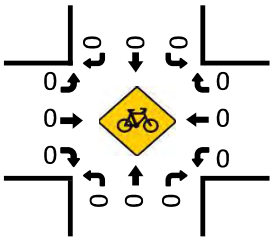
Total Bikes (AM)



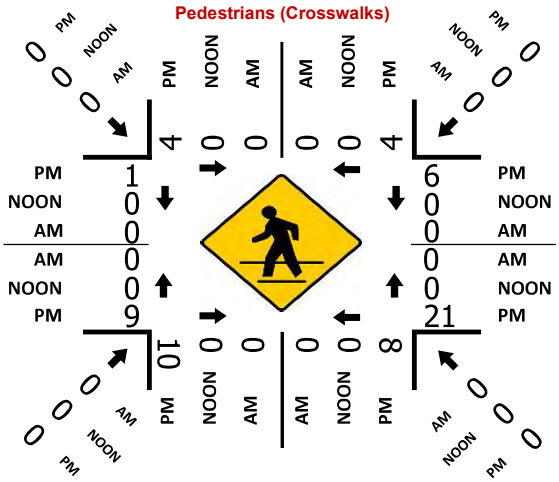
Totals (NOON)



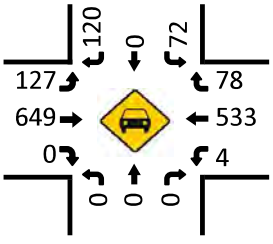
Total Bikes (NOON)



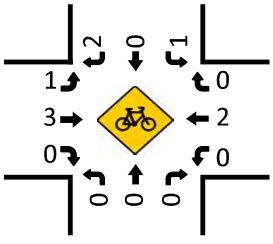
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Kemper St & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040200-032
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

Kemper St

SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	13	1	3	0	242	PM

1 0.5 0.5 0

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM		
0	0	666		
0	0	17	0	
0	0	105	2	
0	0	500	2	
0	0	82	0	
AM	NOON	PM		

CONTROL
Signalized

	AM	NOON	PM
TEV	0	0	1750
PHF			0.96

WESTBOUND (Sports Arena Blvd)

	PM	NOON	AM
0	75	0	0
3	541	0	0
1	124	0	0
0	8	0	0
	635	0	0
	PM	NOON	AM

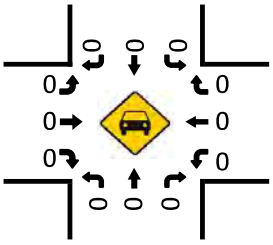
0 1 1 0

PM	207	0	95	62	124	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

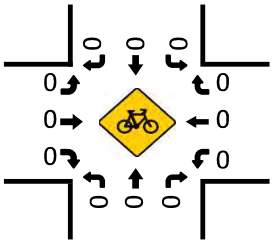
NORTHBOUND

Kemper St

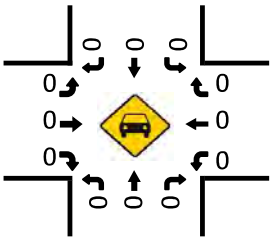
Totals (AM)



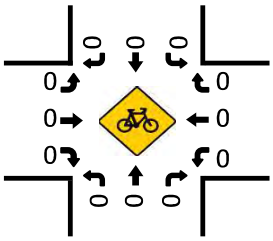
Total Bikes (AM)



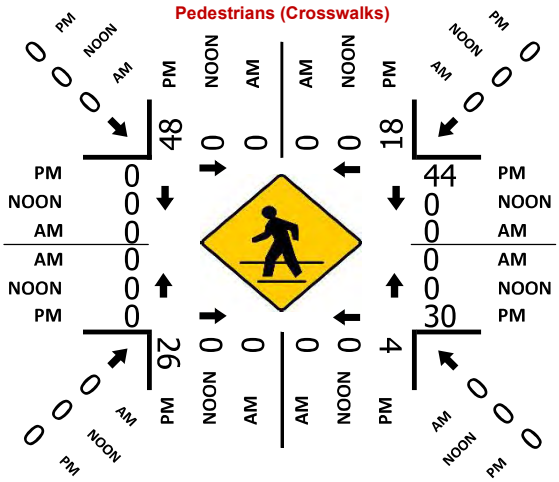
Totals (NOON)



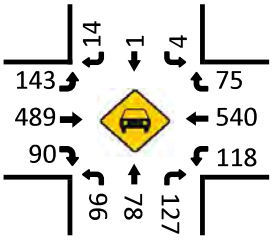
Total Bikes (NOON)



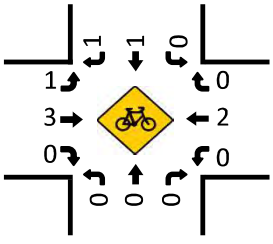
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

West Dr & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040200-033
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (West Dr)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	129	25	157	2	334	PM
	0.5	1	0.5	0		

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM	
0	0	745	
0	0	6	0
0	0	59	2
0	0	500	2
0	0	67	0

WESTBOUND (Sports Arena Blvd)

	PM	NOON	AM
0	243	0	0
3	498	0	0
1	72	0	0
0	4	0	0
	731	0	0

CONTROL

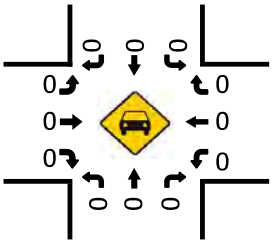
Signalized

TEV	0 AM	0 NOON	1975 PM
PHF			0.98

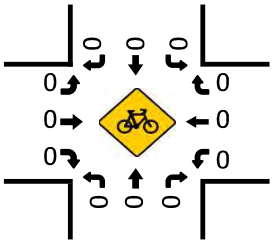
NORTHBOUND (West Dr)

	0	0	1	0		
PM	165	1	112	30	70	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

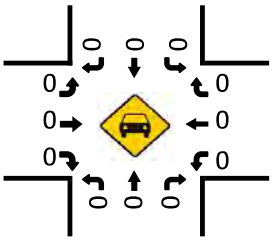
Totals (AM)



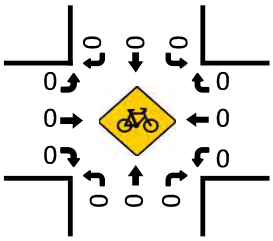
Total Bikes (AM)



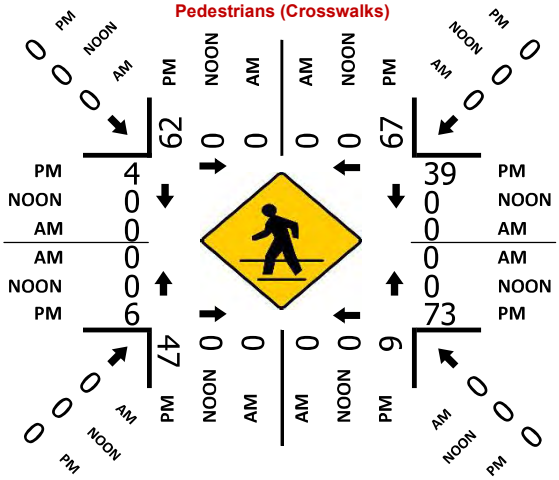
Totals (NOON)



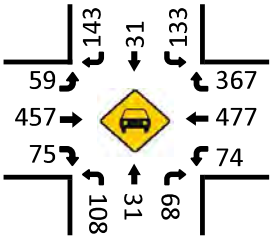
Total Bikes (NOON)



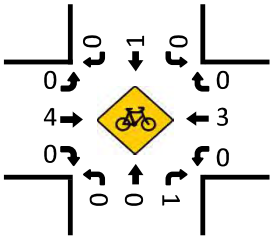
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Target Department Store Dwy & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040200-034
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Target Department Store Dwy)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	18	3	4	0	58	PM

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM		
0	0	824		
0	0	4	0	
0	0	44	1	
0	0	680	3	
0	0	23	0	
AM	NOON	PM		

WESTBOUND (Sports Arena Blvd)

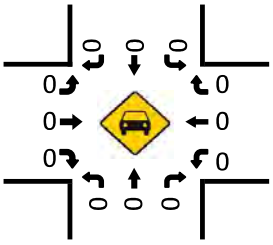
PM	NOON	AM	
0	13	0	0
3	802	0	0
1	117	0	0
0	19	0	0
	804	0	0
PM	NOON	AM	

NORTHBOUND (Target Department Store Dwy)

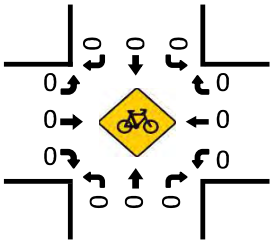
PM	143	0	0	1	101	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
1-Way Stop(NB)			
TEV	0 AM	0 NOON	1829 PM
PHF			0.92

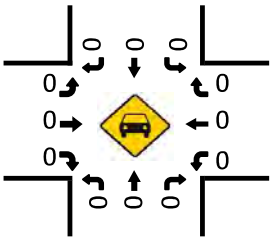
Totals (AM)



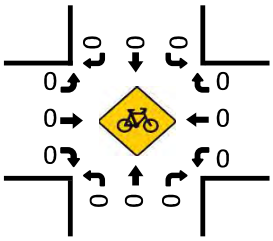
Total Bikes (AM)



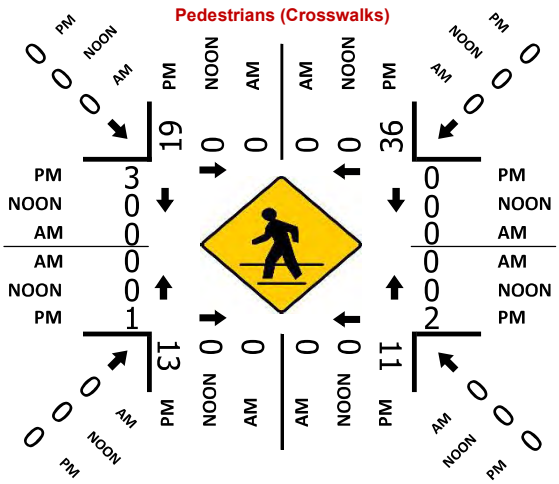
Totals (NOON)



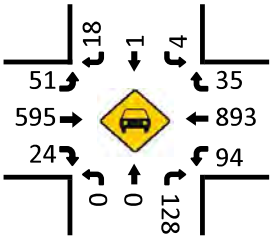
Total Bikes (NOON)



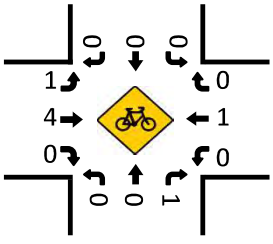
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

East Dr & Sports Arena Blvd

Peak Hour Turning Movement Count

ID: 23-040200-004
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (East Dr)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	1	0	9	PM

EASTBOUND (Sports Arena Blvd)

AM	NOON	PM		
0	0	971	⇦	
0	0	16	↶	0
0	0	5	↱	1
0	0	743	→	3
0	0	29	↷	0
AM	NOON	PM		

WESTBOUND (Sports Arena Blvd)

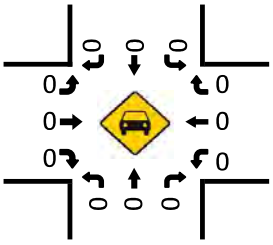
PM	NOON	AM		
				0
4	0	0	↶	0
854	0	0	←	3
125	0	0	↰	1
82	0	0	↶	0
981	0	0	⇨	
PM	NOON	AM		

NORTHBOUND (East Dr)

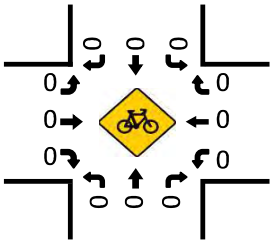
PM	154	0	101	0	155	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
Signalized			
TEV	0 AM	0 NOON	2115 PM
PHF			0.93

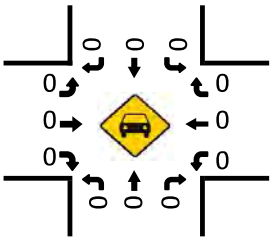
Totals (AM)



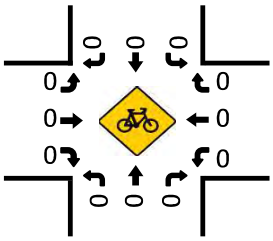
Total Bikes (AM)



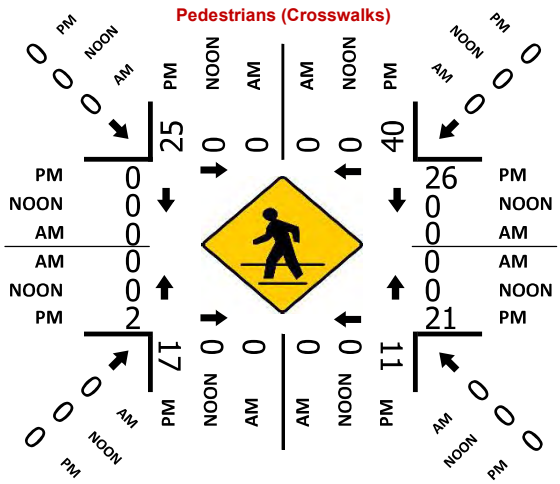
Totals (NOON)



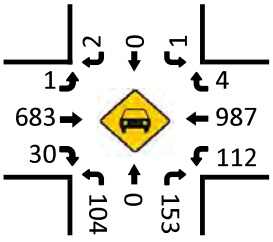
Total Bikes (NOON)



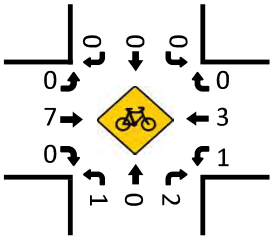
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Kemper St & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040200-024
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	
AM	NONE
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS	
AM	NONE
NOON	NONE
PM	3:00 PM - 07:00 PM

SOUTHBOUND (Kemper St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	62	132	31	0	271	PM

EASTBOUND (Midway Dr)

AM	NOON	PM		
0	0	742		
0	0	37	0	
0	0	68	1	
0	0	467	2	
0	0	117	1	
AM	NOON	PM		

WESTBOUND (Midway Dr)

PM	NOON	AM	
58	0	0	0
487	0	0	2
148	0	0	2
0	0	0	0
654	0	0	
PM	NOON	AM	

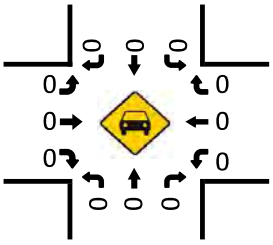
NORTHBOUND (Kemper St)

PM	397	0	156	145	156	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

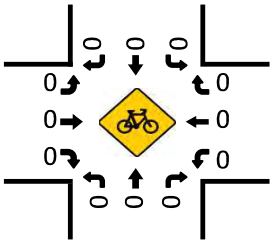
	0	1.5	0.5	1

CONTROL			
Signalized			
TEV	0 AM	0 NOON	2064 PM
PHF			0.95

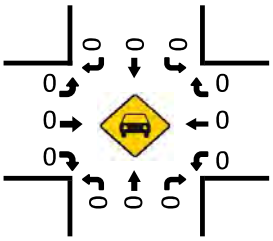
Totals (AM)



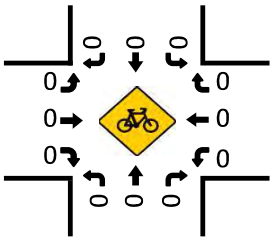
Total Bikes (AM)



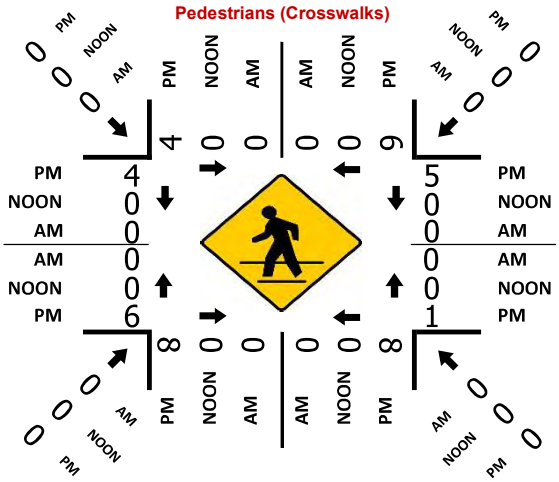
Totals (NOON)



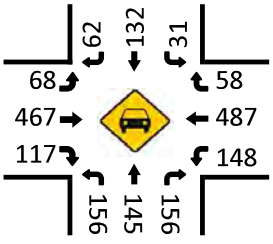
Total Bikes (NOON)



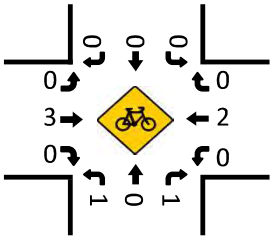
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

East Dr & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040200-023
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:45 PM - 05:45 PM	3:00 PM - 07:00 PM

SOUTHBOUND (East Dr)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	76	11	158	0	356	PM

EASTBOUND (Midway Dr)

AM	NOON	PM		
0	0	810		
0	0	0	0	
0	0	60	1	
0	0	797	2	
0	0	9	0	
AM	NOON	PM		

WESTBOUND (Midway Dr)

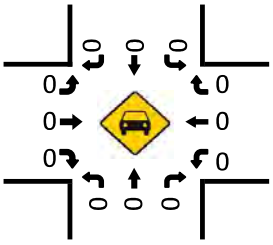
PM	NOON	AM		
293	0	0	0	
724	0	0	2	
15	0	0	1	
7	0	0	0	
969	0	0		
PM	NOON	AM		

NORTHBOUND (East Dr)

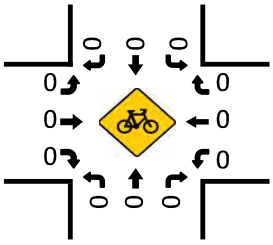
PM	35	0	10	3	7	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
Signalized			
TEV	0 AM	0 NOON	2170 PM
PHF			0.96

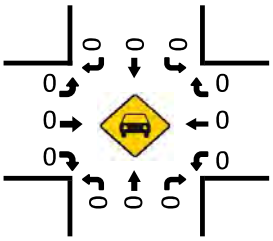
Totals (AM)



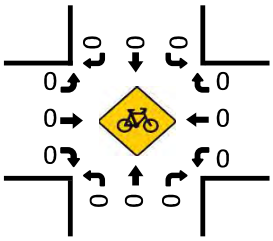
Total Bikes (AM)



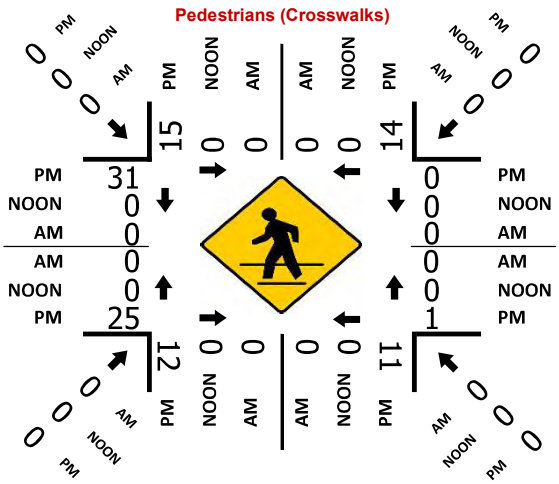
Totals (NOON)



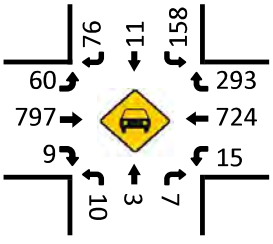
Total Bikes (NOON)



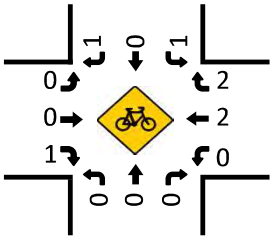
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Hancock St & Channel Way

Peak Hour Turning Movement Count

ID: 23-040200-005
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:15 PM - 05:15 PM	3:00 PM - 07:00 PM

CONTROL: 3-Way Stop(NB/SB/EB)

	AM	NOON	PM
TEV	0	0	383
PHF			0.89

SOUTHBOUND (Hancock St)

	Left	Thru	Right	U-Turn	
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	36	150	0	1	PM

EASTBOUND (Channel Way)

	Left	Thru	Right	U-Turn	
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	59	0	PM

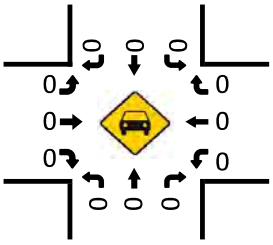
WESTBOUND (Channel Way)

	Left	Thru	Right	U-Turn	
PM	0	0	0	0	PM
NOON	0	0	0	0	NOON
AM	0	0	0	0	AM

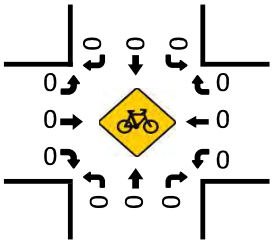
NORTHBOUND (Hancock St)

	Left	Thru	Right	U-Turn	
PM	177	7	23	130	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

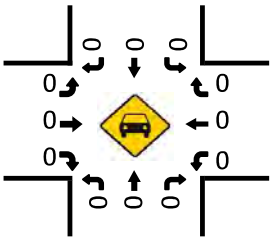
Totals (AM)



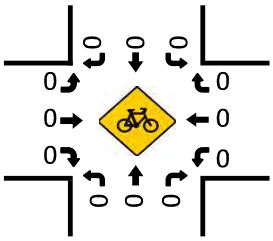
Total Bikes (AM)



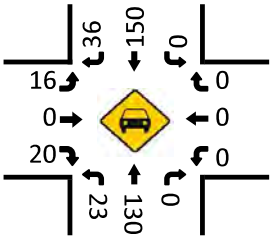
Totals (NOON)



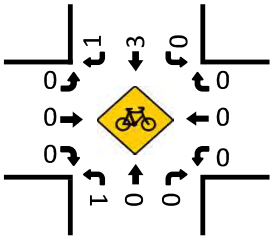
Total Bikes (NOON)



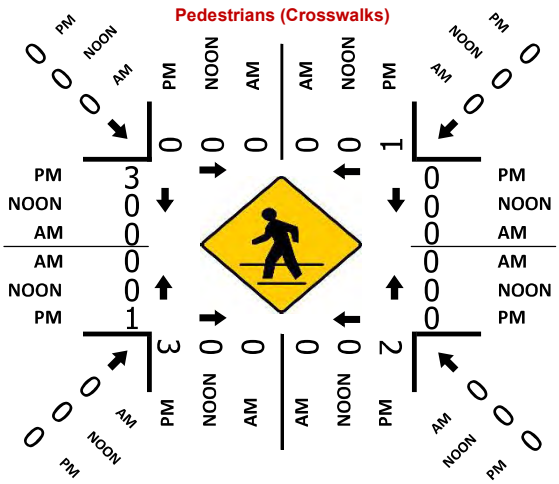
Totals (PM)



Total Bikes (PM)



Pedestrians (Crosswalks)



Prepared by National Data & Surveying Services

Kurtz St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040200-006
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

Kurtz St

SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Hancock St)

AM	NOON	PM		
0	0	214	⇦	
0	0	1	↶	0
0	0	0	↱	0
0	0	0	→	0
0	0	143	↷	1
AM	NOON	PM		

WESTBOUND (Hancock St)

PM	NOON	AM		
				0
0	0	0	↰	0
213	0	0	←	1
156	0	0	↰	1
0	0	0	↶	0
			⇨	
0	0	0		
PM	NOON	AM		

CONTROL: 1-Way Stop(WB)

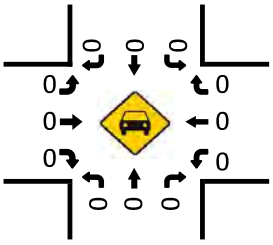
	AM	NOON	PM
TEV	0	0	513
PHF			0.86

NORTHBOUND

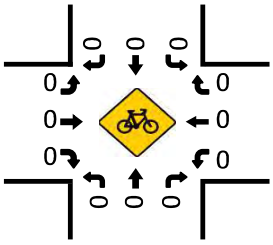
PM	299	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

Kurtz St

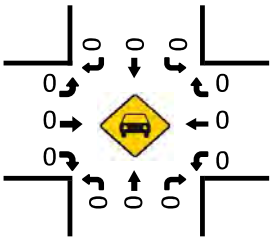
Totals (AM)



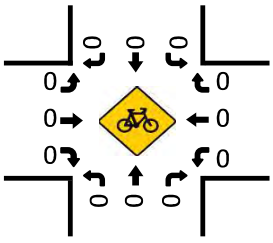
Total Bikes (AM)



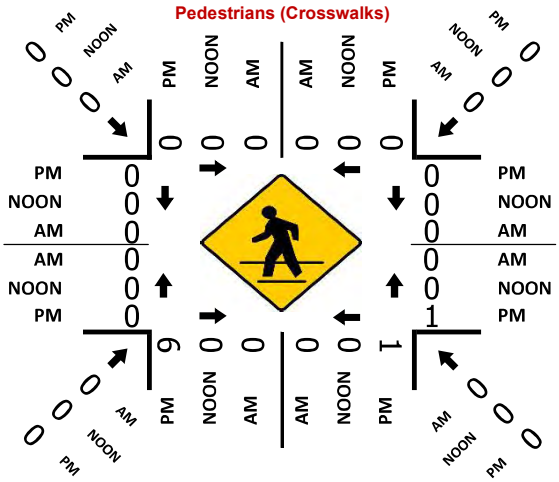
Totals (NOON)



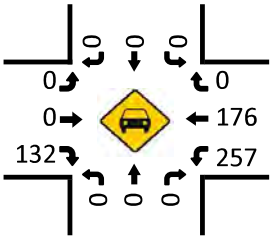
Total Bikes (NOON)



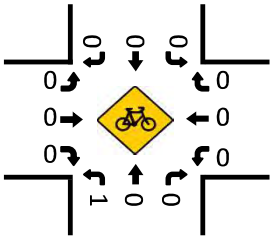
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sherman St & Kurtz St

Peak Hour Turning Movement Count

ID: 23-040200-007
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:30 PM - 05:30 PM	3:00 PM - 07:00 PM

CONTROL: 2-Way Stop(SB/EB)

	AM	NOON	PM
TEV	0	0	460
PHF			0.87

SOUTHBOUND (Sherman St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	156	0	65	PM

Turning movements: 0 (left), 1 (through), 0 (right), 0 (U-turn)

EASTBOUND (Kurtz St)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	63	0
0	0	239	2
0	0	0	0
AM	NOON	PM	

WESTBOUND (Kurtz St)

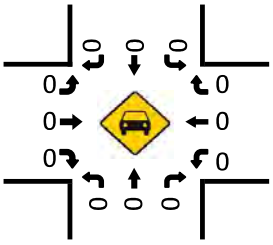
PM	NOON	AM	
2	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
395	0	0	
PM	NOON	AM	

NORTHBOUND (Sherman St)

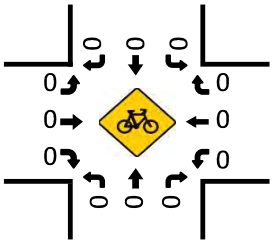
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

Turning movements: 0 (U-turn), 0 (left), 0 (through), 0 (right)

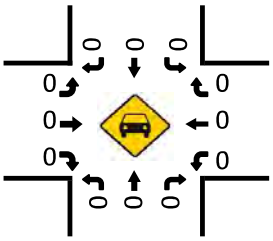
Totals (AM)



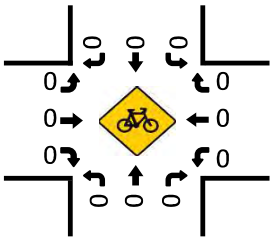
Total Bikes (AM)



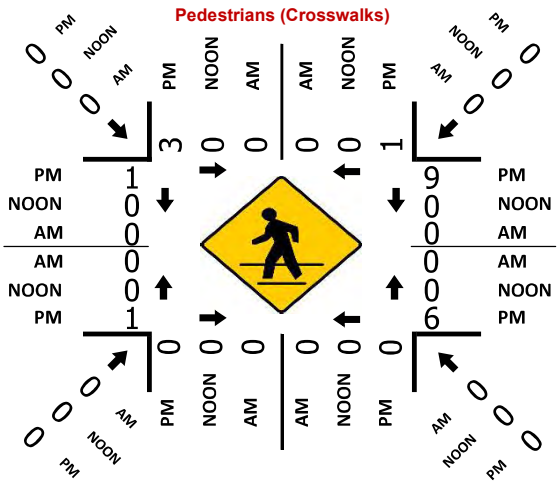
Totals (NOON)



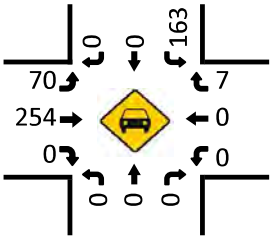
Total Bikes (NOON)



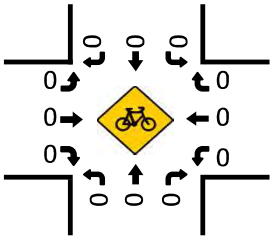
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Greenwood St & Kurtz St

Peak Hour Turning Movement Count

ID: 23-040200-009
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:30 PM - 05:30 PM	3:00 PM - 07:00 PM

CONTROL: 1-Way Stop (SB)

	AM	NOON	PM
TEV	0	0	459
PHF			0.92

SOUTHBOUND (Greenwood St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	48	1	24	PM

EASTBOUND (Kurtz St)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	22	0
0	0	381	2
0	0	2	0

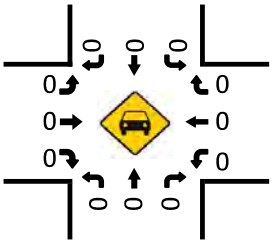
WESTBOUND (Kurtz St)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
433	0	0	

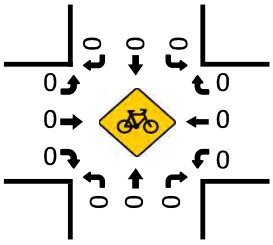
NORTHBOUND (Greenwood St)

PM	2	0	0	1	4	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

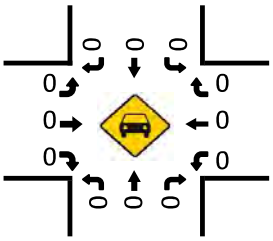
Totals (AM)



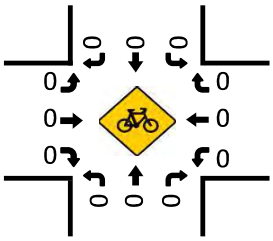
Total Bikes (AM)



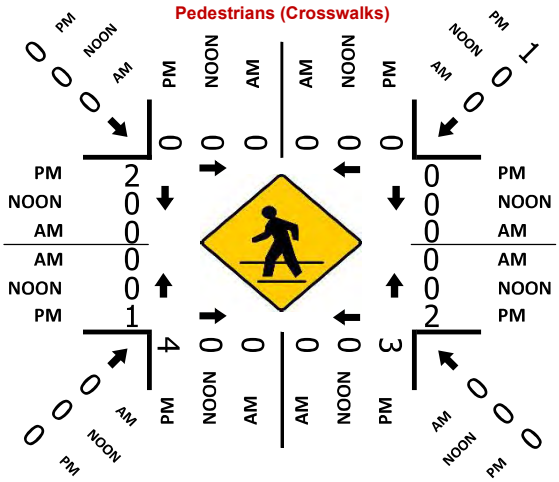
Totals (NOON)



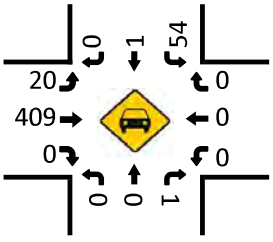
Total Bikes (NOON)



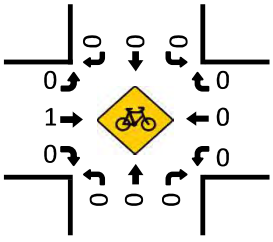
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sherman St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040200-026
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	
AM	NONE
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS	
AM	NONE
NOON	NONE
PM	3:00 PM - 07:00 PM

SOUTHBOUND (Sherman St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	10	84	0	0	39	PM

EASTBOUND (Hancock St)

AM	NOON	PM		
0	0	346	⇦	
0	0	0	↩	0
0	0	0	↱	0
0	0	0	→	0
0	0	0	↴	0
AM	NOON	PM		

WESTBOUND (Hancock St)

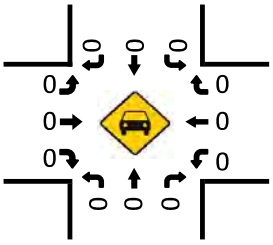
PM	NOON	AM		
			↪	0
26	0	0	←	0
276	0	0	↰	2
67	0	0	↰	0
0	0	0	⇨	0
PM	NOON	AM		

NORTHBOUND (Sherman St)

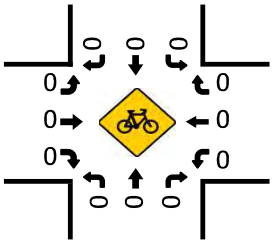
PM	152	1	60	13	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
3-Way Stop(NB/SB/WB)			
TEV	0 AM	0 NOON	537 PM
PHF			0.85

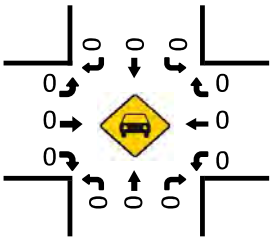
Totals (AM)



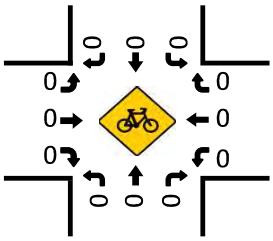
Total Bikes (AM)



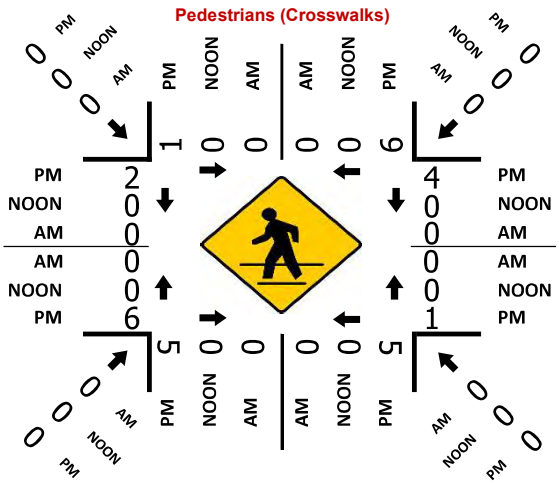
Totals (NOON)



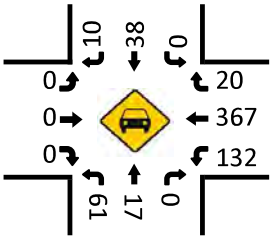
Total Bikes (NOON)



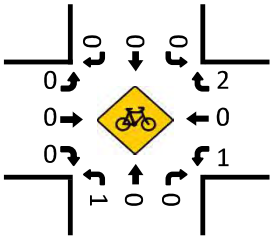
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Greenwood St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040200-008
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Greenwood St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	86	23	0	1	44	PM

EASTBOUND (Hancock St)

AM	NOON	PM		
0	0	362	⇦	
0	0	0	↶	0
0	0	0	↱	0
0	0	0	→	0
0	0	0	↴	0
AM	NOON	PM		

WESTBOUND (Hancock St)

PM	NOON	AM		
37	0	0	↰	0.5
258	0	0	←	1
21	0	0	↩	0.5
0	0	0	↩	0
0	0	0	⇨	
PM	NOON	AM		

NORTHBOUND (Greenwood St)

PM	44	0	18	6	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

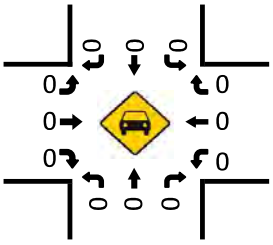
↰	↰	↑	↱	
0	0	1	0	

CONTROL

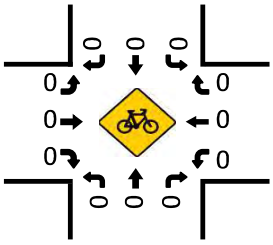
2-Way Stop(NB/SB)

	AM	NOON	PM
TEV	0	0	450
PHF			0.95

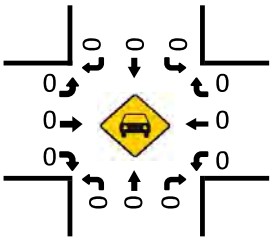
Totals (AM)



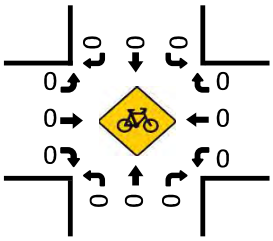
Total Bikes (AM)



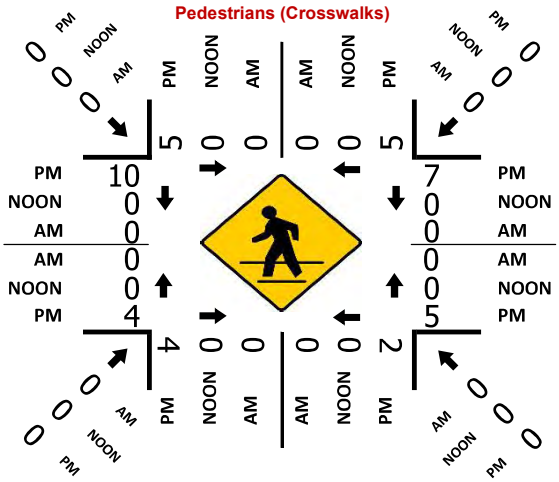
Totals (NOON)



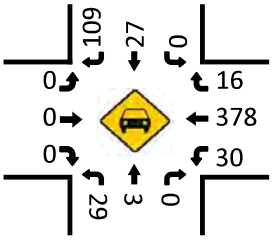
Total Bikes (NOON)



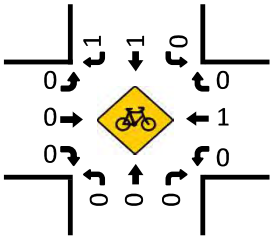
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Camino Del Rio W & Greenwood St/Moore St

Peak Hour Turning Movement Count

ID: 23-040200-010
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	NONE
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	NONE
NOON	NONE
PM	3:00 PM - 07:00 PM

Camino Del Rio W — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	93	1993	0	0	1890	PM

EASTBOUND — Greenwood St/Moore St

AM	NOON	PM	
0	0	93	
0	0	0	0
0	0	0	0
0	0	0	1
0	0	8	0
AM	NOON	PM	

WESTBOUND — Greenwood St/Moore St

PM	NOON	AM	
29	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
10	0	0	
PM	NOON	AM	

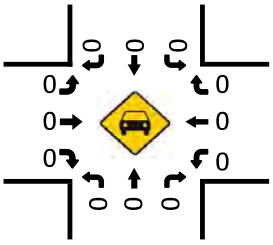
CONTROL: 2-Way Stop(EB/WB)

	AM	NOON	PM
TEV	0	0	3994
PHF			0.88

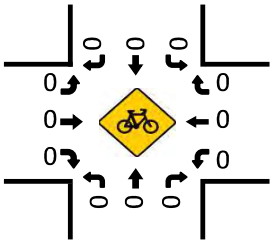
Camino Del Rio W — NORTHBOUND

PM	2001	0	0	1861	10	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

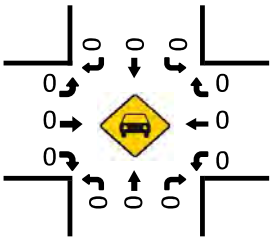
Totals (AM)



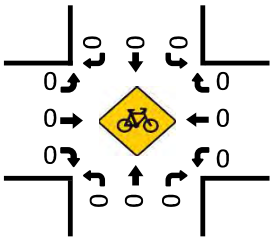
Total Bikes (AM)



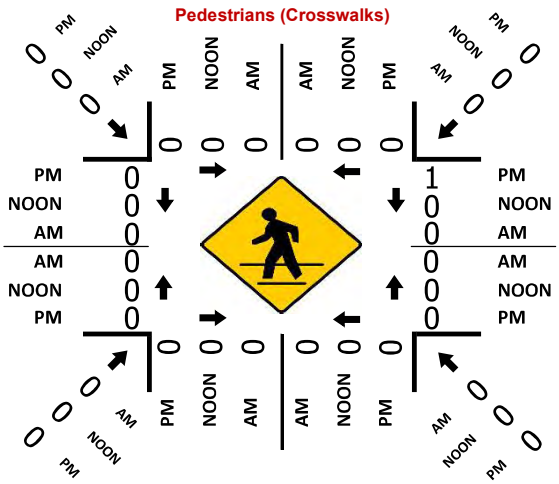
Totals (NOON)



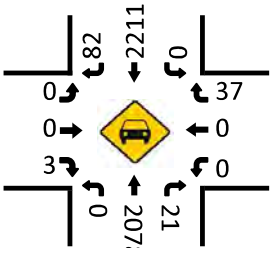
Total Bikes (NOON)



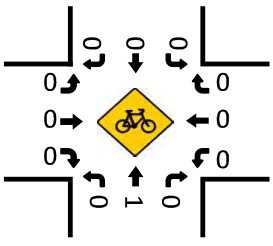
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Camino Del Rio W/Riley St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040200-011
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Camino Del Rio W/Riley St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	118	1855	0	0	1856	PM
	1	3	0	0		

EASTBOUND (Hancock St)

AM	NOON	PM	
0	0	306	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Hancock St)

PM	NOON	AM	
67	0	0	0
140	0	0	1.5
62	0	0	0.5
0	0	0	0
9	0	0	
PM	NOON	AM	

CONTROL

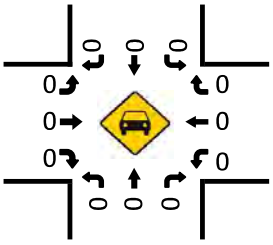
Signalized

	AM	NOON	PM
TEV	0	0	4107
PHF			0.90

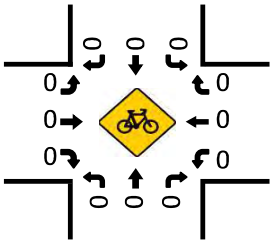
NORTHBOUND (Camino Del Rio W/Riley St)

	0	1	3	0		
PM	1936	19	48	1789	9	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

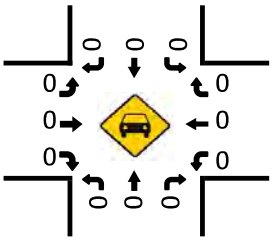
Totals (AM)



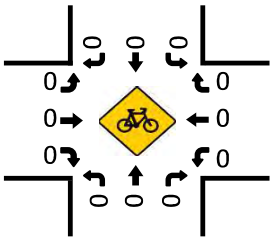
Total Bikes (AM)



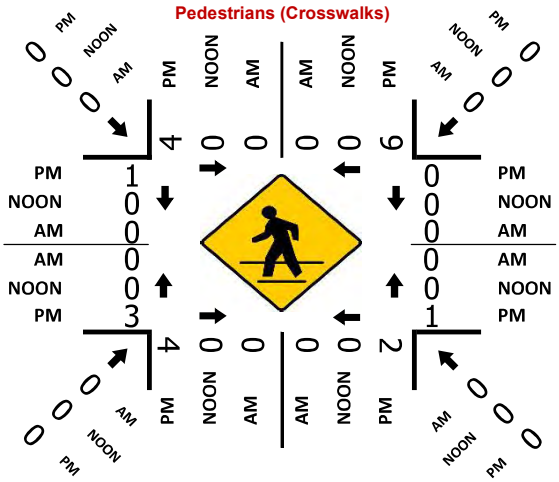
Totals (NOON)



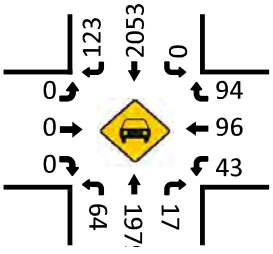
Total Bikes (NOON)



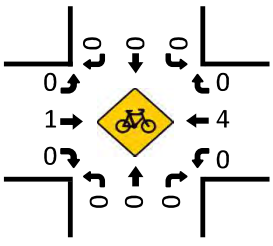
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Camino Del Rio W & Kurtz St/Gaines St

Peak Hour Turning Movement Count

ID: 23-040200-012
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Camino Del Rio W)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	1861	38	10	1876	PM

EASTBOUND (Kurtz St/Gaines St)

AM	NOON	PM		
0	0	0		
0	0	0	0	
0	0	218	1.5	
0	0	137	0.5	
0	0	97	1	
AM	NOON	PM		

WESTBOUND (Kurtz St/Gaines St)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
194	0	0	
PM	NOON	AM	

NORTHBOUND (Camino Del Rio W)

PM	1958	0	0	1648	19	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

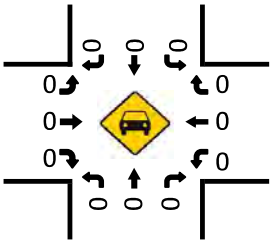
	0	4	1	0
	0	0	3	0

CONTROL

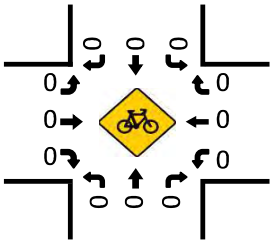
Signalized

	AM	NOON	PM
TEV	0	0	4028
PHF			0.90

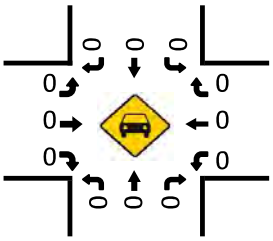
Totals (AM)



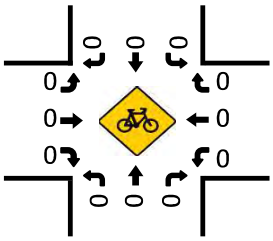
Total Bikes (AM)



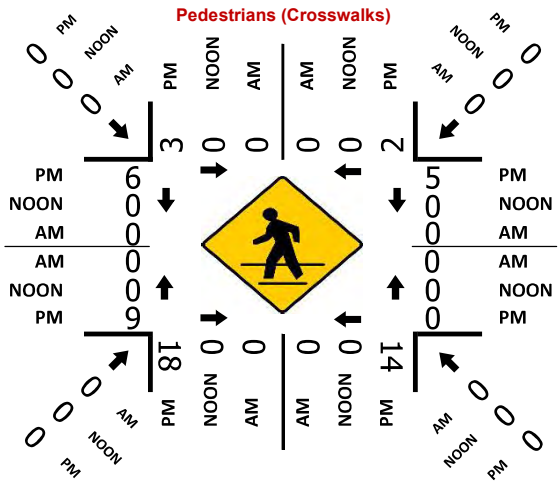
Totals (NOON)



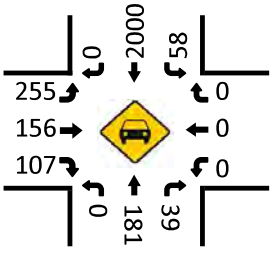
Total Bikes (NOON)



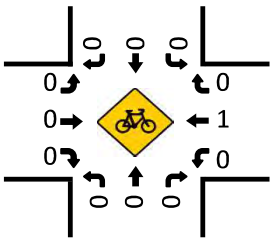
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St/Camino Del Rio W & Sports arena Blvd/Rosecrans St

Peak Hour Turning Movement Count

ID: 23-040200-019
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND — Rosecrans St/Camino Del Rio W

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	561	1354	0	0	1685	PM
	1	3	0	0		

EASTBOUND — Sports arena Blvd/Rosecrans St

AM	NOON	PM		
0	0	1097		
0	0	11	0	
0	0	327	1.5	
0	0	378	1.5	
0	0	215	1	
AM	NOON	PM		

WESTBOUND — Sports arena Blvd/Rosecrans St

PM	NOON	AM	
7	0	0	0.5
224	0	0	1
189	0	0	1.5
0	0	0	0
781	0	0	
PM	NOON	AM	

NORTHBOUND — Rosecrans St/Camino Del Rio W

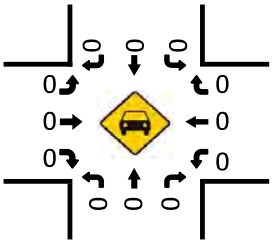
PM	1815	57	301	1351	403	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
		0	2	3	1	

CONTROL

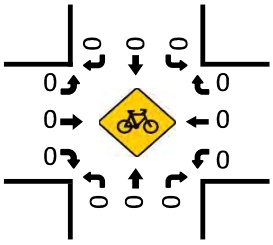
Signalized

TEV	0 AM	0 NOON	5378 PM
PHF			0.93

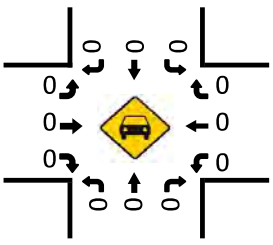
Totals (AM)



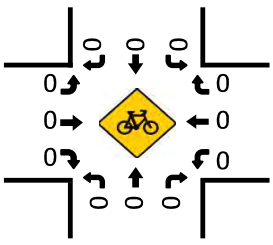
Total Bikes (AM)



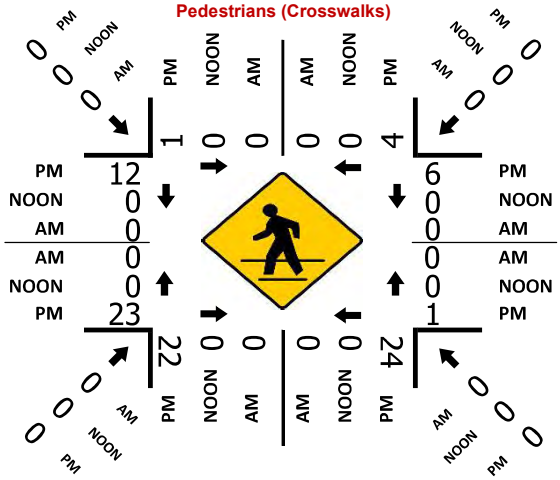
Totals (NOON)



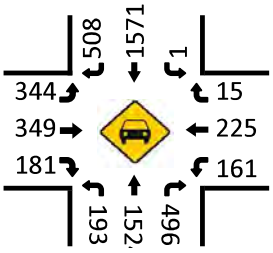
Total Bikes (NOON)



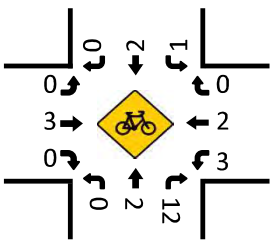
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040200-020
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Rosecrans St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	220	1316	218	74	2100	PM

EASTBOUND (Midway Dr)

AM	NOON	PM		
0	0	1053	⇦	
0	0	8	↶	0
0	0	213	↱	2
0	0	472	→	2
0	0	238	↴	1
AM	NOON	PM		

WESTBOUND (Midway Dr)

		PM	NOON	AM
1	↰	240	0	0
2	←	532	0	0
1	↰	116	0	0
0	↶	0	0	0
	⇨	777	0	0
		PM	NOON	AM

NORTHBOUND (Rosecrans St)

PM	1709	39	293	1573	87	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

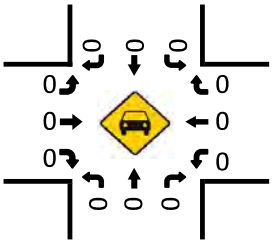
	↶	←	↑	↱
	0	2	3	0

CONTROL

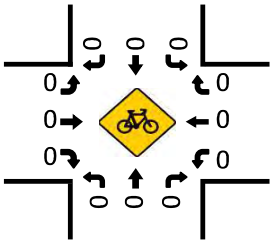
Signalized

TEV	0 AM	0 NOON	5639 PM
PHF			0.96

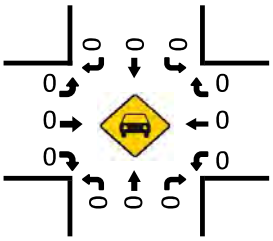
Totals (AM)



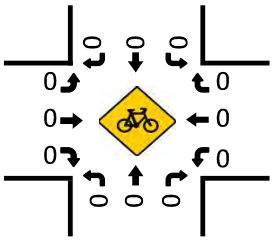
Total Bikes (AM)



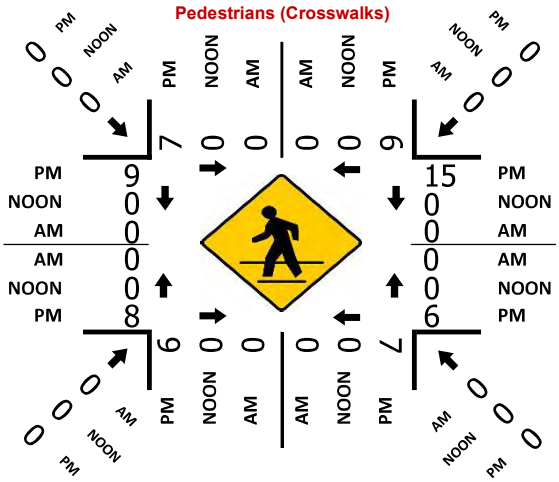
Totals (NOON)



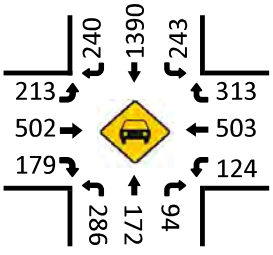
Total Bikes (NOON)



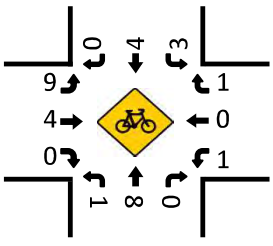
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & N Evergreen St

Peak Hour Turning Movement Count

ID: 23-040200-022
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:30 PM - 05:30 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Rosecrans St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	35	1429	96	45	1986	PM

EASTBOUND (N Evergreen St)

AM	NOON	PM	
0	0	59	
0	0	0	0
0	0	42	0
0	0	10	1
0	0	6	0
AM	NOON	PM	

WESTBOUND (N Evergreen St)

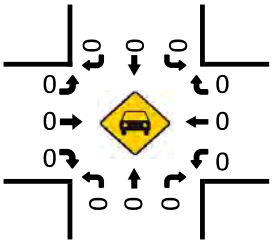
PM	NOON	AM	
105	0	0	0
16	0	0	1
95	0	0	0
0	0	0	0
138	0	0	
PM	NOON	AM	

NORTHBOUND (Rosecrans St)

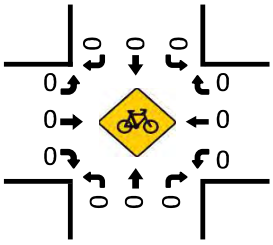
PM	1545	15	8	1794	32	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
Signalized			
TEV	0 AM	0 NOON	3728 PM
PHF			0.97

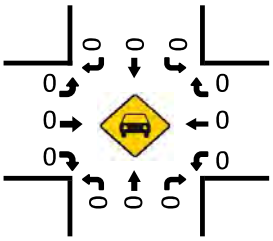
Totals (AM)



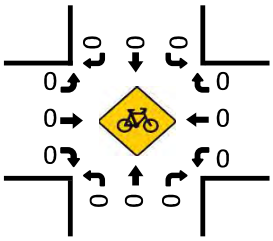
Total Bikes (AM)



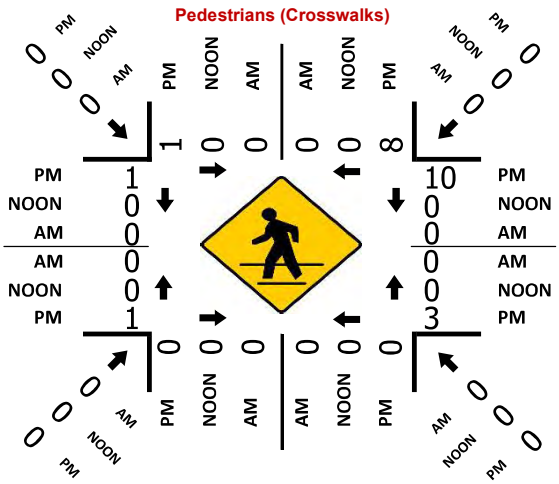
Totals (NOON)



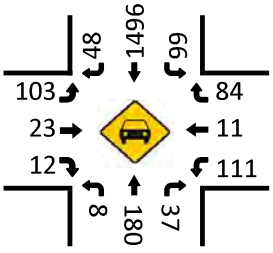
Total Bikes (NOON)



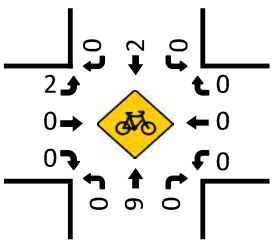
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & Lytton St

Peak Hour Turning Movement Count

ID: 23-040200-021
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:30 PM - 05:30 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Rosecrans St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	275	1185	135	15	1882	PM

EASTBOUND (Lytton St)

AM	NOON	PM		
0	0	607		
0	0	0	0	
0	0	189	1	
0	0	240	0.5	
0	0	14	0.5	
AM	NOON	PM		

WESTBOUND (Lytton St)

PM	NOON	AM	
168	0	0	1
311	0	0	1
503	0	0	2
0	0	0	0
1055	0	0	
PM	NOON	AM	

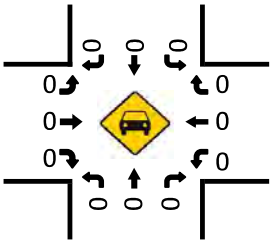
NORTHBOUND (Rosecrans St)

PM	1703	1	21	1510	680	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

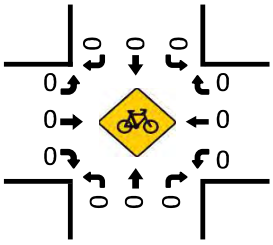
CONTROL			
Signalized			
TEV	0 AM	0 NOON	5247 PM
PHF			0.95

1	2	2	0
0	1	3	1

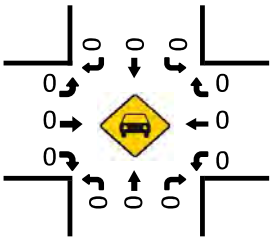
Totals (AM)



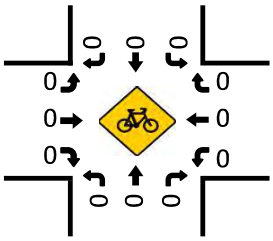
Total Bikes (AM)



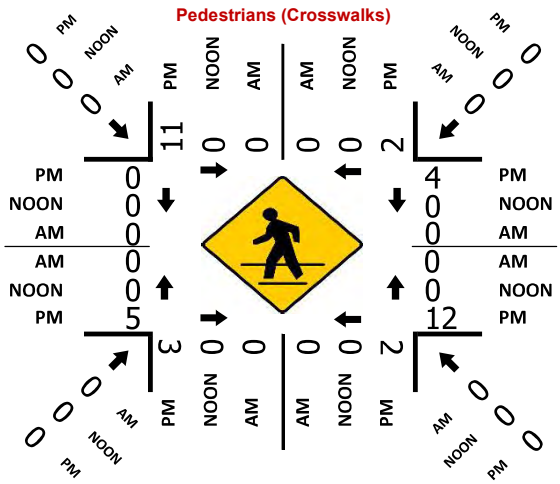
Totals (NOON)



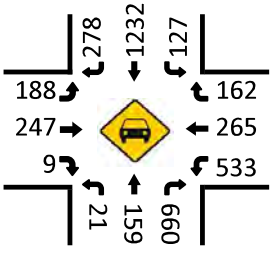
Total Bikes (NOON)



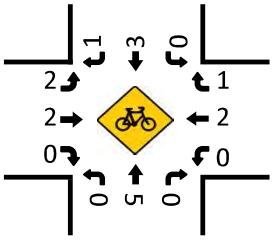
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & Kurtz St

Peak Hour Turning Movement Count

ID: 23-040200-013
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:00 PM - 05:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Rosecrans St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	292	62	0	857	PM

0 2 1 0

EASTBOUND (Kurtz St)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	73	1
0	0	165	0.5
0	0	4	0.5
AM	NOON	PM	

WESTBOUND (Kurtz St)

PM	NOON	AM	
131	0	0	1
0	0	0	0
101	0	0	1
1	0	0	0
447	0	0	
PM	NOON	AM	

CONTROL

Signalized

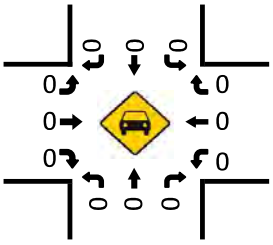
TEV	0 AM	0 NOON	1701 PM
PHF			0.97

0 0 2 0

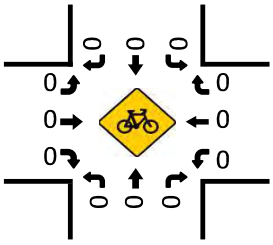
NORTHBOUND (Rosecrans St)

PM	397	0	0	653	219	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

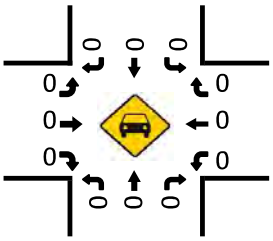
Totals (AM)



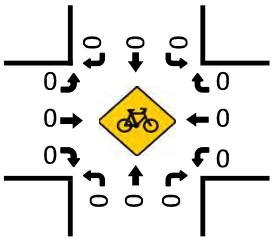
Total Bikes (AM)



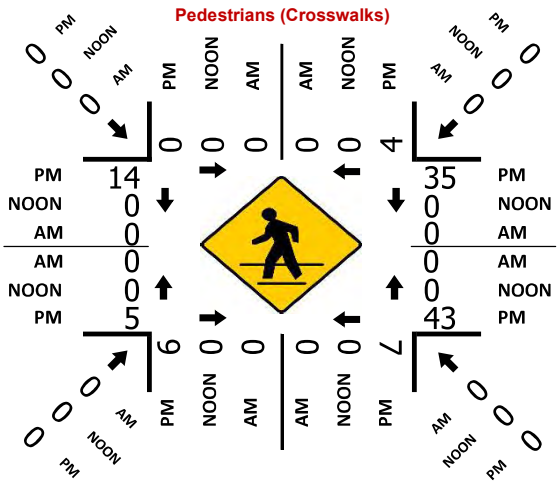
Totals (NOON)



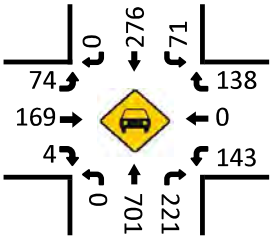
Total Bikes (NOON)



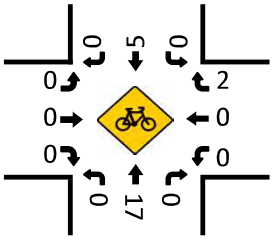
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Rosecrans St & Hancock St

Peak Hour Turning Movement Count

ID: 23-040200-014
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:45 PM - 05:45 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Rosecrans St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	68	369	0	1	671	PM

EASTBOUND (Hancock St)

AM	NOON	PM	
0	0	235	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Hancock St)

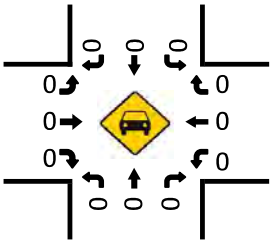
PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

NORTHBOUND (Rosecrans St)

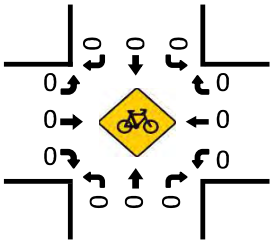
PM	372	3	167	670	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
No Control			
TEV	0 AM	0 NOON	1278 PM
PHF			0.95

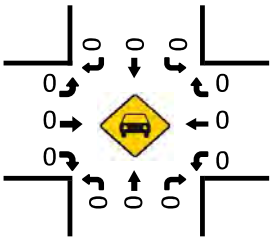
Totals (AM)



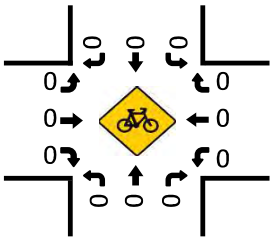
Total Bikes (AM)



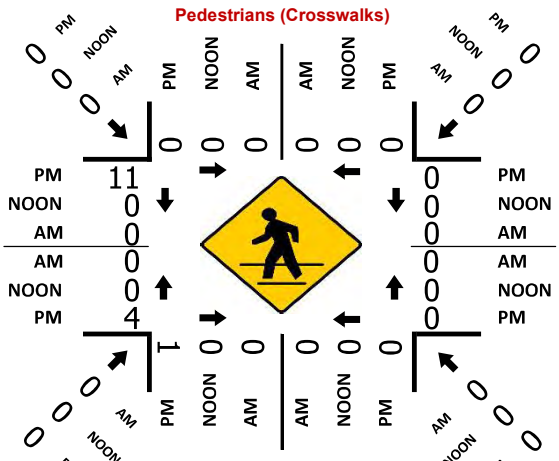
Totals (NOON)



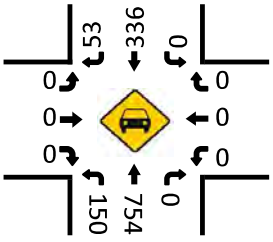
Total Bikes (NOON)



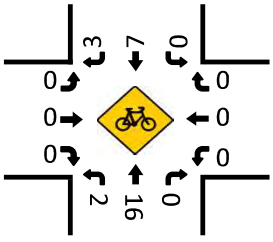
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Pacific Hwy & Rosecrans St/Taylor St

Peak Hour Turning Movement Count

ID: 23-040200-015
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:45 PM - 05:45 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Pacific Hwy)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	87	224	72	0	242	PM

EASTBOUND (Rosecrans St/Taylor St)

AM	NOON	PM		
0	0	482		
0	0	0	0	
0	0	61	1	
0	0	553	4	
0	0	99	1	
AM	NOON	PM		

WESTBOUND (Rosecrans St/Taylor St)

PM	NOON	AM		
73	0	0	1	
251	0	0	1	
248	0	0	2	
1	0	0	0	
1024	0	0		
PM	NOON	AM		

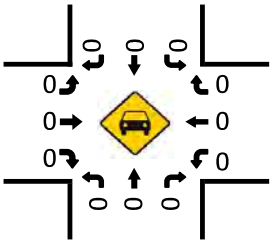
NORTHBOUND (Pacific Hwy)

PM	573	2	144	108	398	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

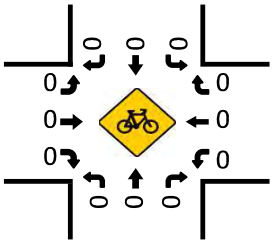
	1	2	2	0
	0	1	2	2

CONTROL			
Signalized			
TEV	0 AM	0 NOON	2321 PM
PHF			0.93

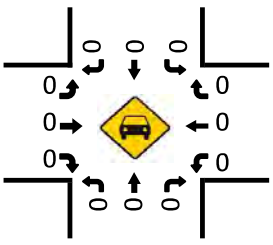
Totals (AM)



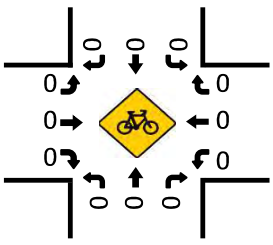
Total Bikes (AM)



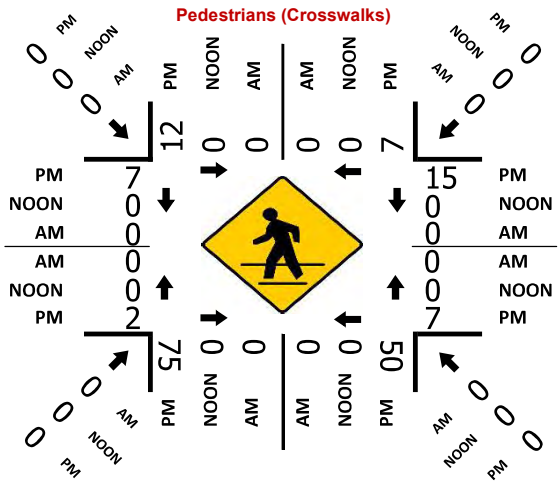
Totals (NOON)



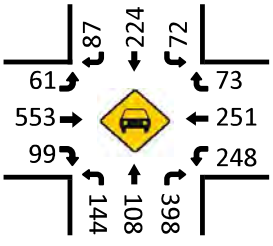
Total Bikes (NOON)



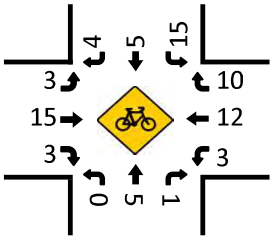
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Pacific Hwy & Kurtz St

Peak Hour Turning Movement Count

ID: 23-040200-016
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:45 PM - 05:45 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Pacific Hwy)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	14	563	0	0	506	PM

EASTBOUND (Kurtz St)

AM	NOON	PM	
0	0	251	
0	0	0	0
0	0	0	0
0	0	0	1
0	0	407	0

WESTBOUND (Kurtz St)

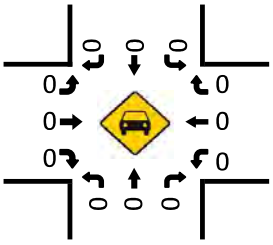
PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

NORTHBOUND (Pacific Hwy)

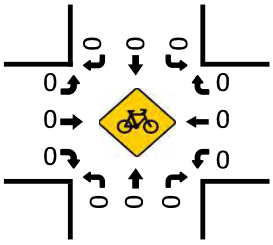
PM	970	0	237	506	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
1-Way Stop(EB)			
TEV	0 AM	0 NOON	1727 PM
PHF			0.94

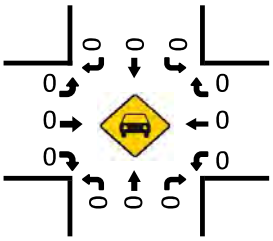
Totals (AM)



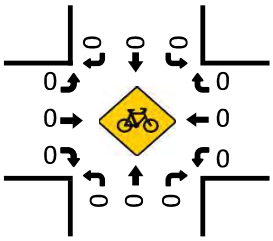
Total Bikes (AM)



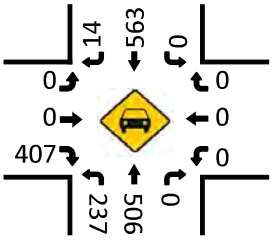
Totals (NOON)



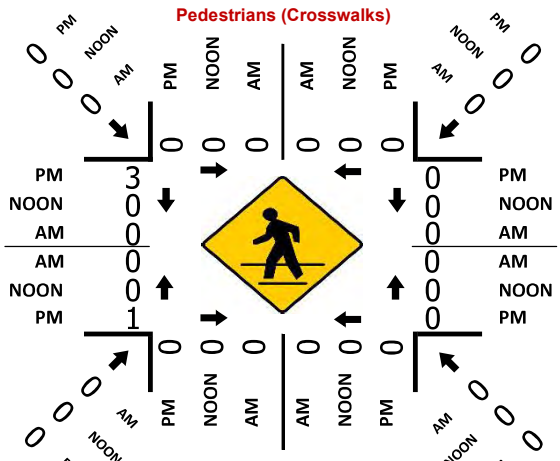
Total Bikes (NOON)



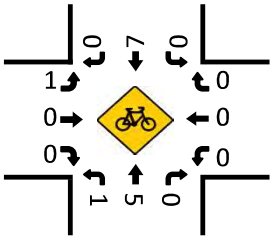
Totals (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Pacific Hwy & Enterprise St

Peak Hour Turning Movement Count

ID: 23-040200-031
City: San Diego

Day: Thursday
Date: 9/21/2023

Pacific Hwy

SOUTHBOUND

PEAK HOURS		COUNT PERIODS
NONE	AM	NONE
NONE	NOON	NONE
04:45 PM - 05:45 PM	PM	3:00 PM - 07:00 PM

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	86	918	3	15	750

0 2 1 0

EASTBOUND

AM	NOON	PM	
0	0	263	
0	0	0	0
0	0	47	1
0	0	7	1
0	0	70	1

WESTBOUND

PM	NOON	AM	
25	0	0	1
20	0	0	1
39	0	0	1
0	0	0	0
17	0	0	

Enterprise St

Enterprise St

CONTROL
Signalized

	AM	NOON	PM
TEV	0	0	2119
PHF			0.96

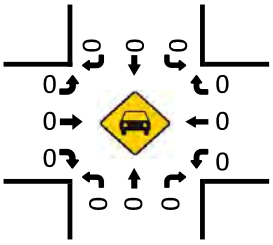
0 1 2 1

PM	1089	62	157	663	7
NOON	0	0	0	0	0
AM	0	0	0	0	0

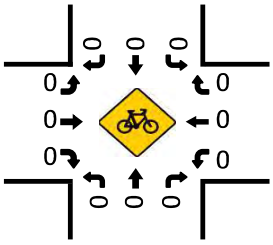
NORTHBOUND

Pacific Hwy

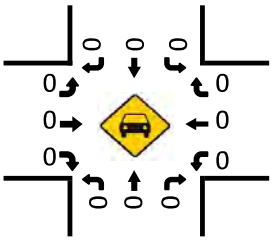
Totals (AM)



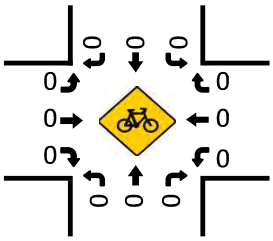
Total Bikes (AM)



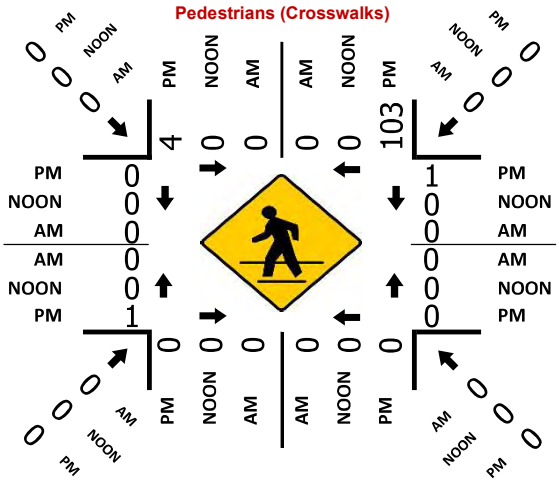
Totals (NOON)



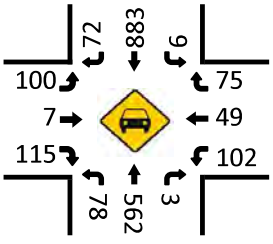
Total Bikes (NOON)



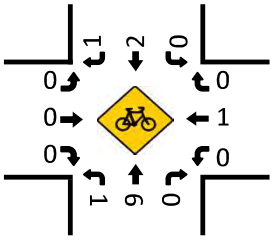
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Enterprise St & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040200-018
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS

AM	NONE
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	NONE
NOON	NONE
PM	3:00 PM - 07:00 PM

SOUTHBOUND (Enterprise St)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	269	0	0	0	9	PM

EASTBOUND (Midway Dr)

AM	NOON	PM		
0	0	1009	⇦	
0	0	0	↩	0
0	0	0	↱	0
0	0	799	→	2
0	0	0	↴	0
AM	NOON	PM		

WESTBOUND (Midway Dr)

PM	NOON	AM		
9	0	0	↰	0
740	0	0	←	2
0	0	0	↰	0
0	0	0	↩	0
799	0	0	⇨	
PM	NOON	AM		

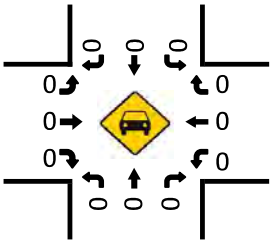
CONTROL: 1-Way Stop(SB)

	AM	NOON	PM
TEV	0	0	1817
PHF			0.93

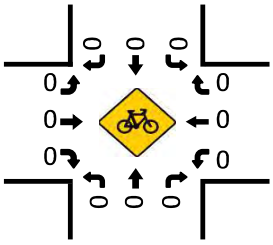
NORTHBOUND (Enterprise St)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

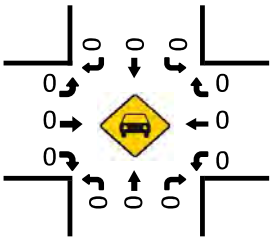
Totals (AM)



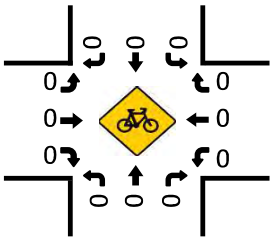
Total Bikes (AM)



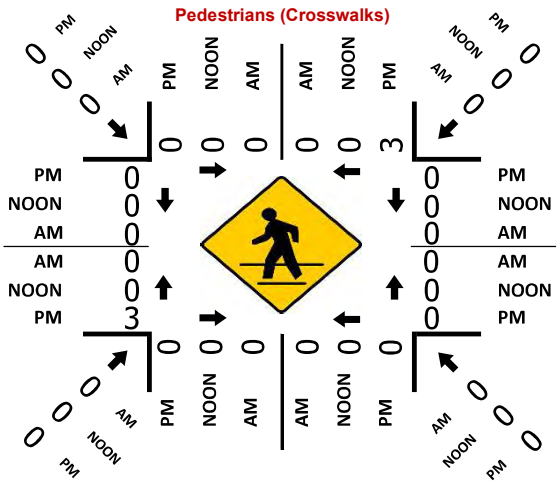
Totals (NOON)



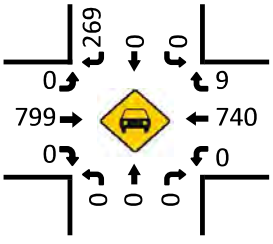
Total Bikes (NOON)



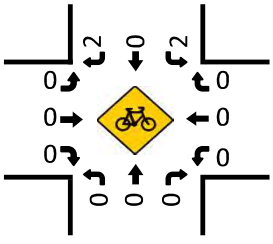
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Barnett Ave & Midway Dr

Peak Hour Turning Movement Count

ID: 23-040200-017
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:45 PM - 05:45 PM	3:00 PM - 07:00 PM

Barnett Ave

SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	750	1091	0	1	1930	PM

1 2 0 0

EASTBOUND

AM	NOON	PM	
0	0	750	
0	0	0	0
0	0	691	0
0	0	0	2
0	0	91	1
AM	NOON	PM	

WESTBOUND

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

CONTROL: Signalized

	AM	NOON	PM
TEV	0	0	3862
PHF			0.98

0 0 2 0

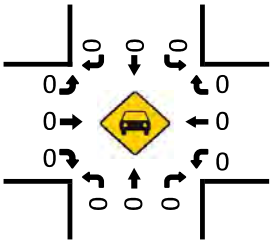
NORTHBOUND

PM	1182	0	0	1238	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

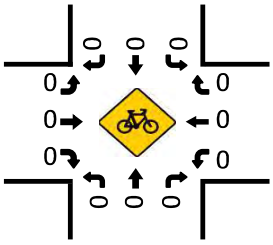
Barnett Ave

Midway Dr (EASTBOUND) | Midway Dr (WESTBOUND)

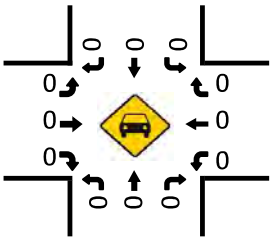
Totals (AM)



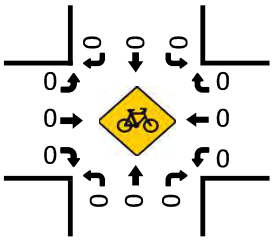
Total Bikes (AM)



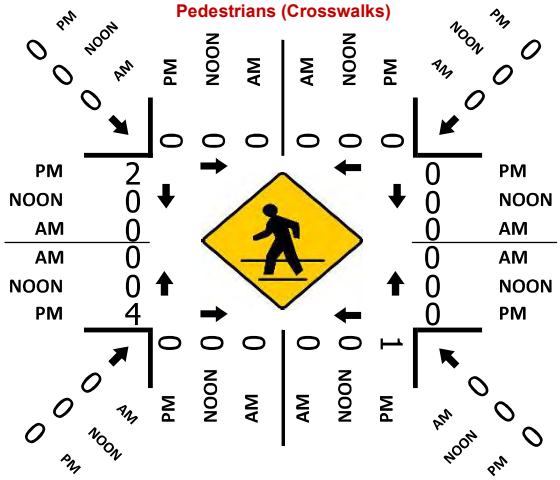
Totals (NOON)



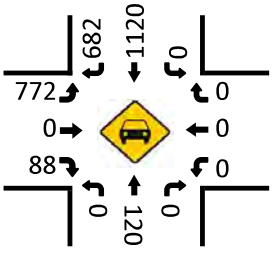
Total Bikes (NOON)



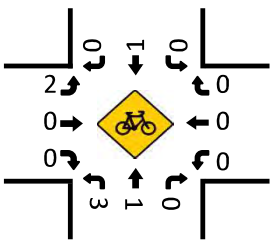
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sea World Dr & Friars Rd

Peak Hour Turning Movement Count

ID: 23-040200-027
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:45 PM - 05:45 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Sea World Dr)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	1251	136	2	1183	PM

EASTBOUND (Friars Rd)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Friars Rd)

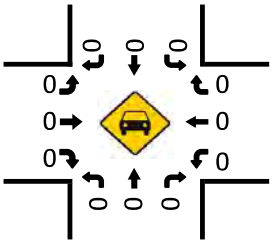
PM	NOON	AM	
1	0	0	1.5
0	0	0	0
0	0	0	1.5
0	0	0	0
582	0	0	
PM	NOON	AM	

NORTHBOUND (Sea World Dr)

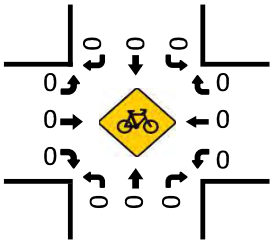
PM	1251	0	0	1180	446	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
Signalized			
TEV	0 AM	0 NOON	3016 PM
PHF			0.96

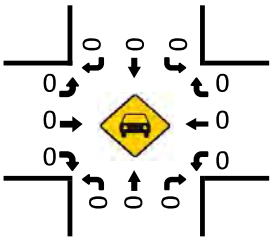
Totals (AM)



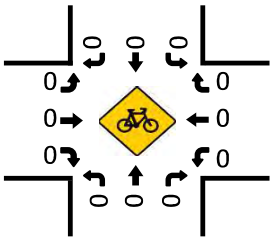
Total Bikes (AM)



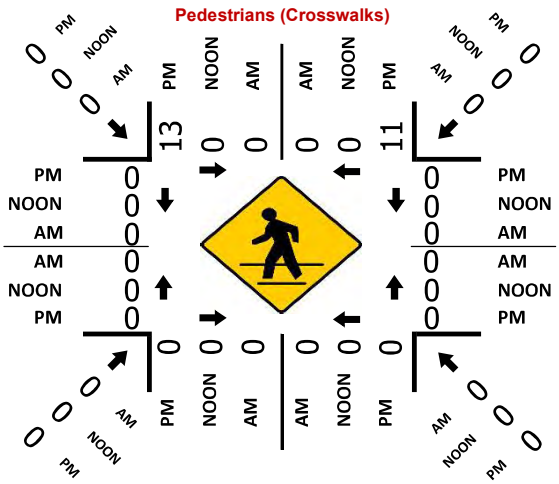
Totals (NOON)



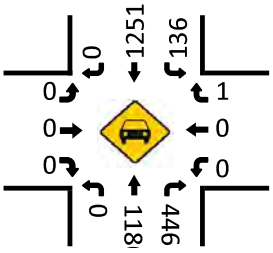
Total Bikes (NOON)



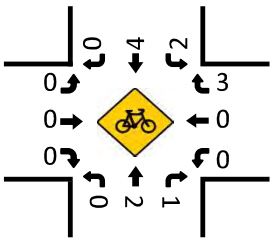
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sea World Dr & Pacific Hwy

Peak Hour Turning Movement Count

ID: 23-040200-028
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:45 PM - 05:45 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Sea World Dr)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	174	1135	138	0	1271	PM

EASTBOUND (Pacific Hwy)

AM	NOON	PM	
0	0	283	
0	0	0	0
0	0	158	2
0	0	88	1
0	0	181	1
AM	NOON	PM	

WESTBOUND (Pacific Hwy)

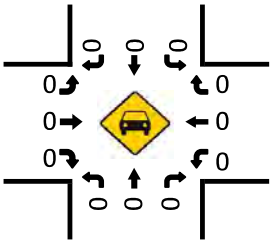
PM	NOON	AM	
106	0	0	1
40	0	0	1
60	0	0	1
0	0	0	0
339	0	0	
PM	NOON	AM	

NORTHBOUND (Sea World Dr)

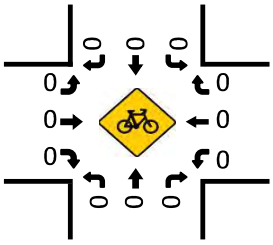
PM	1376	0	69	1007	113	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

CONTROL			
Signalized			
TEV	0 AM	0 NOON	3269 PM
PHF			0.95

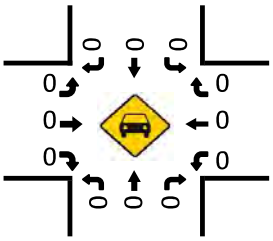
Totals (AM)



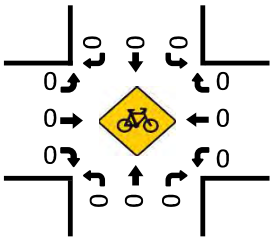
Total Bikes (AM)



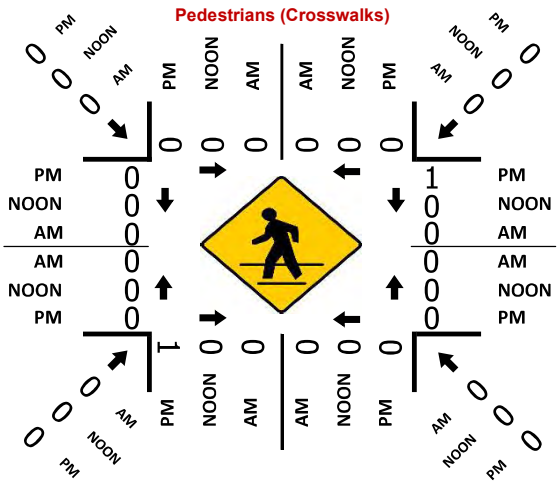
Totals (NOON)



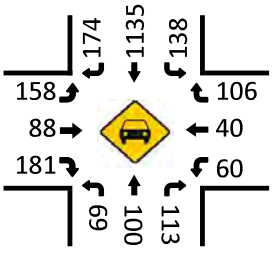
Total Bikes (NOON)



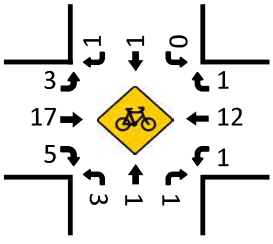
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



Prepared by National Data & Surveying Services

I-5 SB Ramps & Sea World Dr

Peak Hour Turning Movement Count

ID: 23-040200-029
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:45 PM - 05:45 PM	3:00 PM - 07:00 PM

SOUTHBOUND (I-5 SB Ramps)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	867	0	209	0	0	PM

EASTBOUND (Sea World Dr)

AM	NOON	PM		
0	0	1447	⇦	
0	0	0	↰	0
0	0	0	↱	0
0	0	991	→	2
0	0	278	↴	1
AM	NOON	PM		

WESTBOUND (Sea World Dr)

PM	NOON	AM		
0	0	0	↰	0
580	0	0	←	2
270	0	0	↱	2
0	0	0	↴	0
1200	0	0	⇨	
PM	NOON	AM		

1	0	1	0	⇧

NORTHBOUND (I-5 SB Ramps)

PM	548	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

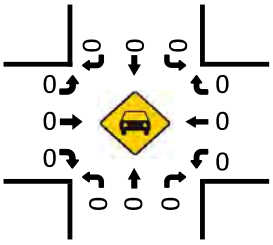
0	0	0	0	⇩

CONTROL

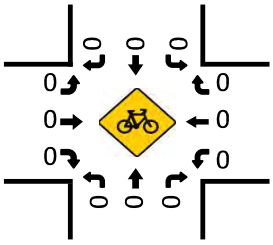
Signalized

TEV	0 AM	0 NOON	3195 PM
PHF			0.97

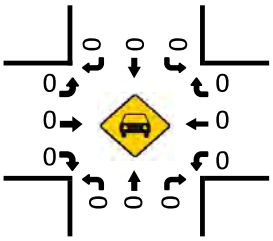
Totals (AM)



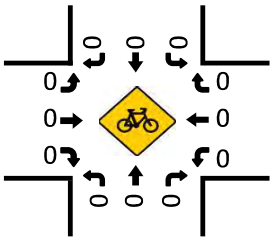
Total Bikes (AM)



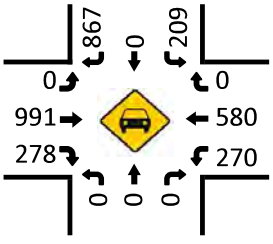
Totals (NOON)



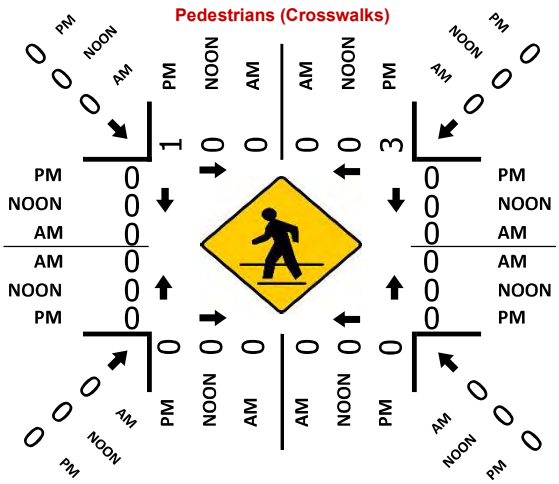
Total Bikes (NOON)



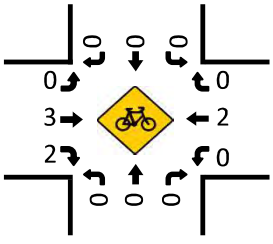
Totals (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



Prepared by National Data & Surveying Services

Sports Arena Blvd & I-8 EB On-Ramp

Peak Hour Turning Movement Count

ID: 23-040200-036
City: San Diego

Day: Thursday
Date: 9/21/2023

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	3:00 PM - 07:00 PM

SOUTHBOUND (Sports Arena Blvd)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	1452	3	0	581	PM

0 3 0 0

EASTBOUND (I-8 EB On-Ramp)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (I-8 EB On-Ramp)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
524	0	0	
PM	NOON	AM	

CONTROL

No Control

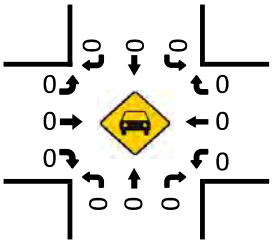
TEV	0 AM	0 NOON	2557 PM
PHF			0.97

0 0 1.5 1.5

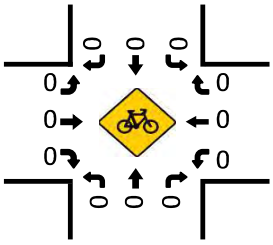
NORTHBOUND (Sports Arena Blvd)

PM	1452	0	0	581	521	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

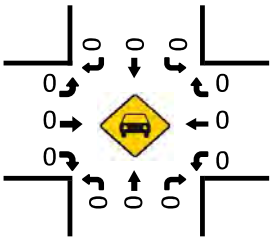
Totals (AM)



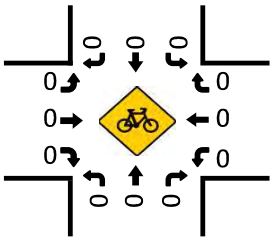
Total Bikes (AM)



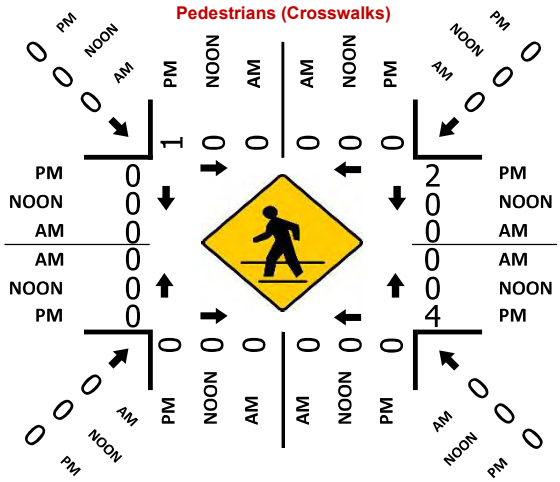
Totals (NOON)



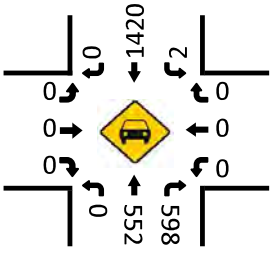
Total Bikes (NOON)



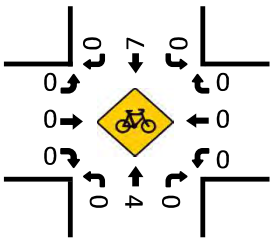
Pedestrians (Crosswalks)



Totals (PM)

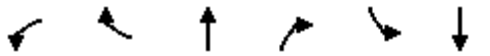


Total Bikes (PM)



Appendix E

Existing Conditions Intersection LOS Worksheets



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	751	1322	376	0	0	1288
Future Volume (vph)	751	1322	376	0	0	1288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	10.5			7.5
Lane Util. Factor	0.97	0.88	0.91			0.86
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	2787	5085			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	2787	5085			6408
Peak-hour factor, PHF	0.94	0.94	0.85	0.85	0.93	0.93
Adj. Flow (vph)	799	1406	442	0	0	1385
RTOR Reduction (vph)	0	98	0	0	0	0
Lane Group Flow (vph)	799	1308	442	0	0	1385
Confl. Bikes (#/hr)				1		
Turn Type	Prot	custom	NA			NA
Protected Phases	8	1 8	2			6
Permitted Phases						
Actuated Green, G (s)	32.3	53.1	17.3			38.1
Effective Green, g (s)	32.3	53.1	14.3			38.1
Actuated g/C Ratio	0.38	0.62	0.17			0.45
Clearance Time (s)	7.5		7.5			7.5
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	1298	1732	851			2858
v/s Ratio Prot	0.23	c0.47	0.09			c0.22
v/s Ratio Perm						
v/c Ratio	0.62	0.76	0.52			0.48
Uniform Delay, d1	21.5	11.5	32.4			16.7
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.6	1.7	0.2			0.0
Delay (s)	22.1	13.2	32.6			16.8
Level of Service	C	B	C			B
Approach Delay (s)	16.5		32.6			16.8
Approach LOS	B		C			B

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	85.4	Sum of lost time (s)	25.5
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	193	193	16	166	341	154	298	16	259	300	156
Future Volume (veh/h)	326	193	193	16	166	341	154	298	16	259	300	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	292	321	217	18	191	0	165	332	0	194	418	0
Peak Hour Factor	0.89	0.89	0.89	0.87	0.87	0.87	0.91	0.91	0.91	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	509	534	669	280	558		253	532		304	639	
Arrive On Green	0.29	0.29	0.29	0.16	0.16	0.00	0.14	0.14	0.00	0.17	0.17	0.00
Sat Flow, veh/h	1781	1870	1552	1781	3554	1585	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	292	321	217	18	191	0	165	332	0	194	418	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1552	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	11.2	11.9	7.5	0.7	3.8	0.0	7.0	6.7	0.0	8.1	8.4	0.0
Cycle Q Clear(g_c), s	11.2	11.9	7.5	0.7	3.8	0.0	7.0	6.7	0.0	8.1	8.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	509	534	669	280	558		253	532		304	639	
V/C Ratio(X)	0.57	0.60	0.32	0.06	0.34		0.65	0.62		0.64	0.65	
Avail Cap(c_a), veh/h	780	819	905	1113	2221		669	1404		669	1404	
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.5	24.7	15.3	28.8	30.1	0.0	32.5	32.4	0.0	30.9	31.0	0.0
Incr Delay (d2), s/veh	2.8	3.0	0.8	0.4	1.4	0.0	2.3	1.0	0.0	1.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	5.3	3.3	0.3	1.7	0.0	3.1	3.0	0.0	3.5	3.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	27.7	16.0	29.1	31.5	0.0	34.8	33.3	0.0	32.3	31.7	0.0
LnGrp LOS	C	C	B	C	C		C	C		C	C	
Approach Vol, veh/h		830			209			497			612	
Approach Delay, s/veh		24.5			31.3			33.8			31.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	27.8	18.6	17.5	16.3
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	35.1	30.1	50.1	30.1
Max Q Clear Time (g_c+I1), s	13.9	10.4	5.8	9.0
Green Ext Time (p_c), s	8.3	2.4	3.4	2.2

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	403	12	5	427	45	0	0	0	47	0	76
Future Volume (veh/h)	96	403	12	5	427	45	0	0	0	47	0	76
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	101	424	13	5	464	49				55	0	89
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92				0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	134	1469	45	10	1632	170				203	0	176
Arrive On Green	0.08	0.42	0.42	0.01	0.35	0.35				0.11	0.00	0.11
Sat Flow, veh/h	1781	3516	108	1781	4691	488				1781	0	1545
Grp Volume(v), veh/h	101	214	223	5	335	178				55	0	89
Grp Sat Flow(s),veh/h/ln	1781	1777	1847	1781	1702	1774				1781	0	1545
Q Serve(g_s), s	1.7	2.4	2.5	0.1	2.2	2.2				0.9	0.0	1.7
Cycle Q Clear(g_c), s	1.7	2.4	2.5	0.1	2.2	2.2				0.9	0.0	1.7
Prop In Lane	1.00		0.06	1.00		0.27				1.00		1.00
Lane Grp Cap(c), veh/h	134	742	771	10	1185	617				203	0	176
V/C Ratio(X)	0.75	0.29	0.29	0.52	0.28	0.29				0.27	0.00	0.50
Avail Cap(c_a), veh/h	1776	3479	3616	1776	6665	3474				2327	0	2019
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	5.9	5.9	15.2	7.2	7.3				12.4	0.0	12.8
Incr Delay (d2), s/veh	3.2	0.3	0.2	14.9	0.2	0.3				0.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.5	0.1	0.5	0.5				0.3	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	6.2	6.2	30.1	7.4	7.6				12.7	0.0	13.6
LnGrp LOS	B	A	A	C	A	A				B	A	B
Approach Vol, veh/h		538			518						144	
Approach Delay, s/veh		8.2			7.7						13.3	
Approach LOS		A			A						B	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	4.6	17.7		8.4	6.7	15.6
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	30.6	60.1		40.1	30.6	60.1
Max Q Clear Time (g_c+I1), s	2.1	4.5		3.7	3.7	4.2
Green Ext Time (p_c), s	0.0	3.4		0.3	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	8.6
HCM 6th LOS	A

Notes

User approved ignoring U-Turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	300	109	117	295	43	117	40	83	27	26	67
Future Volume (veh/h)	51	300	109	117	295	43	117	40	83	27	26	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	1.00		0.98	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	330	120	131	331	48	133	45	94	33	31	81
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.88	0.88	0.88	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	765	272	172	1592	225	423	143	298	280	224	424
Arrive On Green	0.05	0.30	0.30	0.10	0.35	0.35	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	3456	2539	903	1781	4519	638	1281	532	1112	567	837	1585
Grp Volume(v), veh/h	56	229	221	131	247	132	133	0	139	64	0	81
Grp Sat Flow(s),veh/h/ln	1728	1777	1665	1781	1702	1754	1281	0	1645	1405	0	1585
Q Serve(g_s), s	0.7	4.4	4.5	3.0	2.2	2.2	3.9	0.0	2.9	0.0	0.0	1.7
Cycle Q Clear(g_c), s	0.7	4.4	4.5	3.0	2.2	2.2	6.9	0.0	2.9	2.9	0.0	1.7
Prop In Lane	1.00		0.54	1.00		0.36	1.00		0.68	0.52		1.00
Lane Grp Cap(c), veh/h	157	535	501	172	1199	618	423	0	440	505	0	424
V/C Ratio(X)	0.36	0.43	0.44	0.76	0.21	0.21	0.31	0.00	0.32	0.13	0.00	0.19
Avail Cap(c_a), veh/h	2897	2515	2356	2542	4818	2482	1290	0	1553	2895	0	2990
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	11.9	12.0	18.7	9.6	9.6	15.2	0.0	12.4	11.8	0.0	12.0
Incr Delay (d2), s/veh	0.5	1.1	1.2	2.6	0.2	0.3	0.2	0.0	0.2	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.5	1.2	0.6	0.7	1.0	0.0	0.9	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	13.0	13.1	21.3	9.8	10.0	15.4	0.0	12.6	11.8	0.0	12.1
LnGrp LOS	C	B	B	C	A	A	B	A	B	B	A	B
Approach Vol, veh/h		506			510			272			145	
Approach Delay, s/veh		13.8			12.8			14.0			12.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	19.9		16.3	8.5	17.7		16.3
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	35.6	60.1		40.1	60.6	60.1		80.1
Max Q Clear Time (g_c+I1), s	2.7	4.2		8.9	5.0	6.5		4.9
Green Ext Time (p_c), s	0.1	4.8		0.8	0.2	5.8		0.4

Intersection Summary	
HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	371	53	82	364	67	53	9	45	44	9	31
Future Volume (veh/h)	32	371	53	82	364	67	53	9	45	44	9	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	403	58	89	396	73	63	11	54	50	10	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	863	123	112	1340	239	136	24	240	146	29	154
Arrive On Green	0.03	0.28	0.28	0.06	0.31	0.31	0.09	0.09	0.09	0.10	0.10	0.10
Sat Flow, veh/h	3456	3102	443	1781	4337	774	1527	267	1571	1496	299	1585
Grp Volume(v), veh/h	35	229	232	89	308	161	74	0	54	60	0	35
Grp Sat Flow(s),veh/h/ln	1728	1777	1768	1781	1702	1707	1794	0	1571	1796	0	1585
Q Serve(g_s), s	0.4	4.3	4.4	2.0	2.8	2.9	1.6	0.0	1.2	1.3	0.0	0.8
Cycle Q Clear(g_c), s	0.4	4.3	4.4	2.0	2.8	2.9	1.6	0.0	1.2	1.3	0.0	0.8
Prop In Lane	1.00		0.25	1.00		0.45	0.85		1.00	0.83		1.00
Lane Grp Cap(c), veh/h	111	494	492	112	1052	528	160	0	240	175	0	154
V/C Ratio(X)	0.31	0.46	0.47	0.79	0.29	0.31	0.46	0.00	0.22	0.34	0.00	0.23
Avail Cap(c_a), veh/h	436	936	931	467	2255	1131	1597	0	1498	799	0	705
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.1	12.1	12.1	18.7	10.6	10.7	17.5	0.0	15.0	17.0	0.0	16.9
Incr Delay (d2), s/veh	0.6	0.8	0.9	4.7	0.1	0.1	0.8	0.0	0.2	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	1.5	0.8	0.8	0.8	0.6	0.0	0.4	0.5	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	13.0	13.0	23.3	10.7	10.8	18.3	0.0	15.2	17.5	0.0	17.1
LnGrp LOS	B	B	B	C	B	B	B	A	B	B	A	B
Approach Vol, veh/h		496			558			128			95	
Approach Delay, s/veh		13.5			12.7			17.0			17.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	16.1		8.8	5.7	17.4		8.5
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	4.0	21.3		18.0	5.1	26.8		36.0
Max Q Clear Time (g_c+I1), s	4.0	6.4		3.3	2.4	4.9		3.6
Green Ext Time (p_c), s	0.0	2.8		0.2	0.0	1.9		0.3

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

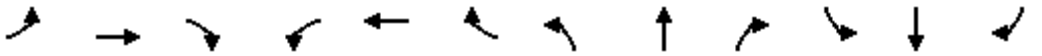
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	443	20	111	511	6	0	0	40	1	0	6
Future Vol, veh/h	23	443	20	111	511	6	0	0	40	1	0	6
Conflicting Peds, #/hr	0	0	5	0	0	10	0	0	1	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	150	-	-	125	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	92	92	92	59	59	59	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	503	23	121	555	7	0	0	68	1	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	572	0	0	531	0	0	-	-	269	1065	1394	291
Stage 1	-	-	-	-	-	-	-	-	-	811	811	-
Stage 2	-	-	-	-	-	-	-	-	-	254	583	-
Critical Hdwy	5.34	-	-	5.34	-	-	-	-	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	-	-	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	626	-	-	655	-	-	0	0	621	234	140	602
Stage 1	-	-	-	-	-	-	0	0	-	269	391	-
Stage 2	-	-	-	-	-	-	0	0	-	668	497	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	620	-	-	652	-	-	-	-	617	171	108	596
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	171	108	-
Stage 1	-	-	-	-	-	-	-	-	-	255	315	-
Stage 2	-	-	-	-	-	-	-	-	-	569	474	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	2.1	11.6	13.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	617	620	-	-	652	-	-	440
HCM Lane V/C Ratio	0.11	0.042	-	-	0.185	-	-	0.018
HCM Control Delay (s)	11.6	11.1	-	-	11.8	-	-	13.3
HCM Lane LOS	B	B	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.7	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	455	13	139	575	39	18	3	85	0	0	0
Future Volume (veh/h)	24	455	13	139	575	39	18	3	85	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.98			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	28	523	15	153	632	43	22	4	106			
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.80	0.80	0.80			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	49	1794	51	201	2133	144	194	35	197			
Arrive On Green	0.03	0.35	0.35	0.11	0.44	0.44	0.13	0.13	0.13			
Sat Flow, veh/h	1781	5096	145	1781	4871	329	1518	276	1548			
Grp Volume(v), veh/h	28	349	189	153	440	235	26	0	106			
Grp Sat Flow(s),veh/h/ln	1781	1702	1837	1781	1702	1796	1794	0	1548			
Q Serve(g_s), s	0.5	2.6	2.6	2.9	2.9	2.9	0.4	0.0	2.2			
Cycle Q Clear(g_c), s	0.5	2.6	2.6	2.9	2.9	2.9	0.4	0.0	2.2			
Prop In Lane	1.00		0.08	1.00		0.18	0.85		1.00			
Lane Grp Cap(c), veh/h	49	1199	647	201	1490	786	229	0	197			
V/C Ratio(X)	0.58	0.29	0.29	0.76	0.30	0.30	0.11	0.00	0.54			
Avail Cap(c_a), veh/h	1564	5870	3168	1564	5870	3096	2065	0	1781			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	16.8	8.1	8.2	15.0	6.3	6.3	13.5	0.0	14.2			
Incr Delay (d2), s/veh	4.0	0.3	0.5	2.2	0.2	0.3	0.1	0.0	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.8	1.0	0.6	0.7	0.2	0.0	0.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.7	8.4	8.7	17.2	6.5	6.6	13.5	0.0	15.1			
LnGrp LOS	C	A	A	B	A	A	B	A	B			
Approach Vol, veh/h		566			828			132				
Approach Delay, s/veh		9.1			8.5			14.8				
Approach LOS		A			A			B				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	8.3	17.2			5.3	20.2		9.3				
Change Period (Y+Rc), s	4.4	4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s	30.6	60.1			30.6	60.1		40.1				
Max Q Clear Time (g_c+I1), s	4.9	4.6			2.5	4.9		4.2				
Green Ext Time (p_c), s	0.2	7.4			0.0	7.0		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Notes

User approved ignoring U-Turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	373	90	67	316	38	124	103	101	30	77	55
Future Volume (veh/h)	75	373	90	67	316	38	124	103	101	30	77	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	439	106	80	376	45	124	129	111	40	103	73
Peak Hour Factor	0.85	0.85	0.85	0.84	0.84	0.84	0.91	0.91	0.91	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	958	414	177	820	97	271	285	319	323	339	279
Arrive On Green	0.06	0.27	0.27	0.05	0.26	0.26	0.15	0.15	0.15	0.18	0.18	0.18
Sat Flow, veh/h	1781	3554	1535	3456	3196	380	1781	1870	1563	1781	1870	1540
Grp Volume(v), veh/h	88	439	106	80	208	213	124	129	111	40	103	73
Grp Sat Flow(s),veh/h/ln	1781	1777	1535	1728	1777	1799	1781	1870	1563	1781	1870	1540
Q Serve(g_s), s	2.7	5.7	3.0	1.2	5.4	5.5	3.5	3.5	3.4	1.0	2.6	2.3
Cycle Q Clear(g_c), s	2.7	5.7	3.0	1.2	5.4	5.5	3.5	3.5	3.4	1.0	2.6	2.3
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	958	414	177	456	462	271	285	319	323	339	279
V/C Ratio(X)	0.77	0.46	0.26	0.45	0.46	0.46	0.46	0.45	0.35	0.12	0.30	0.26
Avail Cap(c_a), veh/h	954	3865	1670	1851	1932	1957	1293	1357	1215	1293	1357	1118
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	16.8	15.8	25.5	17.3	17.3	21.3	21.3	18.9	18.9	19.6	19.4
Incr Delay (d2), s/veh	4.1	0.5	0.5	0.7	1.2	1.2	0.4	0.4	0.2	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.2	1.0	0.5	2.2	2.2	1.4	1.4	1.1	0.4	1.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	17.3	16.3	26.1	18.5	18.6	21.8	21.7	19.1	19.0	19.8	19.6
LnGrp LOS	C	B	B	C	B	B	C	C	B	B	B	B
Approach Vol, veh/h		633			501			364			216	
Approach Delay, s/veh		18.8			19.7			21.0			19.6	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.2	19.8		14.9	7.9	19.1		13.3
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	29.6	60.1		40.1	29.6	60.1		40.1
Max Q Clear Time (g_c+I1), s	3.2	7.7		4.6	4.7	7.5		5.5
Green Ext Time (p_c), s	0.1	5.5		0.5	0.1	4.9		0.8

Intersection Summary	
HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	521	11	22	679	169	12	4	2	56	4	36
Future Volume (veh/h)	33	521	11	22	679	169	12	4	2	56	4	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.99		0.96	0.97		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	548	12	23	722	180	16	5	3	93	7	60
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.75	0.75	0.75	0.60	0.60	0.60
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	1581	35	501	1216	303	322	94	39	275	44	110
Arrive On Green	0.03	0.45	0.45	0.02	0.44	0.44	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1781	3552	78	1781	2792	696	918	479	200	714	227	565
Grp Volume(v), veh/h	35	274	286	23	459	443	24	0	0	160	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1852	1781	1777	1711	1596	0	0	1507	0	0
Q Serve(g_s), s	0.4	4.3	4.3	0.3	8.3	8.3	0.0	0.0	0.0	2.6	0.0	0.0
Cycle Q Clear(g_c), s	0.4	4.3	4.3	0.3	8.3	8.3	0.5	0.0	0.0	3.9	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.41	0.67		0.12	0.58		0.37
Lane Grp Cap(c), veh/h	375	791	824	501	774	745	455	0	0	430	0	0
V/C Ratio(X)	0.09	0.35	0.35	0.05	0.59	0.59	0.05	0.00	0.00	0.37	0.00	0.00
Avail Cap(c_a), veh/h	1611	2534	2642	1754	2534	2440	1530	0	0	1537	0	0
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.0	7.7	7.7	6.5	9.1	9.1	13.8	0.0	0.0	15.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.0	0.8	0.8	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.2	1.3	0.1	2.5	2.4	0.2	0.0	0.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.0	8.0	7.9	6.5	9.8	9.9	13.8	0.0	0.0	15.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		595			925			24			160	
Approach Delay, s/veh		7.9			9.8			13.8			15.3	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	23.7		13.1	5.7	23.3		13.1
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	30.6	60.1		40.1	30.6	60.1		40.1
Max Q Clear Time (g_c+I1), s	2.3	6.3		5.9	2.4	10.3		2.5
Green Ext Time (p_c), s	0.0	4.2		0.6	0.0	8.1		0.1

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑			↰	
Traffic Vol, veh/h	0	111	0	0	80	0
Future Vol, veh/h	0	111	0	0	80	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	92	92	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	132	0	0	84	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	132	-
Stage 1	-	-	0	-
Stage 2	-	-	132	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	862	0
Stage 1	0	-	-	0
Stage 2	0	-	894	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	862	-
Mov Cap-2 Maneuver	-	-	817	-
Stage 1	-	-	-	-
Stage 2	-	-	894	-

Approach	EB	SB
HCM Control Delay, s	0	9.9
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	817
HCM Lane V/C Ratio	-	0.103
HCM Control Delay (s)	-	9.9
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0.3

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	70	143	0	0	93	0
Future Vol, veh/h	70	143	0	0	93	0
Peak Hour Factor	0.87	0.87	0.25	0.25	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	164	0	0	124	0
Number of Lanes	0	2	0	0	1	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	1	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	2
HCM Control Delay	8.8	8.7
HCM LOS	A	A

Lane	EBLn1	EBLn2	SBLn1
Vol Left, %	59%	0%	100%
Vol Thru, %	41%	100%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	118	95	93
LT Vol	70	0	93
Through Vol	48	95	0
RT Vol	0	0	0
Lane Flow Rate	135	110	124
Geometry Grp	7	7	2
Degree of Util (X)	0.194	0.148	0.163
Departure Headway (Hd)	5.155	4.856	4.732
Convergence, Y/N	Yes	Yes	Yes
Cap	701	743	761
Service Time	2.855	2.556	2.743
HCM Lane V/C Ratio	0.193	0.148	0.163
HCM Control Delay	9.1	8.4	8.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.5	0.6

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	208	0	0	44	0
Future Vol, veh/h	14	208	0	0	44	0
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	92	92	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	245	0	0	52	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	155	-
Stage 1	-	-	0	-
Stage 2	-	-	155	-
Critical Hdwy	4.14	-	6.84	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.84	-
Follow-up Hdwy	2.22	-	3.52	-
Pot Cap-1 Maneuver	-	-	821	0
Stage 1	-	-	-	0
Stage 2	-	-	857	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	821	-
Mov Cap-2 Maneuver	-	-	821	-
Stage 1	-	-	-	-
Stage 2	-	-	857	-

Approach	EB	SB
HCM Control Delay, s		9.7
HCM LOS		A

Minor Lane/Major Mvmt	EBL	EBT	SBLn1
Capacity (veh/h)	-	-	821
HCM Lane V/C Ratio	-	-	0.063
HCM Control Delay (s)	-	-	9.7
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.2

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	61	199	60	47	19	0	0	44	10
Future Vol, veh/h	0	0	0	61	199	60	47	19	0	0	44	10
Peak Hour Factor	0.92	0.92	0.92	0.89	0.89	0.89	0.82	0.82	0.82	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	69	224	67	57	23	0	0	49	11
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.1	8.6	8.2
HCM LOS	A	A	A

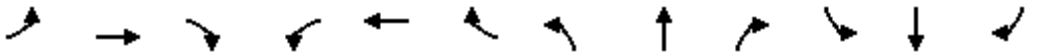
Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	71%	38%	0%	0%
Vol Thru, %	29%	62%	62%	81%
Vol Right, %	0%	0%	38%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	161	160	54
LT Vol	47	61	0	0
Through Vol	19	100	100	44
RT Vol	0	0	60	10
Lane Flow Rate	80	180	179	60
Geometry Grp	2	7	7	2
Degree of Util (X)	0.111	0.254	0.23	0.079
Departure Headway (Hd)	4.967	5.071	4.616	4.744
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	723	711	780	757
Service Time	2.988	2.792	2.337	2.765
HCM Lane V/C Ratio	0.111	0.253	0.229	0.079
HCM Control Delay	8.6	9.5	8.7	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	1	0.9	0.3

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	19	257	23	8	4	0	0	38	81
Future Vol, veh/h	0	0	0	19	257	23	8	4	0	0	38	81
Peak Hour Factor	0.92	0.92	0.92	0.88	0.88	0.88	0.75	0.75	0.75	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	22	292	26	11	5	0	0	48	101
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.1	8.2	8.3
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	67%	13%	0%	0%
Vol Thru, %	33%	87%	85%	32%
Vol Right, %	0%	0%	15%	68%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	148	152	119
LT Vol	8	19	0	0
Through Vol	4	129	129	38
RT Vol	0	0	23	81
Lane Flow Rate	16	168	172	149
Geometry Grp	2	7	7	2
Degree of Util (X)	0.022	0.232	0.23	0.179
Departure Headway (Hd)	5.021	4.991	4.819	4.325
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	714	724	749	832
Service Time	3.047	2.691	2.519	2.341
HCM Lane V/C Ratio	0.022	0.232	0.23	0.179
HCM Control Delay	8.2	9.2	9	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.9	0.9	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	25	115	78	48	1646	46	0	2112	92
Future Volume (veh/h)	0	0	0	25	115	78	48	1646	46	0	2112	92
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				28	129	88	54	1849	52	0	2133	93
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.99	0.99	0.99
Percent Heavy Veh, %				2	2	2	2	2	2	0	2	2
Cap, veh/h				61	282	195	821	3922	110	0	1379	423
Arrive On Green				0.16	0.16	0.16	0.46	0.77	0.77	0.00	0.27	0.27
Sat Flow, veh/h				391	1807	1246	1781	5105	143	0	5274	1567
Grp Volume(v), veh/h				132	0	113	54	1232	669	0	2133	93
Grp Sat Flow(s),veh/h/ln				1851	0	1593	1781	1702	1844	0	1702	1567
Q Serve(g_s), s				8.5	0.0	8.3	2.2	17.1	17.1	0.0	35.1	6.0
Cycle Q Clear(g_c), s				8.5	0.0	8.3	2.2	17.1	17.1	0.0	35.1	6.0
Prop In Lane				0.21		0.78	1.00		0.08	0.00		1.00
Lane Grp Cap(c), veh/h				289	0	249	821	2615	1417	0	1379	423
V/C Ratio(X)				0.46	0.00	0.45	0.07	0.47	0.47	0.00	1.55	0.22
Avail Cap(c_a), veh/h				799	0	688	821	2615	1417	0	1379	423
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.81	0.81	0.81	0.00	1.00	1.00
Uniform Delay (d), s/veh				49.8	0.0	49.8	19.5	5.5	5.5	0.0	47.5	36.8
Incr Delay (d2), s/veh				0.4	0.0	0.5	0.0	0.5	0.9	0.0	249.9	1.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.0	0.0	3.4	0.9	5.3	5.9	0.0	46.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				50.3	0.0	50.3	19.5	6.0	6.4	0.0	297.3	38.0
LnGrp LOS				D	A	D	B	A	A	A	F	D
Approach Vol, veh/h					245			1955			2226	
Approach Delay, s/veh					50.3			6.5			286.5	
Approach LOS					D			A			F	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	104.8	25.2	64.8	40.0
Change Period (Y+Rc), s	4.9	4.9	4.9	* 4.9
Max Green Setting (Gmax), s	64.1	56.1	24.6	* 35
Max Q Clear Time (g_c+I1), s	19.1	10.5	4.2	37.1
Green Ext Time (p_c), s	6.0	0.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	149.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



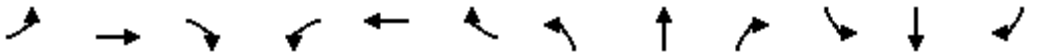
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	79	35	0	0	0	0	1607	14	125	2021	0
Future Volume (veh/h)	106	79	35	0	0	0	0	1607	14	125	2021	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	128	103	45				0	1826	14	128	2062	0
Peak Hour Factor	0.83	0.77	0.77				0.88	0.88	0.97	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	222	233	188				0	3564	27	151	5148	0
Arrive On Green	0.12	0.12	0.12				0.00	1.00	1.00	0.17	1.00	0.00
Sat Flow, veh/h	1781	1870	1509				0	5395	40	1781	6696	0
Grp Volume(v), veh/h	128	103	45				0	1189	651	128	2062	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1509				0	1702	1863	1781	1609	0
Q Serve(g_s), s	8.8	6.6	3.5				0.0	0.0	0.0	9.1	0.0	0.0
Cycle Q Clear(g_c), s	8.8	6.6	3.5				0.0	0.0	0.0	9.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.02	1.00		0.00
Lane Grp Cap(c), veh/h	222	233	188				0	2321	1270	151	5148	0
V/C Ratio(X)	0.58	0.44	0.24				0.00	0.51	0.51	0.85	0.40	0.00
Avail Cap(c_a), veh/h	481	505	408				0	2321	1270	282	5148	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.63	0.63	0.47	0.47	0.00
Uniform Delay (d), s/veh	53.7	52.7	51.4				0.0	0.0	0.0	53.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.5	0.2				0.0	0.5	0.9	2.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	3.2	1.3				0.0	0.2	0.3	3.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	53.2	51.6				0.0	0.5	0.9	55.7	0.1	0.0
LnGrp LOS	D	D	D				A	A	A	E	A	A
Approach Vol, veh/h		276						1840			2190	
Approach Delay, s/veh		53.6						0.7			3.4	
Approach LOS		D						A			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	15.4	93.5	21.1	108.9
Change Period (Y+Rc), s	4.4	4.9	4.9	4.9
Max Green Setting (Gmax), s	20.6	60.1	35.1	85.1
Max Q Clear Time (g_c+I1), s	11.1	2.0	10.8	2.0
Green Ext Time (p_c), s	0.0	5.1	0.2	7.6

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	163	139	201	223	11	206	1436	250	0	1499	348
Future Volume (vph)	208	163	139	201	223	11	206	1436	250	0	1499	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	14	12	12	12	12	12
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9		5.4	5.9			5.9	5.9
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91		0.97	0.91			0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	1.00			1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98			1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1610	3332	1526	1610	3335		3662	4963			5085	1536
Flt Permitted	0.95	0.98	1.00	0.95	0.99		0.95	1.00			1.00	1.00
Satd. Flow (perm)	1610	3332	1526	1610	3335		3662	4963			5085	1536
Peak-hour factor, PHF	0.88	0.88	0.88	0.85	0.85	0.85	0.87	0.87	0.87	0.95	0.95	0.95
Adj. Flow (vph)	236	185	158	236	262	13	237	1651	287	0	1578	366
RTOR Reduction (vph)	0	0	126	0	3	0	0	15	0	0	0	154
Lane Group Flow (vph)	137	284	32	168	340	0	237	1923	0	0	1578	212
Confl. Peds. (#/hr)			19			3						12
Confl. Bikes (#/hr)			4			4			1			3
Turn Type	Split	NA	Perm	Split	NA		Prot	NA			NA	Perm
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases			4									6
Actuated Green, G (s)	26.0	26.0	26.0	17.5	17.5		11.8	68.8			51.6	51.6
Effective Green, g (s)	26.0	26.0	26.0	17.5	17.5		11.8	68.8			51.6	51.6
Actuated g/C Ratio	0.20	0.20	0.20	0.13	0.13		0.09	0.53			0.40	0.40
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.4	5.9			5.9	5.9
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0			1.0	1.0
Lane Grp Cap (vph)	322	666	305	216	448		332	2626			2018	609
v/s Ratio Prot	0.09	c0.09		c0.10	0.10		0.06	c0.39			c0.31	
v/s Ratio Perm			0.02									0.14
v/c Ratio	0.43	0.43	0.10	0.78	0.76		0.71	0.73			0.78	0.35
Uniform Delay, d1	45.5	45.5	42.5	54.4	54.2		57.5	23.5			34.3	27.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.39	0.36			0.98	1.42
Incremental Delay, d2	0.3	0.2	0.1	14.7	6.5		4.3	1.3			2.9	1.5
Delay (s)	45.8	45.6	42.5	69.1	60.7		84.4	9.7			36.6	40.4
Level of Service	D	D	D	E	E		F	A			D	D
Approach Delay (s)		44.8			63.5			17.8			37.3	
Approach LOS		D			E			B			D	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	219	166	127	381	172	304	1545	73	167	1568	189
Future Volume (veh/h)	157	219	166	127	381	172	304	1545	73	167	1568	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	169	235	178	153	459	207	353	1797	85	176	1651	199
Peak Hour Factor	0.93	0.93	0.93	0.83	0.83	0.83	0.86	0.86	0.86	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	590	258	145	620	269	408	1693	80	899	2239	269
Arrive On Green	0.07	0.17	0.17	0.08	0.17	0.17	0.04	0.11	0.11	0.26	0.48	0.48
Sat Flow, veh/h	3456	3554	1551	1781	3554	1540	3456	4990	236	3456	4616	555
Grp Volume(v), veh/h	169	235	178	153	459	207	353	1225	657	176	1216	634
Grp Sat Flow(s),veh/h/ln	1728	1777	1551	1781	1777	1540	1728	1702	1822	1728	1702	1767
Q Serve(g_s), s	6.2	7.7	14.1	10.6	15.9	16.7	13.2	44.1	44.1	5.2	37.2	37.5
Cycle Q Clear(g_c), s	6.2	7.7	14.1	10.6	15.9	16.7	13.2	44.1	44.1	5.2	37.2	37.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.31
Lane Grp Cap(c), veh/h	239	590	258	145	620	269	408	1155	618	899	1651	857
V/C Ratio(X)	0.71	0.40	0.69	1.05	0.74	0.77	0.86	1.06	1.06	0.20	0.74	0.74
Avail Cap(c_a), veh/h	441	959	419	145	795	345	574	1155	618	899	1651	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	0.61	0.61	0.61	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.2	48.4	51.1	59.7	50.9	51.2	61.4	57.7	57.7	37.5	26.8	26.9
Incr Delay (d2), s/veh	1.4	0.2	1.2	89.6	1.8	5.6	4.6	39.0	46.6	0.0	1.6	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	3.4	5.5	8.4	7.2	6.8	6.4	26.4	29.6	2.2	14.8	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	48.6	52.2	149.3	52.7	56.8	66.1	96.7	104.4	37.5	28.4	29.9
LnGrp LOS	E	D	D	F	D	E	E	F	F	D	C	C
Approach Vol, veh/h		582			819			2235			2026	
Approach Delay, s/veh		53.2			71.8			94.1			29.7	
Approach LOS		D			E			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	49.0	15.0	26.5	19.8	68.7	13.9	27.6
Change Period (Y+Rc), s	5.7	* 4.9	4.4	4.9	4.4	5.7	4.9	* 4.9
Max Green Setting (Gmax), s	21.6	* 44	10.6	35.1	21.6	43.3	16.6	* 29
Max Q Clear Time (g_c+I1), s	7.2	46.1	12.6	16.1	15.2	39.5	8.2	18.7
Green Ext Time (p_c), s	0.1	0.0	0.0	0.6	0.2	2.1	0.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	63.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	128	5	141	0	142	0	301	114	37	253	0
Future Volume (vph)	33	128	5	141	0	142	0	301	114	37	253	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.4		4.4		4.9		4.4	4.9	
Lane Util. Factor	1.00	1.00		1.00		1.00		0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00		0.98		0.97		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00		1.00	1.00	
Frt	1.00	0.99		1.00		0.85		0.96		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	1852		1770		1554		3307		1770	3539	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.34	1.00	
Satd. Flow (perm)	1770	1852		1770		1554		3307		631	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.87	0.87	0.87	0.95	0.95	0.95
Adj. Flow (vph)	36	139	5	168	0	169	0	346	131	39	266	0
RTOR Reduction (vph)	0	1	0	0	0	96	0	31	0	0	0	0
Lane Group Flow (vph)	36	143	0	168	0	73	0	446	0	39	266	0
Confl. Peds. (#/hr)			5			4			48			12
Confl. Bikes (#/hr)			2						8			5
Turn Type	Split	NA		Prot		Perm		NA		pm+pt	NA	
Protected Phases	4	4		3				2		1	6	
Permitted Phases						3				6		
Actuated Green, G (s)	10.8	10.8		10.3		10.3		17.3		24.3	24.3	
Effective Green, g (s)	10.8	10.8		10.3		10.3		17.3		24.3	24.3	
Actuated g/C Ratio	0.18	0.18		0.17		0.17		0.29		0.41	0.41	
Clearance Time (s)	4.9	4.9		4.4		4.4		4.9		4.4	4.9	
Vehicle Extension (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lane Grp Cap (vph)	320	335		305		268		959		306	1442	
v/s Ratio Prot	0.02	c0.08		c0.09				c0.13		0.01	c0.08	
v/s Ratio Perm						0.05				0.05		
v/c Ratio	0.11	0.43		0.55		0.27		0.46		0.13	0.18	
Uniform Delay, d1	20.4	21.7		22.5		21.4		17.4		11.0	11.3	
Progression Factor	1.00	1.00		1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.3		1.2		0.2		0.1		0.1	0.0	
Delay (s)	20.5	22.0		23.8		21.6		17.5		11.1	11.3	
Level of Service	C	C		C		C		B		B	B	
Approach Delay (s)		21.7			22.7			17.5			11.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	18.6
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

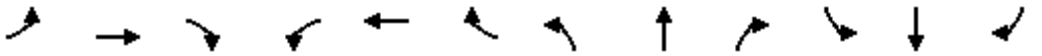
Intersection	
Int Delay, s/veh	1.4

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	134	338	286	56	0	1
Future Vol, veh/h	134	338	286	56	0	1
Conflicting Peds, #/hr	0	0	0	15	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	95	95	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	152	384	301	59	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	375	0	-	0	842	195
Stage 1	-	-	-	-	346	-
Stage 2	-	-	-	-	496	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1180	-	-	-	303	814
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	577	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1163	-	-	-	256	802
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	569	-

Approach	NB	SB	SE
HCM Control Delay, s	2.4	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1163	-	802	-	-
HCM Lane V/C Ratio	0.131	-	0.001	-	-
HCM Control Delay (s)	8.6	-	9.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.5	-	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	219	61	192	238	60	87	91	103	42	55	43
Future Volume (veh/h)	32	219	61	192	238	60	87	91	103	42	55	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.97	1.00		0.96	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	241	67	231	287	72	96	100	113	52	69	54
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.91	0.91	0.91	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	1671	590	339	743	610	125	710	810	126	591	249
Arrive On Green	0.03	0.33	0.33	0.10	0.40	0.40	0.07	0.20	0.20	0.04	0.17	0.17
Sat Flow, veh/h	1781	5106	1462	3456	1870	1535	1781	3554	2686	3456	3554	1498
Grp Volume(v), veh/h	35	241	67	231	287	72	96	100	113	52	69	54
Grp Sat Flow(s),veh/h/ln	1781	1702	1462	1728	1870	1535	1781	1777	1343	1728	1777	1498
Q Serve(g_s), s	1.3	2.3	2.0	4.5	7.6	2.1	3.7	1.6	2.1	1.0	1.1	2.2
Cycle Q Clear(g_c), s	1.3	2.3	2.0	4.5	7.6	2.1	3.7	1.6	2.1	1.0	1.1	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	50	1671	590	339	743	610	125	710	810	126	591	249
V/C Ratio(X)	0.69	0.14	0.11	0.68	0.39	0.12	0.77	0.14	0.14	0.41	0.12	0.22
Avail Cap(c_a), veh/h	772	2952	957	1498	1081	888	772	2054	1826	1498	2054	866
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	16.4	13.2	30.2	14.9	13.2	31.6	22.8	17.8	32.6	24.5	24.9
Incr Delay (d2), s/veh	6.2	0.0	0.1	0.9	0.2	0.0	3.7	0.1	0.1	0.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.9	0.6	1.8	2.9	0.6	1.6	0.6	0.6	0.4	0.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	16.5	13.3	31.1	15.0	13.2	35.3	22.9	17.9	33.4	24.6	25.1
LnGrp LOS	D	B	B	C	B	B	D	C	B	C	C	C
Approach Vol, veh/h		343			590			309			175	
Approach Delay, s/veh		18.2			21.1			24.9			27.4	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	28.5	10.3	18.2	7.4	33.4	7.9	20.5
Change Period (Y+Rc), s	5.4	5.9	5.4	6.7	5.4	5.9	5.4	6.7
Max Green Setting (Gmax), s	30.0	40.0	30.0	40.0	30.0	40.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	6.5	4.3	5.7	4.2	3.3	9.6	3.0	4.1
Green Ext Time (p_c), s	0.4	2.4	0.1	0.3	0.0	1.3	0.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	812	1493	562	0	0	1888
Future Volume (vph)	812	1493	562	0	0	1888
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	10.5			7.5
Lane Util. Factor	0.97	0.88	0.91			0.86
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	2787	5085			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	2787	5085			6408
Peak-hour factor, PHF	0.92	0.92	0.87	0.87	0.97	0.97
Adj. Flow (vph)	883	1623	646	0	0	1946
RTOR Reduction (vph)	0	95	0	0	0	0
Lane Group Flow (vph)	883	1528	646	0	0	1946
Confl. Peds. (#/hr)				5		
Confl. Bikes (#/hr)				4		
Turn Type	Prot	custom	NA			NA
Protected Phases	8	1 8	2			6
Permitted Phases						
Actuated Green, G (s)	35.4	58.1	21.8			44.5
Effective Green, g (s)	35.4	58.1	18.8			44.5
Actuated g/C Ratio	0.37	0.61	0.20			0.47
Clearance Time (s)	7.5		7.5			7.5
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	1280	1706	1007			3004
v/s Ratio Prot	0.26	c0.55	0.13			c0.30
v/s Ratio Perm						
v/c Ratio	0.69	0.90	0.64			0.65
Uniform Delay, d1	25.1	15.8	35.0			19.2
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	1.3	6.4	1.1			0.4
Delay (s)	26.4	22.2	36.0			19.6
Level of Service	C	C	D			B
Approach Delay (s)	23.7		36.0			19.6
Approach LOS	C		D			B

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	94.9	Sum of lost time (s)	25.5
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	234	274	26	273	428	286	415	32	473	470	328
Future Volume (veh/h)	302	234	274	26	273	428	286	415	32	473	470	328
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	304	320	311	28	294	0	282	589	0	580	433	0
Peak Hour Factor	0.88	0.88	0.88	0.93	0.93	0.93	0.83	0.83	0.83	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	388	408	695	223	446		402	844		1099	577	
Arrive On Green	0.22	0.22	0.22	0.13	0.13	0.00	0.07	0.07	0.00	0.31	0.31	0.00
Sat Flow, veh/h	1781	1870	1547	1781	3554	1585	1781	3741	1585	3563	1870	1585
Grp Volume(v), veh/h	304	320	311	28	294	0	282	589	0	580	433	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1547	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	25.7	25.8	22.4	2.2	12.6	0.0	24.7	24.6	0.0	21.5	33.3	0.0
Cycle Q Clear(g_c), s	25.7	25.8	22.4	2.2	12.6	0.0	24.7	24.6	0.0	21.5	33.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	388	408	695	223	446		402	844		1099	577	
V/C Ratio(X)	0.78	0.78	0.45	0.13	0.66		0.70	0.70		0.53	0.75	
Avail Cap(c_a), veh/h	435	457	736	357	713		402	844		1099	577	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.00	0.90	0.90	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	59.0	59.0	31.0	62.2	66.7	0.0	68.8	68.7	0.0	45.7	49.8	0.0
Incr Delay (d2), s/veh	11.3	11.0	1.2	0.9	6.1	0.0	8.9	4.3	0.0	0.3	5.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	13.4	12.5	1.1	6.1	0.0	12.9	13.0	0.0	9.7	16.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.3	70.0	32.2	63.1	72.8	0.0	77.7	73.0	0.0	46.0	54.9	0.0
LnGrp LOS	E	E	C	E	E		E	E		D	D	
Approach Vol, veh/h		935			322			871			1013	
Approach Delay, s/veh		57.5			71.9			74.5			49.8	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	39.8	54.2	25.0	41.0
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	39.1	33.1	32.1	36.1
Max Q Clear Time (g_c+I1), s	27.8	35.3	14.6	26.7
Green Ext Time (p_c), s	6.2	0.0	3.9	2.9

Intersection Summary	
HCM 6th Ctrl Delay	61.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	639	0	6	534	82	0	0	0	65	0	116
Future Volume (veh/h)	136	639	0	6	534	82	0	0	0	65	0	116
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	148	695	0	6	551	85				79	0	141
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97				0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	179	1747	0	101	2015	305				562	0	496
Arrive On Green	0.10	0.49	0.00	0.11	0.90	0.90				0.32	0.00	0.32
Sat Flow, veh/h	1781	3647	0	1781	4456	674				1781	0	1570
Grp Volume(v), veh/h	148	695	0	6	418	218				79	0	141
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1702	1726				1781	0	1570
Q Serve(g_s), s	8.8	13.3	0.0	0.3	1.7	1.7				3.4	0.0	7.3
Cycle Q Clear(g_c), s	8.8	13.3	0.0	0.3	1.7	1.7				3.4	0.0	7.3
Prop In Lane	1.00		0.00	1.00		0.39				1.00		1.00
Lane Grp Cap(c), veh/h	179	1747	0	101	1540	781				562	0	496
V/C Ratio(X)	0.83	0.40	0.00	0.06	0.27	0.28				0.14	0.00	0.28
Avail Cap(c_a), veh/h	538	1747	0	109	1540	781				562	0	496
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.00	0.98	0.98	0.98				1.00	0.00	1.00
Uniform Delay (d), s/veh	47.7	17.3	0.0	45.3	2.9	2.9				26.5	0.0	27.8
Incr Delay (d2), s/veh	2.0	0.4	0.0	0.1	0.4	0.9				0.5	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.3	0.0	0.1	0.6	0.7				1.5	0.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	17.7	0.0	45.4	3.3	3.8				27.0	0.0	29.2
LnGrp LOS	D	B	A	D	A	A				C	A	C
Approach Vol, veh/h		843			642						220	
Approach Delay, s/veh		23.3			3.9						28.4	
Approach LOS		C			A						C	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	11.0	58.0		39.0	15.3	53.7
Change Period (Y+Rc), s	4.9	* 4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	6.6	* 53		34.1	32.6	27.1
Max Q Clear Time (g_c+I1), s	2.3	15.3		9.3	10.8	3.7
Green Ext Time (p_c), s	0.0	6.4		0.5	0.2	4.9

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	500	82	124	541	75	95	62	124	3	1	13
Future Volume (veh/h)	105	500	82	124	541	75	95	62	124	3	1	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.92	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	521	85	138	601	83	103	67	135	4	1	18
Peak Hour Factor	0.96	0.96	0.96	0.90	0.90	0.90	0.92	0.92	0.92	0.71	0.71	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	1533	249	166	2488	338	343	100	202	46	12	50
Arrive On Green	0.10	1.00	1.00	0.09	0.55	0.55	0.19	0.19	0.19	0.03	0.03	0.03
Sat Flow, veh/h	3456	3036	493	1781	4523	615	1781	521	1051	1439	360	1561
Grp Volume(v), veh/h	109	304	302	138	450	234	103	0	202	5	0	18
Grp Sat Flow(s),veh/h/ln	1728	1777	1752	1781	1702	1734	1781	0	1572	1798	0	1561
Q Serve(g_s), s	3.3	0.0	0.0	8.2	7.4	7.6	5.4	0.0	12.9	0.3	0.0	1.2
Cycle Q Clear(g_c), s	3.3	0.0	0.0	8.2	7.4	7.6	5.4	0.0	12.9	0.3	0.0	1.2
Prop In Lane	1.00		0.28	1.00		0.35	1.00		0.67	0.80		1.00
Lane Grp Cap(c), veh/h	167	897	885	166	1872	954	343	0	303	58	0	50
V/C Ratio(X)	0.65	0.34	0.34	0.83	0.24	0.25	0.30	0.00	0.67	0.09	0.00	0.36
Avail Cap(c_a), veh/h	595	897	885	191	1872	954	414	0	365	285	0	247
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.78	0.78	0.78	0.74	0.00	0.74	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.9	0.0	0.0	48.1	12.6	12.6	37.4	0.0	40.4	50.7	0.0	51.2
Incr Delay (d2), s/veh	1.5	1.0	1.0	16.5	0.2	0.5	0.1	0.0	1.6	0.2	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.2	0.2	4.4	2.7	2.9	2.3	0.0	5.1	0.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.5	1.0	1.0	64.6	12.8	13.1	37.5	0.0	41.9	50.9	0.0	52.7
LnGrp LOS	D	A	A	E	B	B	D	A	D	D	A	D
Approach Vol, veh/h		715			822			305			23	
Approach Delay, s/veh		8.4			21.6			40.4			52.3	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.6	64.3		25.7	14.5	59.4		8.4
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	5.2	28.1		25.1	11.6	35.1		17.1
Max Q Clear Time (g_c+I1), s	5.3	9.6		14.9	10.2	2.0		3.2
Green Ext Time (p_c), s	0.1	6.9		0.7	0.0	7.5		0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	500	67	72	498	243	112	30	70	157	25	129
Future Volume (veh/h)	59	500	67	72	498	243	112	30	70	157	25	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.92	1.00		0.92	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	556	74	79	547	267	122	33	76	165	26	136
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	793	105	102	930	398	436	118	541	211	33	213
Arrive On Green	0.04	0.26	0.26	0.06	0.27	0.27	0.31	0.31	0.31	0.14	0.14	0.14
Sat Flow, veh/h	3456	3109	412	1781	3404	1455	1416	383	1465	1549	244	1564
Grp Volume(v), veh/h	66	317	313	79	547	267	155	0	76	191	0	136
Grp Sat Flow(s),veh/h/ln	1728	1777	1744	1781	1702	1455	1800	0	1465	1793	0	1564
Q Serve(g_s), s	1.5	12.7	12.8	3.4	10.9	12.8	5.1	0.0	2.7	8.1	0.0	6.4
Cycle Q Clear(g_c), s	1.5	12.7	12.8	3.4	10.9	12.8	5.1	0.0	2.7	8.1	0.0	6.4
Prop In Lane	1.00		0.24	1.00		1.00	0.79		1.00	0.86		1.00
Lane Grp Cap(c), veh/h	134	453	445	102	930	398	554	0	541	244	0	213
V/C Ratio(X)	0.49	0.70	0.70	0.78	0.59	0.67	0.28	0.00	0.14	0.78	0.00	0.64
Avail Cap(c_a), veh/h	234	548	538	173	1151	492	826	0	763	414	0	361
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.9	26.5	26.5	36.5	24.7	25.4	20.5	0.0	16.7	32.7	0.0	32.0
Incr Delay (d2), s/veh	1.0	3.4	3.7	4.8	0.2	1.5	0.1	0.0	0.0	2.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.5	5.5	1.6	4.2	4.3	2.1	0.0	0.9	3.5	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	29.9	30.2	41.2	24.9	26.8	20.7	0.0	16.7	34.8	0.0	33.2
LnGrp LOS	D	C	C	D	C	C	C	A	B	C	A	C
Approach Vol, veh/h		696			893			231			327	
Approach Delay, s/veh		30.8			26.9			19.4			34.1	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	24.9		15.6	7.4	26.3		29.0
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	7.6	24.2		18.1	5.3	26.5		36.0
Max Q Clear Time (g_c+I1), s	5.4	14.8		10.1	3.5	14.8		7.1
Green Ext Time (p_c), s	0.0	3.1		0.6	0.0	3.0		0.7

Intersection Summary	
HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

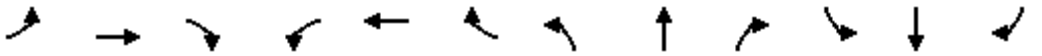
Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	680	23	117	802	13	0	0	101	4	3	18
Future Vol, veh/h	44	680	23	117	802	13	0	0	101	4	3	18
Conflicting Peds, #/hr	0	0	24	0	0	24	0	0	4	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	150	-	-	125	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	91	91	91	94	94	94	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	739	25	129	881	14	0	0	107	7	5	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	919	0	0	788	0	0	-	-	410	1566	2054	474
Stage 1	-	-	-	-	-	-	-	-	-	1170	1170	-
Stage 2	-	-	-	-	-	-	-	-	-	396	884	-
Critical Hdwy	5.34	-	-	5.34	-	-	-	-	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	3.12	-	-	-	-	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	428	-	-	495	-	-	0	0	505	117	55	459
Stage 1	-	-	-	-	-	-	0	0	-	151	265	-
Stage 2	-	-	-	-	-	-	0	0	-	550	362	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	418	-	-	484	-	-	-	-	492	65	34	448
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	65	34	-
Stage 1	-	-	-	-	-	-	-	-	-	131	190	-
Stage 2	-	-	-	-	-	-	-	-	-	379	313	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	1.9	14.4	45.3
HCM LOS			B	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	492	418	-	-	484	-	-	132
HCM Lane V/C Ratio	0.218	0.114	-	-	0.266	-	-	0.332
HCM Control Delay (s)	14.4	14.7	-	-	15.1	-	-	45.3
HCM Lane LOS	B	B	-	-	C	-	-	E
HCM 95th %tile Q(veh)	0.8	0.4	-	-	1.1	-	-	1.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	743	29	207	854	5	101	3	155	0	0	0
Future Volume (veh/h)	25	743	29	207	854	5	101	3	155	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.94			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	27	790	31	227	938	5	113	3	174			
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.89	0.89	0.89			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	278	2781	109	260	2819	15	295	8	253			
Arrive On Green	0.16	0.55	0.55	0.15	0.54	0.54	0.17	0.17	0.17			
Sat Flow, veh/h	1781	5031	197	1781	5240	28	1737	46	1490			
Grp Volume(v), veh/h	27	534	287	227	609	334	116	0	174			
Grp Sat Flow(s),veh/h/ln	1781	1702	1824	1781	1702	1864	1783	0	1490			
Q Serve(g_s), s	1.4	9.0	9.0	13.5	10.9	10.9	6.2	0.0	11.9			
Cycle Q Clear(g_c), s	1.4	9.0	9.0	13.5	10.9	10.9	6.2	0.0	11.9			
Prop In Lane	1.00		0.11	1.00		0.01	0.97		1.00			
Lane Grp Cap(c), veh/h	278	1882	1008	260	1831	1003	303	0	253			
V/C Ratio(X)	0.10	0.28	0.29	0.87	0.33	0.33	0.38	0.00	0.69			
Avail Cap(c_a), veh/h	278	1882	1008	785	1831	1003	398	0	332			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.55	0.55	0.99	0.00	0.99			
Uniform Delay (d), s/veh	39.0	12.8	12.8	45.1	14.0	14.0	39.8	0.0	42.1			
Incr Delay (d2), s/veh	0.1	0.4	0.7	2.0	0.3	0.5	0.3	0.0	1.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.6	3.4	3.7	6.0	4.1	4.5	2.8	0.0	4.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	13.2	13.5	47.2	14.3	14.5	40.1	0.0	44.0			
LnGrp LOS	D	B	B	D	B	B	D	A	D			
Approach Vol, veh/h		848			1170			290				
Approach Delay, s/veh		14.1			20.8			42.5				
Approach LOS		B			C			D				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	20.2	64.6			21.8	63.0		23.2				
Change Period (Y+Rc), s	4.4	4.9			4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	47.6	22.1			11.6	* 58		24.1				
Max Q Clear Time (g_c+I1), s	15.5	11.0			3.4	12.9		13.9				
Green Ext Time (p_c), s	0.3	5.9			0.0	10.5		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	467	117	148	487	58	156	145	156	31	132	62
Future Volume (veh/h)	68	467	117	148	487	58	156	145	156	31	132	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	508	127	164	541	64	180	182	186	34	143	67
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84	0.84	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	612	2021	882	207	897	106	247	259	312	202	212	175
Arrive On Green	0.69	1.00	1.00	0.12	0.56	0.56	0.14	0.14	0.14	0.11	0.11	0.11
Sat Flow, veh/h	1781	3554	1551	3456	3184	375	1781	1870	1564	1781	1870	1543
Grp Volume(v), veh/h	74	508	127	164	301	304	180	182	186	34	143	67
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1728	1777	1782	1781	1870	1564	1781	1870	1543
Q Serve(g_s), s	2.3	0.0	0.0	7.4	17.9	18.1	15.5	14.9	17.3	2.8	11.7	6.4
Cycle Q Clear(g_c), s	2.3	0.0	0.0	7.4	17.9	18.1	15.5	14.9	17.3	2.8	11.7	6.4
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	612	2021	882	207	501	502	247	259	312	202	212	175
V/C Ratio(X)	0.12	0.25	0.14	0.79	0.60	0.61	0.73	0.70	0.60	0.17	0.67	0.38
Avail Cap(c_a), veh/h	612	2021	882	467	501	502	391	410	438	391	410	339
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.70	0.78	0.78	0.78	1.00	1.00	1.00	0.74	0.74	0.74
Uniform Delay (d), s/veh	16.8	0.0	0.0	69.4	29.0	29.0	66.0	65.8	58.3	64.1	68.1	65.7
Incr Delay (d2), s/veh	0.0	0.2	0.2	2.0	4.1	4.2	1.6	1.3	0.7	0.1	1.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.1	0.1	3.2	6.8	6.8	7.2	7.2	7.0	1.3	5.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	0.2	0.2	71.5	33.1	33.2	67.6	67.1	59.0	64.2	69.1	66.1
LnGrp LOS	B	A	A	E	C	C	E	E	E	E	E	E
Approach Vol, veh/h		709			769			548			244	
Approach Delay, s/veh		1.9			41.3			64.5			67.6	
Approach LOS		A			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	95.9		23.0	59.9	50.0		27.1
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9
Max Green Setting (Gmax), s	20.6	49.1		35.1	25.6	* 45		35.1
Max Q Clear Time (g_c+I1), s	9.4	2.0		13.7	4.3	20.1		19.3
Green Ext Time (p_c), s	0.2	6.5		0.6	0.1	6.4		1.1

Intersection Summary	
HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	797	9	15	724	293	10	3	7	158	11	76
Future Volume (veh/h)	60	797	9	15	724	293	10	3	7	158	11	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	0.96		1.00	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	866	10	16	770	312	14	4	10	180	12	86
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.71	0.71	0.71	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	2058	24	393	1334	540	220	72	125	290	20	106
Arrive On Green	0.04	0.57	0.57	0.01	0.55	0.55	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3597	42	1781	2429	983	648	305	530	917	87	450
Grp Volume(v), veh/h	65	428	448	16	563	519	28	0	0	278	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1862	1781	1777	1636	1483	0	0	1454	0	0
Q Serve(g_s), s	1.3	10.9	10.9	0.3	16.7	16.8	0.0	0.0	0.0	13.4	0.0	0.0
Cycle Q Clear(g_c), s	1.3	10.9	10.9	0.3	16.7	16.8	1.0	0.0	0.0	14.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.60	0.50		0.36	0.65		0.31
Lane Grp Cap(c), veh/h	335	1017	1065	393	975	898	416	0	0	416	0	0
V/C Ratio(X)	0.19	0.42	0.42	0.04	0.58	0.58	0.07	0.00	0.00	0.67	0.00	0.00
Avail Cap(c_a), veh/h	458	1017	1065	557	975	898	457	0	0	457	0	0
HCM 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
Upstream Filter(I)	0.97	0.97	0.97	0.41	0.41	0.41	1.00	0.00	0.00	0.59	0.00	0.00
Uniform Delay (d), s/veh	9.1	9.6	9.6	8.2	11.9	11.9	23.8	0.0	0.0	28.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.2	1.2	0.0	1.0	1.1	0.0	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.1	4.3	0.1	6.2	5.7	0.4	0.0	0.0	5.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	10.9	10.8	8.2	12.9	13.0	23.8	0.0	0.0	30.2	0.0	0.0
LnGrp LOS	A	B	B	A	B	B	C	A	A	C	A	A
Approach Vol, veh/h		941			1098			28			278	
Approach Delay, s/veh		10.7			12.9			23.8			30.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.6	50.7		23.7	7.5	48.8		23.7
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	8.6	36.1		21.1	8.6	36.1		21.1
Max Q Clear Time (g_c+I1), s	2.3	12.9		16.4	3.3	18.8		3.0
Green Ext Time (p_c), s	0.0	6.4		0.5	0.0	7.6		0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑			↰	
Traffic Vol, veh/h	0	143	0	0	156	0
Future Vol, veh/h	0	143	0	0	156	0
Conflicting Peds, #/hr	0	0	0	1	0	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	25	25	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	164	0	0	205	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	164	-
Stage 1	-	-	0	-
Stage 2	-	-	164	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	827	0
Stage 1	0	-	-	0
Stage 2	0	-	865	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	827	-
Mov Cap-2 Maneuver	-	-	791	-
Stage 1	-	-	-	-
Stage 2	-	-	865	-

Approach	EB	SB
HCM Control Delay, s	0	11.1
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	791
HCM Lane V/C Ratio	-	0.259
HCM Control Delay (s)	-	11.1
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	1

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	63	239	0	0	156	0
Future Vol, veh/h	63	239	0	0	156	0
Peak Hour Factor	0.88	0.88	0.25	0.25	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	272	0	0	211	0
Number of Lanes	0	2	0	0	1	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	1	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	2
HCM Control Delay	9.6	10
HCM LOS	A	A

Lane	EBLn1	EBLn2	SBLn1
Vol Left, %	44%	0%	100%
Vol Thru, %	56%	100%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	143	159	156
LT Vol	63	0	156
Through Vol	80	159	0
RT Vol	0	0	0
Lane Flow Rate	162	181	211
Geometry Grp	7	7	2
Degree of Util (X)	0.239	0.255	0.29
Departure Headway (Hd)	5.298	5.076	4.952
Convergence, Y/N	Yes	Yes	Yes
Cap	678	708	727
Service Time	3.029	2.807	2.976
HCM Lane V/C Ratio	0.239	0.256	0.29
HCM Control Delay	9.7	9.5	10
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.9	1	1.2

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	381	0	0	48	0
Future Vol, veh/h	22	381	0	0	48	0
Conflicting Peds, #/hr	0	0	0	2	0	3
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	92	92	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	443	0	0	75	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	274	-
Stage 1	-	-	0	-
Stage 2	-	-	274	-
Critical Hdwy	4.14	-	6.84	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.84	-
Follow-up Hdwy	2.22	-	3.52	-
Pot Cap-1 Maneuver	-	-	693	0
Stage 1	-	-	-	0
Stage 2	-	-	747	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	693	-
Mov Cap-2 Maneuver	-	-	693	-
Stage 1	-	-	-	-
Stage 2	-	-	747	-

Approach	EB	SB
HCM Control Delay, s		10.8
HCM LOS		B

Minor Lane/Major Mvmt	EBL	EBT	SBLn1
Capacity (veh/h)	-	-	693
HCM Lane V/C Ratio	-	-	0.108
HCM Control Delay (s)	-	-	10.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.4

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	67	276	26	60	13	0	0	84	10
Future Vol, veh/h	0	0	0	67	276	26	60	13	0	0	84	10
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.86	0.77	0.77	0.77	0.69	0.69	0.69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	78	321	30	78	17	0	0	122	14
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10.3	9.2	9.2
HCM LOS	B	A	A

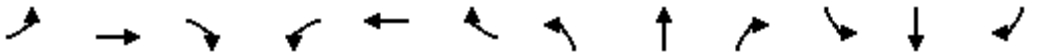
Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	82%	33%	0%	0%
Vol Thru, %	18%	67%	84%	89%
Vol Right, %	0%	0%	16%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	205	164	94
LT Vol	60	67	0	0
Through Vol	13	138	138	84
RT Vol	0	0	26	10
Lane Flow Rate	95	238	191	136
Geometry Grp	2	7	7	2
Degree of Util (X)	0.139	0.35	0.265	0.189
Departure Headway (Hd)	5.272	5.28	5.004	4.992
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	678	679	715	717
Service Time	3.32	3.024	2.748	3.036
HCM Lane V/C Ratio	0.14	0.351	0.267	0.19
HCM Control Delay	9.2	10.9	9.6	9.2
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.5	1.6	1.1	0.7

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	21	258	37	18	6	0	0	23	86
Future Vol, veh/h	0	0	0	21	258	37	18	6	0	0	23	86
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.86	0.86	0.86	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	22	272	39	21	7	0	0	28	106
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9	8.2	8.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	75%	14%	0%	0%
Vol Thru, %	25%	86%	78%	21%
Vol Right, %	0%	0%	22%	79%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	150	166	109
LT Vol	18	21	0	0
Through Vol	6	129	129	23
RT Vol	0	0	37	86
Lane Flow Rate	28	158	175	135
Geometry Grp	2	7	7	2
Degree of Util (X)	0.039	0.219	0.231	0.159
Departure Headway (Hd)	5	4.989	4.762	4.258
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	725	758	844
Service Time	3.024	2.689	2.462	2.275
HCM Lane V/C Ratio	0.039	0.218	0.231	0.16
HCM Control Delay	8.2	9.1	8.9	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.8	0.9	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	65	140	67	67	1789	9	0	1855	127
Future Volume (veh/h)	0	0	0	65	140	67	67	1789	9	0	1855	127
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				260	560	268	74	1988	10	0	7420	508
Peak Hour Factor				0.25	0.25	0.25	0.90	0.90	0.90	0.25	0.25	0.25
Percent Heavy Veh, %				2	2	2	2	2	2	0	2	2
Cap, veh/h				164	367	185	91	3875	19	0	3383	1023
Arrive On Green				0.20	0.20	0.20	0.10	1.00	1.00	0.00	0.66	0.66
Sat Flow, veh/h				802	1796	908	1781	5243	26	0	5274	1545
Grp Volume(v), veh/h				593	0	495	74	1291	707	0	7420	508
Grp Sat Flow(s),veh/h/ln				1830	0	1676	1781	1702	1866	0	1702	1545
Q Serve(g_s), s				35.1	0.0	35.1	7.0	0.0	0.0	0.0	113.9	28.5
Cycle Q Clear(g_c), s				35.1	0.0	35.1	7.0	0.0	0.0	0.0	113.9	28.5
Prop In Lane				0.44		0.54	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h				373	0	342	91	2515	1379	0	3383	1023
V/C Ratio(X)				1.59	0.00	1.45	0.82	0.51	0.51	0.00	2.19	0.50
Avail Cap(c_a), veh/h				373	0	342	275	2515	1379	0	3383	1023
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.81	0.81	0.81	0.00	1.00	1.00
Uniform Delay (d), s/veh				68.5	0.0	68.5	76.5	0.0	0.0	0.0	29.0	14.6
Incr Delay (d2), s/veh				277.0	0.0	216.8	5.4	0.6	1.1	0.0	538.1	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				45.2	0.0	35.7	3.2	0.2	0.4	0.0	211.3	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				345.5	0.0	285.3	81.8	0.6	1.1	0.0	567.1	16.3
LnGrp LOS				F	A	F	F	A	A	A	F	B
Approach Vol, veh/h					1088			2072			7928	
Approach Delay, s/veh					318.1			3.7			531.8	
Approach LOS					F			A			F	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	132.0	40.0	13.2	118.8
Change Period (Y+Rc), s	4.9	4.9	4.4	4.9
Max Green Setting (Gmax), s	127.1	35.1	26.6	96.1
Max Q Clear Time (g_c+I1), s	2.0	37.1	9.0	115.9
Green Ext Time (p_c), s	6.5	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	412.2
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.



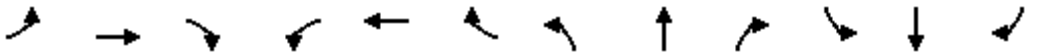
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	142	97	0	0	0	0	1648	31	51	1861	0
Future Volume (veh/h)	218	142	97	0	0	0	0	1648	31	51	1861	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	232	160	109				0	1852	34	55	2023	0
Peak Hour Factor	0.94	0.89	0.89				0.89	0.89	0.90	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	317	333	260				0	3615	66	69	4921	0
Arrive On Green	0.18	0.18	0.18				0.00	1.00	1.00	0.08	1.00	0.00
Sat Flow, veh/h	1781	1870	1459				0	5331	95	1781	6696	0
Grp Volume(v), veh/h	232	160	109				0	1221	665	55	2023	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1459				0	1702	1853	1781	1609	0
Q Serve(g_s), s	21.2	13.2	11.4				0.0	0.0	0.0	5.2	0.0	0.0
Cycle Q Clear(g_c), s	21.2	13.2	11.4				0.0	0.0	0.0	5.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h	317	333	260				0	2384	1298	69	4921	0
V/C Ratio(X)	0.73	0.48	0.42				0.00	0.51	0.51	0.79	0.41	0.00
Avail Cap(c_a), veh/h	364	382	298				0	2384	1298	162	4921	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.63	0.63	0.09	0.09	0.00
Uniform Delay (d), s/veh	66.8	63.5	62.8				0.0	0.0	0.0	78.6	0.0	0.0
Incr Delay (d2), s/veh	5.0	0.4	0.4				0.0	0.5	0.9	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	6.4	4.3				0.0	0.2	0.3	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.7	63.9	63.2				0.0	0.5	0.9	79.3	0.0	0.0
LnGrp LOS	E	E	E				A	A	A	E	A	A
Approach Vol, veh/h		501						1886			2078	
Approach Delay, s/veh		67.4						0.6			2.1	
Approach LOS		E						A			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.1	125.3		35.5		136.5
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9
Max Green Setting (Gmax), s	6.6	107.1		35.1		127.1
Max Q Clear Time (g_c+I1), s	7.2	2.0		23.2		2.0
Green Ext Time (p_c), s	0.0	5.3		0.4		7.4

Intersection Summary	
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	338	378	215	189	224	7	358	1351	403	0	1354	561
Future Volume (vph)	338	378	215	189	224	7	358	1351	403	0	1354	561
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	14	12	12	12	12	12
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9		5.4	5.9			5.9	5.9
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91		0.97	0.91			0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.93	1.00	1.00		1.00	1.00			1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.97			1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1610	3354	1466	1610	3345		3662	4891			5085	1507
Flt Permitted	0.95	0.99	1.00	0.95	0.99		0.95	1.00			1.00	1.00
Satd. Flow (perm)	1610	3354	1466	1610	3345		3662	4891			5085	1507
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.88	0.88	0.88	0.95	0.95	0.95
Adj. Flow (vph)	360	402	229	222	264	8	407	1535	458	0	1425	591
RTOR Reduction (vph)	0	0	183	0	1	0	0	26	0	0	0	232
Lane Group Flow (vph)	248	514	46	160	333	0	407	1967	0	0	1425	359
Confl. Peds. (#/hr)			42			1			3			20
Confl. Bikes (#/hr)			3			7						
Turn Type	Split	NA	Perm	Split	NA		Prot	NA			NA	Perm
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases			4									6
Actuated Green, G (s)	34.4	34.4	34.4	21.3	21.3		22.3	98.6			70.9	70.9
Effective Green, g (s)	34.4	34.4	34.4	21.3	21.3		22.3	98.6			70.9	70.9
Actuated g/C Ratio	0.20	0.20	0.20	0.12	0.12		0.13	0.57			0.41	0.41
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9		5.4	5.9			5.9	5.9
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0			1.0	1.0
Lane Grp Cap (vph)	322	670	293	199	414		474	2803			2096	621
v/s Ratio Prot	c0.15	0.15		0.10	c0.10		c0.11	c0.40			0.28	
v/s Ratio Perm			0.03									0.24
v/c Ratio	0.77	0.77	0.16	0.80	0.80		0.86	0.70			0.68	0.58
Uniform Delay, d1	65.1	65.0	56.8	73.3	73.3		73.3	26.2			41.3	39.0
Progression Factor	1.00	1.00	1.00	1.16	1.15		1.07	0.62			0.82	0.62
Incremental Delay, d2	9.9	4.7	0.1	19.1	10.1		11.7	1.2			1.7	3.6
Delay (s)	75.0	69.8	56.9	104.3	94.5		90.5	17.5			35.5	27.8
Level of Service	E	E	E	F	F		F	B			D	C
Approach Delay (s)		68.1			97.6			29.9			33.2	
Approach LOS		E			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	172.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	472	238	116	532	240	293	1573	87	218	1316	220
Future Volume (veh/h)	213	472	238	116	532	240	293	1573	87	218	1316	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.95	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	224	497	251	125	572	258	315	1691	94	232	1400	234
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.93	0.93	0.93	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	599	252	144	626	265	356	2070	115	735	2335	390
Arrive On Green	0.08	0.17	0.17	0.08	0.18	0.18	0.07	0.28	0.28	0.21	0.53	0.53
Sat Flow, veh/h	3456	3554	1495	1781	3554	1506	3456	4937	274	3456	4392	733
Grp Volume(v), veh/h	224	497	251	125	572	258	315	1165	620	232	1085	549
Grp Sat Flow(s),veh/h/ln	1728	1777	1495	1781	1777	1506	1728	1702	1807	1728	1702	1722
Q Serve(g_s), s	11.0	23.3	23.4	11.9	27.2	19.5	15.5	54.9	55.1	9.7	37.7	37.7
Cycle Q Clear(g_c), s	11.0	23.3	23.4	11.9	27.2	19.5	15.5	54.9	55.1	9.7	37.7	37.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.43
Lane Grp Cap(c), veh/h	264	599	252	144	626	265	356	1427	758	735	1810	915
V/C Ratio(X)	0.85	0.83	1.00	0.87	0.91	0.97	0.88	0.82	0.82	0.32	0.60	0.60
Avail Cap(c_a), veh/h	434	684	288	193	626	265	675	1427	758	735	1810	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.5	69.1	47.0	78.1	69.6	31.3	79.0	55.7	55.7	57.1	27.7	27.7
Incr Delay (d2), s/veh	3.7	6.2	46.5	21.3	17.7	47.4	2.3	4.2	7.7	0.1	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	11.2	12.0	6.3	13.9	10.7	7.2	25.1	27.4	4.3	15.3	15.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.2	75.3	93.5	99.4	87.2	78.7	81.4	59.9	63.4	57.2	28.1	28.5
LnGrp LOS	F	E	F	F	F	E	F	E	E	E	C	C
Approach Vol, veh/h		972			955			2100			1866	
Approach Delay, s/veh		81.6			86.5			64.2			31.8	
Approach LOS		F			F			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	77.0	18.8	33.9	22.1	97.2	17.5	35.2
Change Period (Y+Rc), s	5.7	* 4.9	4.9	* 4.9	4.4	5.7	4.4	4.9
Max Green Setting (Gmax), s	29.6	* 72	18.6	* 33	33.6	67.3	21.6	30.1
Max Q Clear Time (g_c+I1), s	11.7	57.1	13.9	25.4	17.5	39.7	13.0	29.2
Green Ext Time (p_c), s	0.1	4.3	0.0	1.1	0.2	4.4	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	60.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	165	4	101	0	131	0	653	219	62	292	0
Future Volume (vph)	73	165	4	101	0	131	0	653	219	62	292	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.4		4.4		4.9		4.4	4.9	
Lane Util. Factor	1.00	1.00		1.00		1.00		0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00		0.98		0.95		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00		1.00	1.00	
Frt	1.00	1.00		1.00		0.85		0.96		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	1854		1770		1551		3239		1770	3539	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.19	1.00	
Satd. Flow (perm)	1770	1854		1770		1551		3239		351	3539	
Peak-hour factor, PHF	0.88	0.88	0.88	0.84	0.84	0.84	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	83	188	5	120	0	156	0	710	238	64	301	0
RTOR Reduction (vph)	0	2	0	0	0	140	0	30	0	0	0	0
Lane Group Flow (vph)	83	191	0	120	0	16	0	918	0	64	301	0
Confl. Peds. (#/hr)			14			3			88			10
Confl. Bikes (#/hr)									11			8
Turn Type	Split	NA		Prot		Perm		NA		pm+pt	NA	
Protected Phases	4	4		3				2		1	6	
Permitted Phases						3				6		
Actuated Green, G (s)	14.0	14.0		8.7		8.7		40.6		49.1	49.1	
Effective Green, g (s)	14.0	14.0		8.7		8.7		40.6		49.1	49.1	
Actuated g/C Ratio	0.16	0.16		0.10		0.10		0.47		0.57	0.57	
Clearance Time (s)	4.9	4.9		4.4		4.4		4.9		4.4	4.9	
Vehicle Extension (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lane Grp Cap (vph)	288	301		179		156		1529		268	2020	
v/s Ratio Prot	0.05	c0.10		c0.07				c0.28		c0.01	0.09	
v/s Ratio Perm						0.01				0.12		
v/c Ratio	0.29	0.64		0.67		0.10		0.60		0.24	0.15	
Uniform Delay, d1	31.6	33.6		37.3		35.1		16.7		10.1	8.7	
Progression Factor	1.20	1.51		1.00		1.00		0.68		1.00	1.00	
Incremental Delay, d2	0.2	3.0		7.5		0.1		1.3		0.2	0.2	
Delay (s)	38.2	53.9		44.8		35.2		12.8		10.3	8.8	
Level of Service	D	D		D		D		B		B	A	
Approach Delay (s)		49.2			39.4			12.8			9.1	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

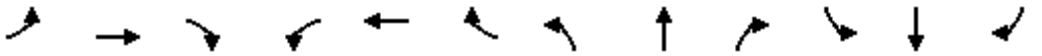
Intersection	
Int Delay, s/veh	1.2

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	167	670	369	68	0	1
Future Vol, veh/h	167	670	369	68	0	1
Conflicting Peds, #/hr	0	0	0	22	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	85	85	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	180	720	434	80	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	536	0	-	0	1216	279
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	720	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1028	-	-	-	173	718
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	443	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1006	-	-	-	136	703
Mov Cap-2 Maneuver	-	-	-	-	136	-
Stage 1	-	-	-	-	464	-
Stage 2	-	-	-	-	434	-

Approach	NB	SB	SE
HCM Control Delay, s	1.9	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1006	-	703	-	-
HCM Lane V/C Ratio	0.178	-	0.002	-	-
HCM Control Delay (s)	9.4	-	10.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	553	99	248	252	73	144	110	398	72	224	87
Future Volume (veh/h)	61	553	99	248	252	73	144	110	398	72	224	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		0.97	1.00		0.96	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	628	112	318	323	94	158	121	437	89	277	107
Peak Hour Factor	0.88	0.88	0.88	0.78	0.78	0.78	0.91	0.91	0.91	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	1797	661	405	784	643	193	822	944	150	590	248
Arrive On Green	0.05	0.35	0.35	0.12	0.42	0.42	0.11	0.23	0.23	0.04	0.17	0.17
Sat Flow, veh/h	1781	5106	1388	3456	1870	1535	1781	3554	2665	3456	3554	1494
Grp Volume(v), veh/h	69	628	112	318	323	94	158	121	437	89	277	107
Grp Sat Flow(s),veh/h/ln	1781	1702	1388	1728	1870	1535	1781	1777	1333	1728	1777	1494
Q Serve(g_s), s	3.5	8.3	4.3	8.2	11.1	3.5	7.9	2.5	11.7	2.3	6.4	5.9
Cycle Q Clear(g_c), s	3.5	8.3	4.3	8.2	11.1	3.5	7.9	2.5	11.7	2.3	6.4	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	1797	661	405	784	643	193	822	944	150	590	248
V/C Ratio(X)	0.77	0.35	0.17	0.78	0.41	0.15	0.82	0.15	0.46	0.59	0.47	0.43
Avail Cap(c_a), veh/h	585	2235	780	1134	819	672	585	1555	1494	1134	1555	654
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	21.9	14.5	39.2	18.7	16.4	39.8	28.0	23.2	42.9	34.5	34.2
Incr Delay (d2), s/veh	5.1	0.1	0.1	1.3	0.2	0.1	3.2	0.1	0.4	1.4	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.3	1.3	3.5	4.6	1.1	3.5	1.0	3.4	1.0	2.7	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	22.0	14.6	40.5	18.8	16.5	43.1	28.0	23.6	44.3	34.7	34.7
LnGrp LOS	D	C	B	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		809			735			716			473	
Approach Delay, s/veh		23.2			27.9			28.6			36.5	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	38.1	15.3	21.9	10.0	44.2	9.4	27.8
Change Period (Y+Rc), s	5.4	5.9	5.4	6.7	5.4	5.9	5.4	6.7
Max Green Setting (Gmax), s	30.0	40.0	30.0	40.0	30.0	40.0	30.0	40.0
Max Q Clear Time (g_c+I1), s	10.2	10.3	9.9	8.4	5.5	13.1	4.3	13.7
Green Ext Time (p_c), s	0.6	6.4	0.2	1.2	0.1	1.5	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Appendix F

Existing Conditions 95th Percentile Queue Worksheets

Intersection: 1: Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp

Movement	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	R	R	T	T	T	T	T	T	T
Maximum Queue (ft)	290	300	316	336	246	210	96	274	262	199	68
Average Queue (ft)	178	182	168	174	151	106	13	183	162	88	13
95th Queue (ft)	267	266	261	276	219	192	58	248	235	184	45
Link Distance (ft)	2519	2519	2519	2519				1147	1147	1147	1147
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	L	T	T	L	LT	T	R	L	LT
Maximum Queue (ft)	217	253	66	16	54	58	99	155	187	100	99	100
Average Queue (ft)	95	135	8	1	7	8	30	85	101	13	54	82
95th Queue (ft)	185	217	39	7	29	33	80	141	161	68	100	98
Link Distance (ft)		1939	1939		629	629		1525	1525			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			150			230			25		
Storage Blk Time (%)									64	0		
Queuing Penalty (veh)									10	0		

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	101	54
Average Queue (ft)	61	5
95th Queue (ft)	106	31
Link Distance (ft)		
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		100
Storage Blk Time (%)	1	0
Queuing Penalty (veh)	1	0

Intersection: 3: Commercial Dwy 1/Hancock St & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	L	T	TR	L	T	T	TR	LT	R
Maximum Queue (ft)	87	93	102	25	58	110	199	64	64
Average Queue (ft)	34	27	33	4	15	26	79	26	30
95th Queue (ft)	68	70	79	18	43	72	164	56	56
Link Distance (ft)		629	629		959	959	959	857	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	160			100					210
Storage Blk Time (%)					0				
Queuing Penalty (veh)					0				

Intersection: 4: Kemper St/Existing Dwy 1 & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	L	T	TR	L	T	T	TR	L	TR	LT	R
Maximum Queue (ft)	29	69	136	221	106	77	104	156	116	118	65	63
Average Queue (ft)	4	28	58	92	47	20	42	72	46	37	31	32
95th Queue (ft)	20	57	110	168	90	51	88	125	89	77	61	59
Link Distance (ft)			959	959		636	636	636		708	282	282
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	440	440			175				100			
Storage Blk Time (%)									0	0		
Queuing Penalty (veh)									1	0		

Intersection: 5: West Dr/Existing Dwy 2 & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	L	T	TR	L	T	T	TR	LT	R	LT	R
Maximum Queue (ft)	23	39	86	182	104	85	81	142	80	53	70	57
Average Queue (ft)	4	11	27	47	45	27	25	52	32	18	28	19
95th Queue (ft)	18	30	65	111	85	70	65	117	64	43	58	45
Link Distance (ft)			636	636		202	202	202	444		292	292
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	330	330			175					50		
Storage Blk Time (%)									4	0		
Queuing Penalty (veh)									2	0		

Intersection: 6: Target Dwy/Existing VIP Access Rd & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	SB
Directions Served	L	T	TR	L	T	T	LTR
Maximum Queue (ft)	48	6	21	72	15	6	31
Average Queue (ft)	6	0	1	26	1	0	8
95th Queue (ft)	29	4	9	57	8	4	30
Link Distance (ft)		232	232		364	364	458
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150			125			
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 7: East Dr/Commercial Dwy 3 & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R
Maximum Queue (ft)	50	83	94	124	140	229	303	338	37	80
Average Queue (ft)	17	29	40	51	58	62	39	60	12	30
95th Queue (ft)	42	66	83	108	110	164	250	215	35	56
Link Distance (ft)		364	364	364		1057	1057	1057	921	
Upstream Blk Time (%)							0	0		
Queuing Penalty (veh)							0	0		
Storage Bay Dist (ft)	125				125					100
Storage Blk Time (%)					0	2				0
Queuing Penalty (veh)					1	3				0

Intersection: 8: Kemper St & Midway Dr

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	L	T	TR	L	LT	R	L
Maximum Queue (ft)	94	156	165	64	96	60	149	181	132	158	55	60
Average Queue (ft)	45	71	77	24	40	8	68	79	35	75	25	17
95th Queue (ft)	85	126	137	52	77	36	127	149	85	132	46	46
Link Distance (ft)		1525	1525				1839	1839		355	355	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	320			150	250	250			90			100
Storage Blk Time (%)			1						0	8		
Queuing Penalty (veh)			1						0	5		

Intersection: 8: Kemper St & Midway Dr

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	102	54
Average Queue (ft)	40	25
95th Queue (ft)	85	50
Link Distance (ft)	708	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		115
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 9: Commercial Dwy 2/East Dr & Midway Dr

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	32	163	175	69	237	267	36	74
Average Queue (ft)	8	49	69	9	89	123	7	31
95th Queue (ft)	24	117	140	37	191	228	24	65
Link Distance (ft)		1839	1839		968	968	270	921
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	90			100				
Storage Blk Time (%)		2		0	5			
Queuing Penalty (veh)		1		0	1			

Intersection: 10: Hancock St & Channel Way

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	48	50	69	75
Average Queue (ft)	21	17	37	40
95th Queue (ft)	47	45	62	62
Link Distance (ft)	242		857	833
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	0	
Queuing Penalty (veh)		0	0	

Intersection: 11: Kurtz St & Hancock St

Movement	SB
Directions Served	L
Maximum Queue (ft)	69
Average Queue (ft)	32
95th Queue (ft)	56
Link Distance (ft)	80
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Kurtz St & Sherman St

Movement	EB	EB	SB
Directions Served	LT	T	L
Maximum Queue (ft)	66	67	60
Average Queue (ft)	37	35	33
95th Queue (ft)	57	57	48
Link Distance (ft)	1596	1596	310
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Kurtz St & Greenwood St

Movement	SB
Directions Served	L
Maximum Queue (ft)	51
Average Queue (ft)	23
95th Queue (ft)	48
Link Distance (ft)	321
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Sherman St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	54	73	48	60
Average Queue (ft)	33	40	29	30
95th Queue (ft)	48	62	44	49
Link Distance (ft)	468	468	310	513
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Greenwood St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	76	77	40	70
Average Queue (ft)	39	43	12	38
95th Queue (ft)	61	67	37	60
Link Distance (ft)	249	249	321	361
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Camino Del Rio W & Moore St

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	R	R	T	T	TR	T	T	TR
Maximum Queue (ft)	50	34	68	88	115	327	426	492
Average Queue (ft)	12	8	5	6	9	66	96	150
95th Queue (ft)	54	24	35	44	65	234	318	398
Link Distance (ft)	361	414	254	254	254	3946	3946	3946
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 17: Camino Del Rio W & Hancock St

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	TR	L	T	T	TR	T	T	T	R
Maximum Queue (ft)	104	124	98	194	204	231	413	417	427	205
Average Queue (ft)	42	44	23	52	57	63	308	324	359	91
95th Queue (ft)	89	100	65	138	149	166	484	493	505	246
Link Distance (ft)	527	527		289	289	289	254	254	254	
Upstream Blk Time (%)							25	27	34	
Queuing Penalty (veh)							180	195	251	
Storage Bay Dist (ft)			100							130
Storage Blk Time (%)			0	2					41	
Queuing Penalty (veh)			1	1					38	

Intersection: 18: Camino Del Rio W & Kurtz St

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T	T	T
Maximum Queue (ft)	165	249	67	282	299	302	174	336	325	298	202
Average Queue (ft)	76	114	10	94	101	111	126	149	110	85	40
95th Queue (ft)	141	210	39	229	237	244	206	346	296	230	138
Link Distance (ft)	535	535		341	341	341		289	289	289	289
Upstream Blk Time (%)				0	0	0		5	1	0	
Queuing Penalty (veh)				0	1	0		28	4	1	
Storage Bay Dist (ft)			200				100				
Storage Blk Time (%)		2					39	4			
Queuing Penalty (veh)		1					198	5			

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	LT	T	R	L	LT	TR	L	L	T	T	TR
Maximum Queue (ft)	192	205	199	184	164	172	152	210	208	270	260	269
Average Queue (ft)	74	102	82	69	93	138	101	94	81	71	72	90
95th Queue (ft)	152	181	165	144	175	186	160	186	181	206	193	213
Link Distance (ft)	1057	1057	1057		96	96	96			301	301	301
Upstream Blk Time (%)					21	42	24		0	0	0	0
Queuing Penalty (veh)					31	61	36		0	2	0	2
Storage Bay Dist (ft)				300				260	260			
Storage Blk Time (%)								1	0	1		
Queuing Penalty (veh)								3	2	2		

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (ft)	393	403	410	6
Average Queue (ft)	210	216	226	0
95th Queue (ft)	367	373	389	4
Link Distance (ft)	341	341	341	341
Upstream Blk Time (%)	4	4	5	
Queuing Penalty (veh)	18	20	26	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Rosecrans St & Midway Dr

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T
Maximum Queue (ft)	134	152	160	152	192	278	244	306	222	229	346	438
Average Queue (ft)	47	68	68	81	64	126	135	148	77	99	126	158
95th Queue (ft)	100	121	125	135	128	231	215	235	162	183	233	329
Link Distance (ft)			968	968			2538	2538				1229
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100	100			240	250			180	280	280	
Storage Blk Time (%)	1	4	3		0	1	0	6	0	0	0	1
Queuing Penalty (veh)	1	4	4		0	3	0	10	0	0	1	3

Intersection: 20: Rosecrans St & Midway Dr

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	T	TR
Maximum Queue (ft)	483	474	144	263	341	346	347
Average Queue (ft)	191	224	52	106	217	230	232
95th Queue (ft)	370	406	110	225	358	367	366
Link Distance (ft)	1229	1229			263	263	263
Upstream Blk Time (%)				0	8	10	10
Queuing Penalty (veh)				0	51	62	59
Storage Bay Dist (ft)			320	320			
Storage Blk Time (%)				0	8		
Queuing Penalty (veh)				0	14		

Intersection: 21: Rosecrans St & N Evergreen St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	424	308	58	244	454	215	274	404	421	358
Average Queue (ft)	173	144	17	77	80	84	129	112	117	85
95th Queue (ft)	420	290	46	183	287	195	267	321	331	258
Link Distance (ft)	1032	1493		1345	1345	1345		1229	1229	1229
Upstream Blk Time (%)					0					
Queuing Penalty (veh)					0					
Storage Bay Dist (ft)			180				310			
Storage Blk Time (%)				1			3	0		
Queuing Penalty (veh)				0			19	1		

Intersection: 22: Rosecrans St & Lytton St

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	TR	L	L	T	R	L	T	T	T	R	L
Maximum Queue (ft)	409	383	281	320	738	91	172	456	435	408	302	153
Average Queue (ft)	252	208	199	248	339	41	20	272	266	238	113	69
95th Queue (ft)	374	362	296	359	684	79	95	417	404	374	217	120
Link Distance (ft)	1405	1405			2346	2346		2449	2449	2449		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			245	245			100				490	470
Storage Blk Time (%)			4	9	19			43				
Queuing Penalty (veh)			11	25	105			4				

Intersection: 22: Rosecrans St & Lytton St

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	544	778	767	356
Average Queue (ft)	142	441	447	114
95th Queue (ft)	417	691	691	251
Link Distance (ft)		1345	1345	1345
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	470			
Storage Blk Time (%)		14		
Queuing Penalty (veh)		24		

Intersection: 23: Rosecrans St & Kurtz St

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	R	T	TR	L	T	T
Maximum Queue (ft)	84	250	241	143	157	202	72	156	70
Average Queue (ft)	26	90	75	55	49	71	18	45	16
95th Queue (ft)	66	189	168	116	109	139	50	113	47
Link Distance (ft)	246	246	1396		152	152		274	274
Upstream Blk Time (%)		0			0	1		0	
Queuing Penalty (veh)		0			0	2		0	
Storage Bay Dist (ft)				70			100		
Storage Blk Time (%)			12	2				3	
Queuing Penalty (veh)			17	3				1	

Intersection: 24: Rosecrans St & Hancock St

Movement	NB	SE
Directions Served	L	LR
Maximum Queue (ft)	64	12
Average Queue (ft)	24	1
95th Queue (ft)	55	9
Link Distance (ft)		527
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	L	T	R	L	T	T
Maximum Queue (ft)	44	64	64	69	47	108	104	110	58	118	52	60
Average Queue (ft)	9	17	29	30	21	75	39	71	8	45	8	12
95th Queue (ft)	32	46	56	64	47	111	96	122	27	96	31	41
Link Distance (ft)		242	242	242							1877	1877
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	120				100	150	150			150		
Storage Blk Time (%)				0		0				0		
Queuing Penalty (veh)				0		0				0		

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	R	R	L	L	T	T	R
Maximum Queue (ft)	50	46	24	62	62	24	31
Average Queue (ft)	6	6	4	17	16	3	3
95th Queue (ft)	25	28	16	44	46	14	15
Link Distance (ft)	1877				1531	1531	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		320	230	230			65
Storage Blk Time (%)						0	0
Queuing Penalty (veh)						0	0

Intersection: 1: Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp

Movement	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	R	R	T	T	T	T	T	T	T
Maximum Queue (ft)	2107	2194	2330	2308	174	163	151	1060	1031	954	840
Average Queue (ft)	1289	1378	1539	1478	89	77	74	642	614	555	465
95th Queue (ft)	2796	2814	2835	2726	152	144	137	1255	1215	1139	1059
Link Distance (ft)	2519	2519	2519	2519	757	757	757	1147	1147	1147	1147
Upstream Blk Time (%)	20	23	20	11				9	8	7	6
Queuing Penalty (veh)	0	0	0	0				0	0	0	0
Storage Bay Dist (ft)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	L	T	T	L	LT	T	R	L	LT
Maximum Queue (ft)	435	1603	1190	71	225	236	143	222	255	98	247	234
Average Queue (ft)	391	934	250	7	87	86	34	82	98	13	216	214
95th Queue (ft)	528	1756	1007	43	180	189	102	170	199	67	233	225
Link Distance (ft)		1939	1939		629	629		1525	1525		142	142
Upstream Blk Time (%)		0									77	79
Queuing Penalty (veh)		0									374	380
Storage Bay Dist (ft)	360			150			230			25		
Storage Blk Time (%)	7	67			4			0	47	0		
Queuing Penalty (veh)	29	101			1			0	15	0		

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	SB	SB	B39	B39	B39
Directions Served	T	R	T	T	T
Maximum Queue (ft)	250	142	519	526	528
Average Queue (ft)	218	134	459	467	474
95th Queue (ft)	235	185	624	603	599
Link Distance (ft)	142		402	402	402
Upstream Blk Time (%)	73	36	71	79	82
Queuing Penalty (veh)	352	0	346	380	399
Storage Bay Dist (ft)		100			
Storage Blk Time (%)	62	25			
Queuing Penalty (veh)	202	60			

Intersection: 3: Commercial Dwy 1/Hancock St & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	L	T	TR	L	T	T	TR	LT	R
Maximum Queue (ft)	191	252	276	29	84	106	188	97	83
Average Queue (ft)	81	77	88	3	25	32	80	35	38
95th Queue (ft)	153	186	211	15	60	86	153	81	69
Link Distance (ft)		629	629		959	959	959	857	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	160			100					210
Storage Blk Time (%)	1	1			0				
Queuing Penalty (veh)	3	1			0				

Intersection: 4: Kemper St/Existing Dwy 1 & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	L	T	TR	L	T	T	TR	L	TR	LT	R
Maximum Queue (ft)	78	89	190	226	192	150	186	232	148	234	31	36
Average Queue (ft)	20	49	67	91	76	33	61	100	57	83	4	12
95th Queue (ft)	59	83	148	189	145	96	143	197	120	164	19	37
Link Distance (ft)			959	959		636	636	636		708	282	282
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	440	440			175				100			
Storage Blk Time (%)					1	0			3	7		
Queuing Penalty (veh)					2	0			5	7		

Intersection: 5: West Dr/Existing Dwy 2 & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B83	B83	B83	NB
Directions Served	L	L	T	TR	L	T	T	TR	T	T	T	LT
Maximum Queue (ft)	55	64	245	296	142	181	240	290	29	106	175	167
Average Queue (ft)	12	27	106	143	56	71	115	181	1	3	21	70
95th Queue (ft)	38	56	209	256	117	148	222	307	21	31	96	132
Link Distance (ft)			636	636		202	202	202	232	232	232	444
Upstream Blk Time (%)					0	0	2	14		0	0	
Queuing Penalty (veh)					0	0	4	39		0	0	
Storage Bay Dist (ft)	330	330			175							
Storage Blk Time (%)					0	0						22
Queuing Penalty (veh)					0	0						16

Intersection: 5: West Dr/Existing Dwy 2 & Sports Arena Blvd

Movement	NB	SB	SB
Directions Served	R	LT	R
Maximum Queue (ft)	119	246	92
Average Queue (ft)	36	126	41
95th Queue (ft)	86	213	74
Link Distance (ft)		292	292
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)	50		
Storage Blk Time (%)	3		
Queuing Penalty (veh)	4		

Intersection: 6: Target Dwy/Existing VIP Access Rd & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LTR
Maximum Queue (ft)	63	33	12	46	115	26	35	63	40
Average Queue (ft)	15	2	1	3	32	1	1	3	15
95th Queue (ft)	46	15	7	20	76	12	15	24	41
Link Distance (ft)		232	232	232		364	364	364	458
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150				125				
Storage Blk Time (%)					0				
Queuing Penalty (veh)					1				

Intersection: 7: East Dr/Commercial Dwy 3 & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R
Maximum Queue (ft)	80	182	227	221	199	536	617	386	268	175
Average Queue (ft)	28	66	85	94	131	111	79	74	89	60
95th Queue (ft)	67	152	181	201	210	391	385	245	195	131
Link Distance (ft)		364	364	364		1057	1057	1057	921	
Upstream Blk Time (%)						0	0			
Queuing Penalty (veh)						0	1			
Storage Bay Dist (ft)	125				125					100
Storage Blk Time (%)		2			26	1			14	1
Queuing Penalty (veh)		1			74	3			22	1

Intersection: 8: Kemper St & Midway Dr

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	B53
Directions Served	L	T	T	R	L	L	T	TR	L	LT	R	T
Maximum Queue (ft)	128	213	213	126	179	225	323	340	165	371	95	6
Average Queue (ft)	51	62	71	18	94	42	121	131	108	188	41	0
95th Queue (ft)	102	155	165	66	169	130	252	268	191	324	75	5
Link Distance (ft)		1525	1525				1839	1839		355	355	701
Upstream Blk Time (%)										1		
Queuing Penalty (veh)										0		
Storage Bay Dist (ft)	320			150	250	250			90			
Storage Blk Time (%)			1		0	0	1		10	49		
Queuing Penalty (veh)			2		0	0	1		24	38		

Intersection: 8: Kemper St & Midway Dr

Movement	SB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	159	242	184
Average Queue (ft)	30	107	37
95th Queue (ft)	87	195	96
Link Distance (ft)		708	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		115
Storage Blk Time (%)	0	16	0
Queuing Penalty (veh)	0	15	0

Intersection: 9: Commercial Dwy 2/East Dr & Midway Dr

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	105	255	247	94	392	470	40	397
Average Queue (ft)	23	93	106	10	161	204	10	175
95th Queue (ft)	72	200	210	55	338	395	28	358
Link Distance (ft)		1839	1839		968	968	270	921
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	90			100				
Storage Blk Time (%)	0	5			11			
Queuing Penalty (veh)	0	3			2			

Intersection: 10: Hancock St & Channel Way

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	57	45	91	91
Average Queue (ft)	22	15	45	49
95th Queue (ft)	48	42	76	76
Link Distance (ft)	242		857	833
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	1	
Queuing Penalty (veh)		0	0	

Intersection: 11: Kurtz St & Hancock St

Movement	SB
Directions Served	L
Maximum Queue (ft)	80
Average Queue (ft)	42
95th Queue (ft)	65
Link Distance (ft)	80
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Kurtz St & Sherman St

Movement	EB	EB	SB
Directions Served	LT	T	L
Maximum Queue (ft)	64	66	66
Average Queue (ft)	39	42	36
95th Queue (ft)	58	63	55
Link Distance (ft)	1596	1596	310
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Kurtz St & Greenwood St

Movement	EB	EB	SB
Directions Served	LT	T	L
Maximum Queue (ft)	48	131	66
Average Queue (ft)	4	15	27
95th Queue (ft)	50	101	57
Link Distance (ft)	455	455	321
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Sherman St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	62	70	57	70
Average Queue (ft)	37	39	30	34
95th Queue (ft)	58	59	49	56
Link Distance (ft)	468	468	310	513
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Greenwood St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	84	98	31	70
Average Queue (ft)	42	40	17	33
95th Queue (ft)	73	75	41	53
Link Distance (ft)	249	249	321	361
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Camino Del Rio W & Moore St

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	R	R	T	T	TR	T	T	TR
Maximum Queue (ft)	20	52	7	9	20	326	373	384
Average Queue (ft)	3	12	0	0	1	44	53	56
95th Queue (ft)	14	35	6	7	13	220	248	258
Link Distance (ft)	361	414	254	254	254	3946	3946	3946
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 17: Camino Del Rio W & Hancock St

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	TR	L	T	T	TR	T	T	T	R
Maximum Queue (ft)	518	530	165	231	209	178	397	409	405	205
Average Queue (ft)	319	296	78	72	63	48	201	168	142	27
95th Queue (ft)	578	585	153	207	189	149	428	443	419	130
Link Distance (ft)	527	527		289	289	289	254	254	254	
Upstream Blk Time (%)	4	4		0	0		16	15	11	
Queuing Penalty (veh)	4	5		1	0		107	100	75	
Storage Bay Dist (ft)			100							130
Storage Blk Time (%)			17	6					12	1
Queuing Penalty (veh)			100	4					35	11

Intersection: 18: Camino Del Rio W & Kurtz St

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T	T	T
Maximum Queue (ft)	442	523	275	265	294	300	173	342	335	272	186
Average Queue (ft)	254	326	124	77	86	85	133	255	103	41	27
95th Queue (ft)	431	542	320	223	241	242	190	423	301	163	121
Link Distance (ft)	535	535		341	341	341		289	289	289	289
Upstream Blk Time (%)	0	5			0	0		51	4	0	0
Queuing Penalty (veh)	1	12			0	0		127	42	3	2
Storage Bay Dist (ft)			200				100				
Storage Blk Time (%)		51	0				81	4			
Queuing Penalty (veh)		49	1				374	2			

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	LT	T	R	L	LT	TR	L	L	T	T	TR
Maximum Queue (ft)	382	446	437	316	164	170	163	268	284	324	295	335
Average Queue (ft)	175	216	202	103	95	143	118	159	162	108	122	150
95th Queue (ft)	302	342	341	228	163	188	178	248	253	260	259	293
Link Distance (ft)	1057	1057	1057		96	96	96			301	301	301
Upstream Blk Time (%)					17	41	29	0	0	0	0	1
Queuing Penalty (veh)					24	58	40	0	0	2	0	9
Storage Bay Dist (ft)				300				260	260			
Storage Blk Time (%)			2	0				1	1	1		
Queuing Penalty (veh)			5	1				4	5	4		

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (ft)	396	405	408	28
Average Queue (ft)	133	139	134	1
95th Queue (ft)	369	373	366	17
Link Distance (ft)	341	341	341	341
Upstream Blk Time (%)	5	4	5	
Queuing Penalty (veh)	27	21	24	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Rosecrans St & Midway Dr

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T
Maximum Queue (ft)	137	175	414	408	315	324	470	522	255	239	284	412
Average Queue (ft)	93	135	210	213	87	132	232	262	169	132	151	159
95th Queue (ft)	153	202	346	328	203	274	413	460	315	213	248	323
Link Distance (ft)			968	968			2538	2538				1229
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100	100			240	250			180	280	280	
Storage Blk Time (%)	9	27	39	8	0	0	9	26	7	0	0	1
Queuing Penalty (veh)	20	63	82	19	0	1	10	62	19	0	0	2

Intersection: 20: Rosecrans St & Midway Dr

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	T	TR
Maximum Queue (ft)	433	446	177	263	337	346	346
Average Queue (ft)	201	235	59	98	175	192	195
95th Queue (ft)	379	416	141	219	322	338	346
Link Distance (ft)	1229	1229			263	263	263
Upstream Blk Time (%)				0	6	9	9
Queuing Penalty (veh)				0	36	53	55
Storage Bay Dist (ft)			320	320			
Storage Blk Time (%)				0	6		
Queuing Penalty (veh)				0	13		

Intersection: 21: Rosecrans St & N Evergreen St

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	119	447	52	620	618	371	168	361	372	306
Average Queue (ft)	49	219	7	51	47	48	57	108	122	81
95th Queue (ft)	106	409	31	246	313	237	131	279	297	234
Link Distance (ft)	1032	1493		1345	1345	1345		1229	1229	1229
Upstream Blk Time (%)				0	0	0				
Queuing Penalty (veh)				0	0	0				
Storage Bay Dist (ft)			180				310			
Storage Blk Time (%)								1		
Queuing Penalty (veh)								1		

Intersection: 22: Rosecrans St & Lytton St

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	TR	L	L	T	R	L	T	T	T	R	L
Maximum Queue (ft)	345	466	282	320	2205	2141	148	446	438	398	457	137
Average Queue (ft)	165	237	239	309	1594	1135	24	293	283	252	216	58
95th Queue (ft)	280	412	328	374	2870	2886	86	429	419	384	390	114
Link Distance (ft)	1405	1405			2346	2346		2449	2449	2449		
Upstream Blk Time (%)					29	10						
Queuing Penalty (veh)					0	0						
Storage Bay Dist (ft)			245	245			100				490	470
Storage Blk Time (%)			22	34	54			35			0	
Queuing Penalty (veh)			67	106	270			7			0	

Intersection: 22: Rosecrans St & Lytton St

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	135	288	303	121
Average Queue (ft)	63	121	134	29
95th Queue (ft)	118	230	251	74
Link Distance (ft)		1345	1345	1345
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	470			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Rosecrans St & Kurtz St

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	R	T	TR	L	T	T
Maximum Queue (ft)	181	266	222	145	212	242	72	128	80
Average Queue (ft)	48	131	80	66	86	119	33	50	23
95th Queue (ft)	128	299	163	131	180	212	63	112	63
Link Distance (ft)	246	246	1396		152	152		274	274
Upstream Blk Time (%)		4			3	5			
Queuing Penalty (veh)		4			12	19			
Storage Bay Dist (ft)				70			100		
Storage Blk Time (%)			19	5			0	1	
Queuing Penalty (veh)			25	5			0	1	

Intersection: 24: Rosecrans St & Hancock St

Movement	NB	NB	NB	SB	SB	SE
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	132	111	100	44	75	12
Average Queue (ft)	47	13	4	3	10	0
95th Queue (ft)	117	107	53	41	75	6
Link Distance (ft)		274	274	640	640	527
Upstream Blk Time (%)		2				
Queuing Penalty (veh)		7				
Storage Bay Dist (ft)	120					
Storage Blk Time (%)	4					
Queuing Penalty (veh)	15					

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	L	T	R	L	T	T
Maximum Queue (ft)	120	186	192	210	152	156	170	231	44	190	141	59
Average Queue (ft)	27	91	94	95	39	91	120	120	7	96	20	12
95th Queue (ft)	78	156	158	161	102	156	180	222	25	171	91	42
Link Distance (ft)		242	242	242				171	171		1877	1877
Upstream Blk Time (%)		0	0	0		0	0	4				
Queuing Penalty (veh)		0	0	0		0	0	11				
Storage Bay Dist (ft)	120				100	150	150			150		
Storage Blk Time (%)	0	5		9	0	0	1	5		3	0	
Queuing Penalty (veh)	1	3		9	0	1	3	13		2	0	

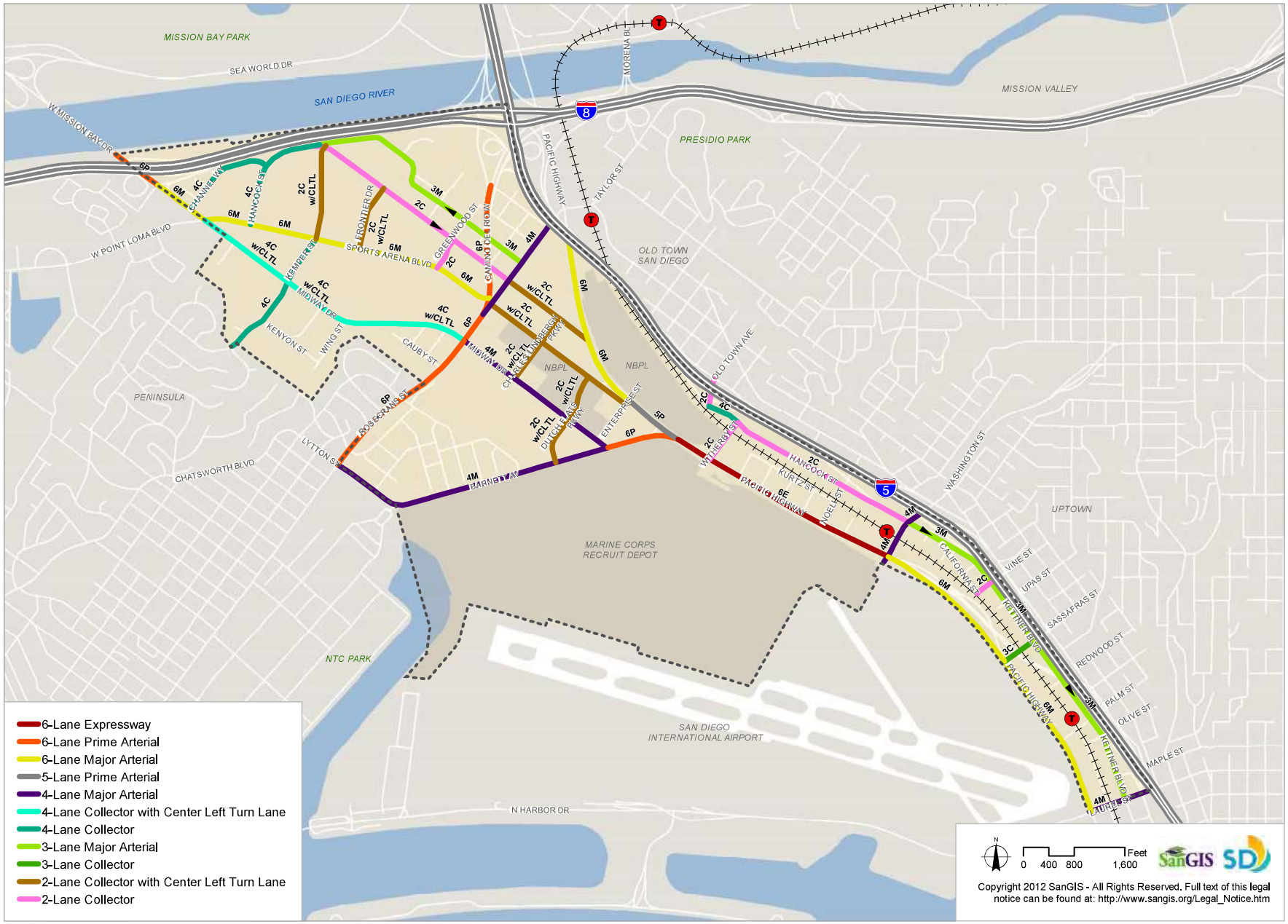
Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	R	R	L	L	T	T	R
Maximum Queue (ft)	162	156	31	89	163	148	85
Average Queue (ft)	57	56	8	32	72	38	12
95th Queue (ft)	123	125	26	68	134	100	45
Link Distance (ft)	1877				1531	1531	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		320	230	230			65
Storage Blk Time (%)						4	0
Queuing Penalty (veh)						3	0

Appendix G

Planned Street Classifications

FIGURE 3-6: PLANNED STREET CLASSIFICATIONS



Appendix H

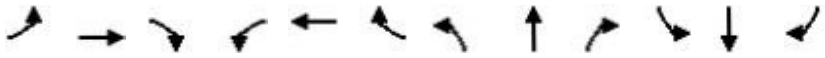
Horizon Year (2050) Baseline (CP) Scenario Intersection LOS Worksheets



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	751	1322	376	0	0	1288
Future Volume (vph)	751	1322	376	0	0	1288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	7.5			7.5
Lane Util. Factor	0.97	0.88	0.91			0.86
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	2787	5085			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	2787	5085			6408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	816	1437	409	0	0	1400
RTOR Reduction (vph)	0	202	0	0	0	0
Lane Group Flow (vph)	816	1235	409	0	0	1400
Confl. Peds. (#/hr)				5		
Confl. Bikes (#/hr)				2		
Turn Type	Prot	custom	NA			NA
Protected Phases	8	1 8	2			6
Permitted Phases						
Actuated Green, G (s)	22.5	45.2	17.0			39.7
Effective Green, g (s)	22.5	45.2	17.0			39.7
Actuated g/C Ratio	0.29	0.59	0.22			0.51
Clearance Time (s)	7.5		7.5			7.5
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	1000	1631	1119			3295
v/s Ratio Prot	0.24	c0.44	0.08			c0.22
v/s Ratio Perm						
v/c Ratio	0.81	0.75	0.36			0.42
Uniform Delay, d1	25.4	11.9	25.5			11.6
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	4.9	1.8	0.0			0.0
Delay (s)	30.3	13.7	25.6			11.6
Level of Service	C	B	C			B
Approach Delay (s/veh)	19.7		25.6			11.6
Approach LOS	B		C			B

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	22.5
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	202	224	20	173	329	177	315	21	246	316	152
Future Volume (veh/h)	323	202	224	20	173	329	177	315	21	246	316	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.96	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	351	220	243	22	188	358	192	342	23	267	343	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	753	395	718	235	469	802	883	454	30	1309	599	282
Arrive On Green	0.21	0.21	0.21	0.13	0.13	0.13	0.26	0.13	0.13	0.38	0.26	0.26
Sat Flow, veh/h	3563	1870	1482	1781	3554	1527	3456	3375	226	3456	2323	1094
Grp Volume(v), veh/h	351	220	243	22	188	358	192	179	186	267	261	247
Grp Sat Flow(s),veh/h/ln	1781	1870	1482	1781	1777	1527	1728	1777	1824	1728	1777	1640
Q Serve(g_s), s	11.8	14.4	14.3	1.5	6.6	0.0	6.0	13.3	13.4	7.1	17.5	18.1
Cycle Q Clear(g_c), s	11.8	14.4	14.3	1.5	6.6	0.0	6.0	13.3	13.4	7.1	17.5	18.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.67
Lane Grp Cap(c), veh/h	753	395	718	235	469	802	883	239	245	1309	458	423
V/C Ratio(X)	0.47	0.56	0.34	0.09	0.40	0.45	0.22	0.75	0.76	0.20	0.57	0.59
Avail Cap(c_a), veh/h	1017	534	828	403	805	946	883	613	629	1309	458	423
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	48.3	23.3	52.2	54.4	21.1	40.2	57.0	57.1	28.6	44.2	44.4
Incr Delay (d2), s/veh	1.2	3.4	0.8	0.7	2.1	1.5	0.6	2.9	2.9	0.1	5.1	5.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	7.0	5.2	0.7	3.1	7.6	2.7	6.2	6.4	3.0	8.4	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.5	51.6	24.0	52.9	56.6	22.6	40.7	59.9	60.0	28.7	49.2	50.2
LnGrp LOS	D	D	C	D	E	C	D	E	E	C	D	D
Approach Vol, veh/h		814			568			557			775	
Approach Delay, s/veh		42.0			35.0			53.3			42.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	33.8	56.8	23.3	23.0	39.9	40.2
Change Period (Y+Rc), s	4.9	4.9	* 4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	39.1	23.5	* 47	31.0	35.0	35.3
Max Q Clear Time (g_c+I1), s	16.4	9.1	15.4	8.6	8.0	20.1
Green Ext Time (p_c), s	8.3	0.8	1.7	7.0	0.5	2.4

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	43.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



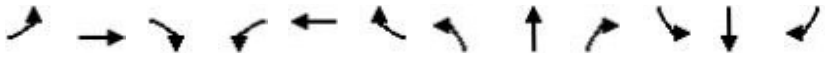
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	420	9	9	437	59	0	0	0	57	0	66
Future Volume (veh/h)	82	420	9	9	437	59	0	0	0	57	0	66
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	89	457	10	10	475	64				62	0	72
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	269	2503	55	17	1545	203				643	0	566
Arrive On Green	0.15	0.49	0.49	0.00	0.11	0.11				0.36	0.00	0.36
Sat Flow, veh/h	1781	5137	112	1781	4531	596				1781	0	1567
Grp Volume(v), veh/h	89	302	165	10	354	185				62	0	72
Grp Sat Flow(s),veh/h/ln	1781	1702	1845	1781	1702	1723				1781	0	1567
Q Serve(g_s), s	4.5	5.0	5.0	0.6	9.6	9.9				2.3	0.0	3.1
Cycle Q Clear(g_c), s	4.5	5.0	5.0	0.6	9.6	9.9				2.3	0.0	3.1
Prop In Lane	1.00		0.06	1.00		0.35				1.00		1.00
Lane Grp Cap(c), veh/h	269	1659	899	17	1161	588				643	0	566
V/C Ratio(X)	0.33	0.18	0.18	0.58	0.30	0.31				0.10	0.00	0.13
Avail Cap(c_a), veh/h	278	1659	899	118	1161	588				643	0	566
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33				1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.95	0.95	0.95				1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	14.4	14.4	49.6	33.5	33.6				21.2	0.0	21.4
Incr Delay (d2), s/veh	0.2	0.2	0.4	10.3	0.6	1.3				0.3	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.9	2.1	0.3	4.3	4.6				1.0	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.2	14.6	14.8	60.0	34.1	35.0				21.5	0.0	21.9
LnGrp LOS	D	B	B	E	C	C				C		C
Approach Vol, veh/h		556			549						134	
Approach Delay, s/veh		18.5			34.9						21.7	
Approach LOS		B			C						C	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	5.4	53.6		41.0	20.0	39.0
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9
Max Green Setting (Gmax), s	6.6	43.1		36.1	15.6	* 34
Max Q Clear Time (g_c+I1), s	2.6	7.0		5.1	6.5	11.9
Green Ext Time (p_c), s	0.0	3.7		0.3	0.1	4.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	26.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



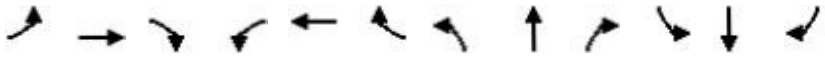
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	308	121	107	309	90	126	50	77	160	140	110
Future Volume (veh/h)	110	308	121	107	309	90	126	50	77	160	140	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83	1.00		0.80	1.00		0.68	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	335	132	116	336	98	137	54	84	174	152	120
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1004	347	137	1073	279	529	150	233	269	146	115
Arrive On Green	0.03	0.09	0.09	0.08	0.28	0.28	0.30	0.30	0.30	0.15	0.15	0.15
Sat Flow, veh/h	1781	3536	1223	1781	3818	992	1781	504	784	1781	968	764
Grp Volume(v), veh/h	120	321	146	116	295	139	137	0	138	174	0	272
Grp Sat Flow(s),veh/h/ln	1781	1702	1355	1781	1702	1406	1781	0	1288	1781	0	1733
Q Serve(g_s), s	6.7	8.8	10.1	6.4	6.8	7.9	5.9	0.0	8.4	9.2	0.0	15.1
Cycle Q Clear(g_c), s	6.7	8.8	10.1	6.4	6.8	7.9	5.9	0.0	8.4	9.2	0.0	15.1
Prop In Lane	1.00		0.90	1.00		0.71	1.00		0.61	1.00		0.44
Lane Grp Cap(c), veh/h	143	967	385	137	957	395	529	0	382	269	0	262
V/C Ratio(X)	0.84	0.33	0.38	0.85	0.31	0.35	0.26	0.00	0.36	0.65	0.00	1.04
Avail Cap(c_a), veh/h	143	967	385	137	957	395	552	0	399	269	0	262
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	1.00	1.00	1.00	0.92	0.00	0.92	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.1	36.4	37.0	45.6	28.3	28.7	26.8	0.0	27.7	39.9	0.0	42.5
Incr Delay (d2), s/veh	32.5	0.9	2.8	34.4	0.8	2.5	0.1	0.0	0.2	4.2	0.0	66.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.0	3.9	4.1	2.8	2.9	2.5	0.0	2.6	4.3	0.0	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	80.5	37.3	39.9	80.0	29.1	31.1	26.9	0.0	27.9	44.1	0.0	108.8
LnGrp LOS	F	D	D	F	C	C	C		C	D		F
Approach Vol, veh/h		587			550			275			446	
Approach Delay, s/veh		46.8			40.4			27.4			83.6	
Approach LOS		D			D			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	33.0		34.6	12.1	33.3		20.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	8.0	26.8		31.0	7.7	27.1		15.1				
Max Q Clear Time (g_c+I1), s	8.7	9.9		10.4	8.4	12.1		17.1				
Green Ext Time (p_c), s	0.0	4.2		0.8	0.0	4.2		0.0				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	50.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	384	48	87	373	40	48	20	50	60	20	50
Future Volume (veh/h)	90	384	48	87	373	40	48	20	50	60	20	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.55	1.00		0.88	1.00		0.74	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	417	52	95	405	43	52	22	54	65	22	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	1130	126	121	1222	126	479	203	547	125	32	79
Arrive On Green	0.07	0.27	0.27	0.07	0.26	0.26	0.38	0.38	0.38	0.07	0.07	0.07
Sat Flow, veh/h	1781	4252	473	1781	4633	477	1270	537	1165	1781	459	1127
Grp Volume(v), veh/h	98	324	145	95	294	154	74	0	54	65	0	76
Grp Sat Flow(s),veh/h/ln	1781	1702	1320	1781	1702	1705	1807	0	1165	1781	0	1586
Q Serve(g_s), s	4.7	6.7	7.9	4.6	6.1	6.4	2.3	0.0	2.4	3.1	0.0	4.1
Cycle Q Clear(g_c), s	4.7	6.7	7.9	4.6	6.1	6.4	2.3	0.0	2.4	3.1	0.0	4.1
Prop In Lane	1.00		0.36	1.00		0.28	0.70		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	125	905	351	121	898	450	681	0	547	125	0	111
V/C Ratio(X)	0.78	0.36	0.41	0.78	0.33	0.34	0.11	0.00	0.10	0.52	0.00	0.68
Avail Cap(c_a), veh/h	182	905	351	178	898	450	745	0	588	367	0	327
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.9	26.0	26.4	40.0	25.9	26.0	17.7	0.0	14.1	39.2	0.0	39.6
Incr Delay (d2), s/veh	7.5	1.1	3.6	7.2	1.0	2.1	0.0	0.0	0.0	1.2	0.0	2.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.8	2.7	2.2	2.5	2.8	0.9	0.0	0.6	1.4	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.4	27.1	30.0	47.3	26.9	28.1	17.7	0.0	14.1	40.4	0.0	42.4
LnGrp LOS	D	C	C	D	C	C	B		B	D		D
Approach Vol, veh/h		567			543			128			141	
Approach Delay, s/veh		31.4			30.8			16.2			41.5	
Approach LOS		C			C			B			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.3	28.1		11.0	10.5	27.9		37.8
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	5.9	23.2		18.0	8.9	23.0		36.0
Max Q Clear Time (g_c+I1), s	6.6	9.9		6.1	6.7	8.4		4.4
Green Ext Time (p_c), s	0.0	3.0		0.3	0.0	1.6		0.4

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		30.8
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	466	20	111	536	0	40
Future Vol, veh/h	466	20	111	536	0	40
Conflicting Peds, #/hr	0	80	0	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	507	22	121	583	0	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	609	0	-	348
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	5.34	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.12	-	-	3.92
Pot Cap-1 Maneuver	-	-	602	-	0	553
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	556	-	-	509
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.3	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	509	-	-	556	-
HCM Lane V/C Ratio	0.085	-	-	0.217	-
HCM Control Delay (s/veh)	12.7	-	-	13.3	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q (veh)	0.3	-	-	0.8	-

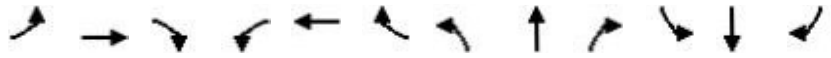
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	432	11	124	518	50	17	10	87	10	10	50
Future Volume (veh/h)	40	432	11	124	518	50	17	10	87	10	10	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		1.00	1.00		0.90	0.90		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	470	12	135	563	54	18	11	95	11	11	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	500	2644	67	169	3149	299	262	146	320	214	195	355
Arrive On Green	0.52	0.52	0.52	0.09	0.66	0.66	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	806	5098	129	1781	4743	450	872	650	1426	679	869	1585
Grp Volume(v), veh/h	43	313	169	135	402	215	29	0	95	22	0	54
Grp Sat Flow(s),veh/h/ln	806	1702	1823	1781	1702	1789	1522	0	1426	1548	0	1585
Q Serve(g_s), s	2.4	4.3	4.3	6.5	3.9	4.0	0.0	0.0	4.8	0.0	0.0	2.4
Cycle Q Clear(g_c), s	2.4	4.3	4.3	6.5	3.9	4.0	1.1	0.0	4.8	0.8	0.0	2.4
Prop In Lane	1.00		0.07	1.00		0.25	0.62		1.00	0.50		1.00
Lane Grp Cap(c), veh/h	500	1765	945	169	2260	1188	408	0	320	409	0	355
V/C Ratio(X)	0.09	0.18	0.18	0.80	0.18	0.18	0.07	0.00	0.30	0.05	0.00	0.15
Avail Cap(c_a), veh/h	500	1765	945	501	2260	1188	622	0	523	624	0	581
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.7	11.2	11.2	38.8	5.6	5.6	26.8	0.0	28.2	26.7	0.0	27.3
Incr Delay (d2), s/veh	0.3	0.2	0.4	3.3	0.2	0.3	0.0	0.0	0.2	0.0	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.5	1.7	2.9	1.2	1.3	0.5	0.0	1.6	0.4	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	11.1	11.4	11.6	42.0	5.8	6.0	26.8	0.0	28.4	26.7	0.0	27.3
LnGrp LOS	B	B	B	D	A	A	C		C	C		C
Approach Vol, veh/h		525			752			124			76	
Approach Delay, s/veh		11.4			12.3			28.0			27.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.7	50.3		24.5		63.0		24.5				
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s	24.6	29.1		32.1		58.1		32.1				
Max Q Clear Time (g_c+I1), s	8.5	6.3		4.4		6.0		6.8				
Green Ext Time (p_c), s	0.1	5.8		0.1		6.3		0.3				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		14.1	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	431	86	75	366	45	120	97	112	36	73	56
Future Volume (veh/h)	75	431	86	75	366	45	120	97	112	36	73	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	468	93	82	398	49	118	123	122	39	79	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	1311	572	149	962	117	311	326	331	293	308	250
Arrive On Green	0.10	0.37	0.37	0.04	0.30	0.30	0.17	0.17	0.17	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1549	3456	3166	387	1781	1870	1508	1781	1870	1519
Grp Volume(v), veh/h	82	468	93	82	222	225	118	123	122	39	79	61
Grp Sat Flow(s),veh/h/ln	1781	1777	1549	1728	1777	1775	1781	1870	1508	1781	1870	1519
Q Serve(g_s), s	3.3	7.3	3.1	1.8	7.6	7.8	4.5	4.5	5.3	1.4	2.8	2.7
Cycle Q Clear(g_c), s	3.3	7.3	3.1	1.8	7.6	7.8	4.5	4.5	5.3	1.4	2.8	2.7
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	1311	572	149	540	539	311	326	331	293	308	250
V/C Ratio(X)	0.45	0.36	0.16	0.55	0.41	0.42	0.38	0.38	0.37	0.13	0.26	0.24
Avail Cap(c_a), veh/h	246	1311	572	252	540	539	790	829	737	766	805	653
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	17.6	16.3	36.0	21.2	21.3	28.0	28.0	25.6	27.4	27.9	27.9
Incr Delay (d2), s/veh	0.7	0.8	0.6	1.2	2.3	2.4	0.3	0.3	0.3	0.1	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.0	1.1	0.8	3.4	3.4	1.9	2.0	1.8	0.6	1.2	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.1	18.4	16.9	37.2	23.6	23.7	28.3	28.3	25.8	27.4	28.1	28.1
LnGrp LOS	C	B	B	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		643			529			363			179	
Approach Delay, s/veh		20.0			25.7			27.4			27.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.7	33.2		17.5	12.7	28.2		18.3
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9
Max Green Setting (Gmax), s	5.6	28.3		33.0	10.6	* 23		34.0
Max Q Clear Time (g_c+I1), s	3.8	9.3		4.8	5.3	9.8		7.3
Green Ext Time (p_c), s	0.0	4.6		0.4	0.0	3.4		0.8

Intersection Summary		
HCM 6th Ctrl Delay, s/veh	24.2	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	588	17	16	782	164	13	4	2	52	5	43
Future Volume (veh/h)	46	588	17	16	782	164	13	4	2	52	5	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	0.95		0.98	0.99		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	639	18	17	850	178	14	4	2	57	5	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	2174	61	502	1746	366	286	79	34	218	30	151
Arrive On Green	0.03	0.62	0.62	0.01	0.60	0.60	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3525	99	1781	2895	606	956	325	142	701	125	626
Grp Volume(v), veh/h	50	322	335	17	522	506	20	0	0	109	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1848	1781	1777	1724	1423	0	0	1452	0	0
Q Serve(g_s), s	1.2	9.5	9.5	0.4	18.5	18.5	0.0	0.0	0.0	4.8	0.0	0.0
Cycle Q Clear(g_c), s	1.2	9.5	9.5	0.4	18.5	18.5	1.0	0.0	0.0	6.7	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.35	0.70		0.10	0.52		0.43
Lane Grp Cap(c), veh/h	355	1096	1139	502	1072	1040	399	0	0	400	0	0
V/C Ratio(X)	0.14	0.29	0.29	0.03	0.49	0.49	0.05	0.00	0.00	0.27	0.00	0.00
Avail Cap(c_a), veh/h	441	1096	1139	565	1072	1040	399	0	0	400	0	0
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.5	10.1	10.1	8.6	12.5	12.5	32.6	0.0	0.0	34.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.7	0.7	0.0	1.6	1.6	0.0	0.0	0.0	1.7	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.8	3.9	0.2	7.5	7.3	0.4	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.6	10.7	10.7	8.6	14.1	14.1	32.6	0.0	0.0	36.3	0.0	0.0
LnGrp LOS	A	B	B	A	B	B	C			D		
Approach Vol, veh/h		707			1045			20			109	
Approach Delay, s/veh		10.6			14.0			32.6			36.3	
Approach LOS		B			B			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	74.0		32.0	7.6	72.5		32.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	5.6	69.1		27.1	8.6	66.1		27.1				
Max Q Clear Time (g_c+I1), s	2.4	11.5		8.7	3.2	20.5		3.0				
Green Ext Time (p_c), s	0.0	5.1		0.3	0.0	9.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	14.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	111	80	127	0	0
Future Volume (veh/h)	0	111	80	127	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	0	121	87	138		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1617	1442	1291	1702		
Arrive On Green	0.00	0.91	0.91	0.91		
Sat Flow, veh/h	1870	1585	1270	1870		
Grp Volume(v), veh/h	0	121	87	138		
Grp Sat Flow(s),veh/h/ln	1777	1585	1270	1870		
Q Serve(g_s), s	0.0	0.4	0.4	0.4		
Cycle Q Clear(g_c), s	0.0	0.4	0.7	0.4		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1617	1442	1291	1702		
V/C Ratio(X)	0.00	0.08	0.07	0.08		
Avail Cap(c_a), veh/h	1617	1442	1291	1702		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.2	0.3	0.2		
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.0	0.3	0.4	0.3		
LnGrp LOS		A	A	A		
Approach Vol, veh/h	121			225		
Approach Delay, s/veh	0.3			0.3		
Approach LOS	A			A		

Timer - Assigned Phs	2					6
Phs Duration (G+Y+Rc), s	50.0					50.0
Change Period (Y+Rc), s	4.5					4.5
Max Green Setting (Gmax), s	45.5					45.5
Max Q Clear Time (g_c+I1), s	2.4					2.7
Green Ext Time (p_c), s	0.8					1.1

Intersection Summary						
HCM 6th Ctrl Delay, s/veh			0.3			
HCM 6th LOS			A			

LANE SUMMARY

Site: 1 [2050 CP AM_Kurtz Street at Hancock Street: Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Hancock Street															
Lane 1[d]	261	2.0	261	2.0	1355	0.193	100	3.6	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	261	2.0	261	2.0		0.193		3.6	LOS A	0.0	0.0				
West: Hancock Street															
Lane 1[d]	109	2.0	109	2.0	1191	0.091	100	3.8	LOS A	0.4	10.2	Full	1600	0.0	0.0
Approach	109	2.0	109	2.0		0.091		3.8	LOS A	0.4	10.2				
All Vehicles	370	2.0	370	2.0		0.193		3.7	LOS A	0.4	10.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Hancock Street

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	122	139	261	2.0	1355	0.193	100	NA	NA
Approach	122	139	261	2.0		0.193			

West: Hancock Street

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	108	109	2.0	1191	0.091	100	NA	NA
Approach	1	108	109	2.0		0.091			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	370	2.0	0.193

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0
West: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0

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Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	143	0	0	0	0	0	0	0	93	0	0
Future Vol, veh/h	70	143	0	0	0	0	0	0	0	93	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	155	0	0	0	0	0	0	0	101	0	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	8.6	0	8.4
HCM LOS	A	-	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	59%	0%	100%
Vol Thru, %	100%	41%	100%	0%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	118	95	93
LT Vol	0	70	0	93
Through Vol	0	48	95	0
RT Vol	0	0	0	0
Lane Flow Rate	0	128	104	101
Geometry Grp	2	5	5	2
Degree of Util (X)	0	0.178	0.136	0.132
Departure Headway (Hd)	4.621	5.01	4.712	4.697
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	709	752	768
Service Time	2.626	2.793	2.495	2.697
HCM Lane V/C Ratio	0	0.181	0.138	0.132
HCM Control Delay, s/veh	7.6	8.9	8.2	8.4
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.6	0.5	0.5

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	245	100	0	0	0	0	0	0	50	220	0
Future Vol, veh/h	12	245	100	0	0	0	0	0	0	50	220	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	266	109	0	0	0	0	0	0	54	239	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	9.9	0	11.1
HCM LOS	A	-	B

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	9%	0%	19%
Vol Thru, %	100%	91%	55%	81%
Vol Right, %	0%	0%	45%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	135	223	270
LT Vol	0	12	0	50
Through Vol	0	123	123	220
RT Vol	0	0	100	0
Lane Flow Rate	0	146	242	293
Geometry Grp	2	5	5	2
Degree of Util (X)	0	0.216	0.333	0.396
Departure Headway (Hd)	5.218	5.318	4.957	4.863
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	674	723	740
Service Time	3.279	3.062	2.7	2.897
HCM Lane V/C Ratio	0	0.217	0.335	0.396
HCM Control Delay, s/veh	8.3	9.5	10.2	11.1
HCM Lane LOS	N	A	B	B
HCM 95th-tile Q	0	0.8	1.5	1.9

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	61	199	60	47	19	0	0	44	10
Future Vol, veh/h	0	0	0	61	199	60	47	19	0	0	44	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	66	216	65	51	21	0	0	48	11
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	9	8.5	8.1
HCM LOS	A	A	A

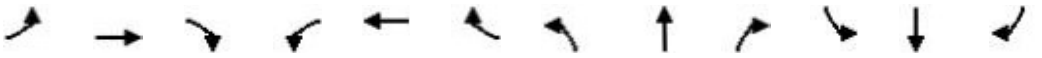
Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	71%	38%	0%	0%
Vol Thru, %	29%	62%	62%	81%
Vol Right, %	0%	0%	38%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	161	160	54
LT Vol	47	61	0	0
Through Vol	19	100	100	44
RT Vol	0	0	60	10
Lane Flow Rate	72	174	173	59
Geometry Grp	2	5	5	2
Degree of Util (X)	0.098	0.245	0.222	0.077
Departure Headway (Hd)	4.939	5.063	4.608	4.705
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	727	714	784	762
Service Time	2.96	2.763	2.308	2.726
HCM Lane V/C Ratio	0.099	0.244	0.221	0.077
HCM Control Delay, s/veh	8.5	9.4	8.6	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	1	0.8	0.2

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	19	257	23	8	4	0	0	38	81
Future Vol, veh/h	0	0	0	19	257	23	8	4	0	0	38	81
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	21	279	25	9	4	0	0	41	88
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.9	8.1	8.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	67%	13%	0%	0%
Vol Thru, %	33%	87%	85%	32%
Vol Right, %	0%	0%	15%	68%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	148	152	119
LT Vol	8	19	0	0
Through Vol	4	129	129	38
RT Vol	0	0	23	81
Lane Flow Rate	13	160	165	129
Geometry Grp	2	5	5	2
Degree of Util (X)	0.018	0.216	0.214	0.154
Departure Headway (Hd)	4.963	4.847	4.676	4.288
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	724	733	757	841
Service Time	2.971	2.634	2.463	2.289
HCM Lane V/C Ratio	0.018	0.218	0.218	0.153
HCM Control Delay, s/veh	8.1	9	8.8	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.8	0.8	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	50	157	184	31	1608	85	0	2125	72
Future Volume (veh/h)	0	0	0	50	157	184	31	1608	85	0	2125	72
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				54	171	200	34	1748	92	0	2310	78
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	2	0	2	2
Cap, veh/h				79	250	278	368	3694	194	0	2545	780
Arrive On Green				0.18	0.18	0.18	0.41	1.00	1.00	0.00	0.50	0.50
Sat Flow, veh/h				444	1405	1558	1781	4965	261	0	5274	1566
Grp Volume(v), veh/h				225	0	200	34	1198	642	0	2310	78
Grp Sat Flow(s),veh/h/ln				1848	0	1558	1781	1702	1822	0	1702	1566
Q Serve(g_s), s				14.4	0.0	15.2	1.5	0.0	0.0	0.0	52.2	3.3
Cycle Q Clear(g_c), s				14.4	0.0	15.2	1.5	0.0	0.0	0.0	52.2	3.3
Prop In Lane				0.24		1.00	1.00		0.14	0.00		1.00
Lane Grp Cap(c), veh/h				329	0	278	368	2533	1356	0	2545	780
V/C Ratio(X)				0.68	0.00	0.72	0.09	0.47	0.47	0.00	0.91	0.10
Avail Cap(c_a), veh/h				645	0	544	368	2533	1356	0	2545	780
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.78	0.78	0.78	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.5	0.0	48.8	29.7	0.0	0.0	0.0	28.9	16.7
Incr Delay (d2), s/veh				0.9	0.0	1.3	0.0	0.5	0.9	0.0	6.1	0.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.7	0.0	6.0	0.6	0.2	0.3	0.0	21.4	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				49.4	0.0	50.1	29.8	0.5	0.9	0.0	35.0	16.9
LnGrp LOS				D		D	C	A	A		D	B
Approach Vol, veh/h					425			1874			2388	
Approach Delay, s/veh					49.7			1.2			34.4	
Approach LOS					D			A			C	

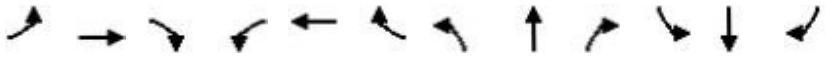
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	98.7	27.3	31.0	67.7
Change Period (Y+Rc), s	4.9	4.9	4.9	* 4.9
Max Green Setting (Gmax), s	72.2	44.0	5.0	* 63
Max Q Clear Time (g_c+I1), s	2.0	17.2	3.5	54.2
Green Ext Time (p_c), s	5.7	1.0	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	22.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	161	42	0	0	0	0	1592	35	218	1982	0
Future Volume (veh/h)	94	161	42	0	0	0	0	1592	35	218	1982	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	102	175	46				0	1730	38	237	2154	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	204	214	178				0	3228	71	258	5196	0
Arrive On Green	0.11	0.11	0.11				0.00	1.00	1.00	0.29	1.00	0.00
Sat Flow, veh/h	1781	1870	1556				0	5310	113	1781	6696	0
Grp Volume(v), veh/h	102	175	46				0	1145	623	237	2154	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1556				0	1702	1850	1781	1609	0
Q Serve(g_s), s	6.8	11.5	3.4				0.0	0.0	0.0	16.2	0.0	0.0
Cycle Q Clear(g_c), s	6.8	11.5	3.4				0.0	0.0	0.0	16.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	204	214	178				0	2137	1162	258	5196	0
V/C Ratio(X)	0.50	0.82	0.26				0.00	0.54	0.54	0.92	0.41	0.00
Avail Cap(c_a), veh/h	638	669	557				0	2137	1162	277	5196	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.72	0.72	0.73	0.73	0.00
Uniform Delay (d), s/veh	52.4	54.5	50.9				0.0	0.0	0.0	44.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	2.9	0.3				0.0	0.7	1.3	25.1	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	5.6	1.3				0.0	0.2	0.4	7.7	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.1	57.4	51.2				0.0	0.7	1.3	69.2	0.2	0.0
LnGrp LOS	D	E	D					A	A	E	A	
Approach Vol, veh/h		323						1768			2391	
Approach Delay, s/veh		55.1						0.9			7.0	
Approach LOS		E						A			A	

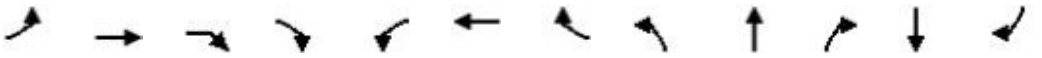
Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	22.6	84.0	19.3	106.7
Change Period (Y+Rc), s	4.4	4.9	4.9	4.9
Max Green Setting (Gmax), s	19.6	47.1	45.1	71.1
Max Q Clear Time (g_c+I1), s	18.2	2.0	13.5	2.0
Green Ext Time (p_c), s	0.0	4.8	0.4	8.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	8.1
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	173	168	0	193	233	11	249	1409	275	1472	381
Future Volume (vph)	230	173	168	0	193	233	11	249	1409	275	1472	381
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	14	12	12	12	12
Total Lost time (s)	5.9	5.9	5.9		5.9	5.9		5.4	5.9		5.9	5.9
Lane Util. Factor	0.95	0.95	1.00		0.91	0.91		0.97	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.99		1.00	0.97		1.00	0.85
Flt Protected	0.95	0.99	1.00		0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (prot)	1681	1756	1583		1610	3328		3662	4940		5085	1505
Flt Permitted	0.95	0.99	1.00		0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (perm)	1681	1756	1583		1610	3328		3662	4940		5085	1505
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	188	183	0	210	253	12	271	1532	299	1600	414
RTOR Reduction (vph)	0	0	0	0	0	2	0	0	0	0	0	186
Lane Group Flow (vph)	215	223	183	0	155	318	0	271	1831	0	1600	228
Confl. Peds. (#/hr)				4			37			11		28
Confl. Bikes (#/hr)				2			3			1		1
Turn Type	Split	NA	Perm	Perm	Split	NA		Prot	NA		NA	Perm
Protected Phases	4	4			8	8		5	2		6	
Permitted Phases			4	4								6
Actuated Green, G (s)	19.9	19.9	19.9		13.6	13.6		13.4	74.8		56.0	56.0
Effective Green, g (s)	19.9	19.9	19.9		13.6	13.6		13.4	74.8		56.0	56.0
Actuated g/C Ratio	0.16	0.16	0.16		0.11	0.11		0.11	0.59		0.44	0.44
Clearance Time (s)	5.9	5.9	5.9		5.9	5.9		5.4	5.9		5.9	5.9
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lane Grp Cap (vph)	265	277	250		173	359		389	2932		2260	668
v/s Ratio Prot	c0.13	0.13			c0.10	0.10		0.07	c0.37		c0.31	
v/s Ratio Perm			0.12									0.15
v/c Ratio	0.81	0.80	0.73		0.89	0.88		0.69	0.62		0.70	0.34
Uniform Delay, d1	51.2	51.1	50.5		55.5	55.4		54.3	16.5		28.3	22.9
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.39	0.27		0.67	0.61
Incremental Delay, d2	16.1	14.7	9.1		39.1	21.5		3.3	0.7		1.7	1.2
Delay (s)	67.3	65.8	59.6		94.6	77.0		79.4	5.2		20.8	15.3
Level of Service	E	E	E		F	E		E	A		C	B
Approach Delay (s/veh)		64.5				82.7			14.8		19.6	
Approach LOS		E				F			B		B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	286	165	175	491	225	304	1507	105	214	1527	176
Future Volume (veh/h)	148	286	165	175	491	225	304	1507	105	214	1527	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.94	1.00		0.94	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	311	179	190	534	245	330	1638	114	233	1660	191
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	624	269	178	746	312	377	1902	132	602	2134	245
Arrive On Green	0.06	0.18	0.18	0.10	0.21	0.21	0.22	0.78	0.78	0.17	0.46	0.46
Sat Flow, veh/h	3456	3554	1528	1781	3554	1487	3456	4852	337	3456	4628	531
Grp Volume(v), veh/h	161	311	179	190	534	245	330	1148	604	233	1220	631
Grp Sat Flow(s),veh/h/ln	1728	1777	1528	1781	1777	1487	1728	1702	1786	1728	1702	1754
Q Serve(g_s), s	5.8	10.0	13.8	12.6	17.6	19.6	11.6	28.2	28.4	7.5	37.9	38.2
Cycle Q Clear(g_c), s	5.8	10.0	13.8	12.6	17.6	19.6	11.6	28.2	28.4	7.5	37.9	38.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.30
Lane Grp Cap(c), veh/h	213	624	269	178	746	312	377	1335	700	602	1570	809
V/C Ratio(X)	0.75	0.50	0.67	1.07	0.72	0.78	0.88	0.86	0.86	0.39	0.78	0.78
Avail Cap(c_a), veh/h	299	959	412	178	1007	421	496	1335	700	602	1570	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	46.9	48.5	56.7	46.3	47.1	48.4	11.3	11.3	46.1	28.5	28.6
Incr Delay (d2), s/veh	3.7	0.2	1.0	86.2	0.8	4.6	10.8	7.4	13.2	0.2	2.3	4.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	4.4	5.3	9.9	7.8	7.6	5.0	5.5	6.9	3.2	15.3	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.8	47.1	49.5	142.9	47.1	51.7	59.2	18.8	24.6	46.2	30.8	33.1
LnGrp LOS	E	D	D	F	D	D	E	B	C	D	C	C
Approach Vol, veh/h		651			969			2082			2084	
Approach Delay, s/veh		51.4			67.0			26.9			33.2	
Approach LOS		D			E			C			C	

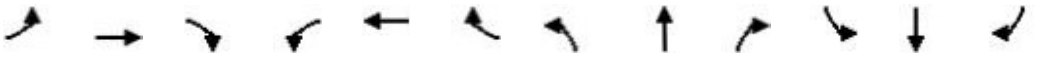
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	54.3	17.0	27.0	18.1	63.8	12.7	31.4
Change Period (Y+Rc), s	5.7	* 4.9	4.4	4.9	4.4	5.7	4.9	* 4.9
Max Green Setting (Gmax), s	1.4	* 49	12.6	34.0	18.1	41.9	10.9	* 36
Max Q Clear Time (g_c+I1), s	9.5	30.4	14.6	15.8	13.6	40.2	7.8	21.6
Green Ext Time (p_c), s	0.0	4.5	0.0	0.8	0.1	1.1	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	38.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	309	7	233	0	277	0	200	189	82	189	0
Future Volume (vph)	36	309	7	233	0	277	0	200	189	82	189	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.4		4.4		4.9		4.4	4.9	
Lane Util. Factor	1.00	1.00		1.00		1.00		0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00		0.95		0.91		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00		1.00	1.00	
Frt	1.00	0.99		1.00		0.85		0.92		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	1856		1770		1513		3007		1770	3539	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.36	1.00	
Satd. Flow (perm)	1770	1856		1770		1513		3007		688	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	336	8	253	0	301	0	217	205	89	205	0
RTOR Reduction (vph)	0	1	0	0	0	126	0	124	0	0	0	0
Lane Group Flow (vph)	39	343	0	253	0	175	0	298	0	89	205	0
Confl. Peds. (#/hr)						22			75			12
Confl. Bikes (#/hr)									12			6
Turn Type	Split	NA		Prot		Perm		NA		pm+pt	NA	
Protected Phases	4	4		3				2		1	6	
Permitted Phases						3				6		
Actuated Green, G (s)	19.6	19.6		16.6		16.6		24.4		32.7	32.7	
Effective Green, g (s)	19.6	19.6		16.6		16.6		24.4		32.7	32.7	
Actuated g/C Ratio	0.24	0.24		0.20		0.20		0.29		0.39	0.39	
Clearance Time (s)	4.9	4.9		4.4		4.4		4.9		4.4	4.9	
Vehicle Extension (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lane Grp Cap (vph)	417	437		353		302		882		321	1392	
v/s Ratio Prot	0.02	c0.18		c0.14				c0.10		c0.01	0.06	
v/s Ratio Perm						0.12				0.10		
v/c Ratio	0.09	0.78		0.71		0.58		0.33		0.27	0.14	
Uniform Delay, d1	24.8	29.7		31.0		30.0		23.0		16.4	16.2	
Progression Factor	1.00	1.00		1.00		1.00		1.00		1.00	1.00	
Incremental Delay, d2	0.0	8.3		5.6		1.8		1.0		0.1	0.2	
Delay (s)	24.8	38.1		36.7		31.9		24.0		16.6	16.4	
Level of Service	C	D		D		C		C		B	B	
Approach Delay (s/veh)		36.7			34.1			24.0			16.5	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	83.1	Sum of lost time (s)	23.1
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

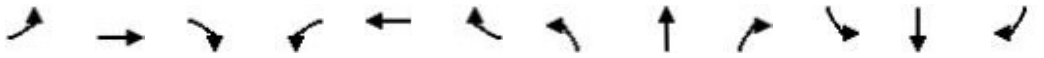
Intersection	
Int Delay, s/veh	2.1

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	205	312	263	113	0	1
Future Vol, veh/h	205	312	263	113	0	1
Conflicting Peds, #/hr	0	0	0	13	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	223	339	286	123	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	422	0	-	0	-	218
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	1134	-	-	-	0	786
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1120	-	-	-	-	776
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SE
HCM Control Delay, s/v	3.6	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1120	-	776	-	-
HCM Lane V/C Ratio	0.199	-	0.001	-	-
HCM Control Delay (s/veh)	9	-	9.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	0.7	-	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	217	67	278	230	72	100	117	164	53	75	40
Future Volume (veh/h)	28	217	67	278	230	72	100	117	164	53	75	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.89	1.00		0.92	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	236	73	302	250	78	109	127	178	58	82	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	1294	492	353	617	467	139	861	906	138	726	317
Arrive On Green	0.03	0.25	0.25	0.10	0.33	0.33	0.08	0.24	0.24	0.04	0.20	0.20
Sat Flow, veh/h	1781	5106	1453	3456	1870	1417	1781	3554	2561	3456	3554	1550
Grp Volume(v), veh/h	30	236	73	302	250	78	109	127	178	58	82	43
Grp Sat Flow(s),veh/h/ln	1781	1702	1453	1728	1870	1417	1781	1777	1281	1728	1777	1550
Q Serve(g_s), s	1.1	2.3	2.3	5.6	6.7	2.5	3.9	1.8	3.2	1.1	1.2	1.5
Cycle Q Clear(g_c), s	1.1	2.3	2.3	5.6	6.7	2.5	3.9	1.8	3.2	1.1	1.2	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	1294	492	353	617	467	139	861	906	138	726	317
V/C Ratio(X)	0.65	0.18	0.15	0.86	0.41	0.17	0.78	0.15	0.20	0.42	0.11	0.14
Avail Cap(c_a), veh/h	168	2876	942	353	1068	809	154	2111	1807	278	2089	911
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	18.9	15.2	28.5	16.8	15.4	29.2	19.2	14.9	30.3	20.9	21.0
Incr Delay (d2), s/veh	5.7	0.1	0.2	17.5	0.2	0.1	18.1	0.1	0.1	0.8	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.9	0.7	3.0	2.6	0.7	2.2	0.7	0.8	0.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.9	19.0	15.4	46.1	17.0	15.5	47.3	19.3	15.0	31.0	21.0	21.1
LnGrp LOS	D	B	B	D	B	B	D	B	B	C	C	C
Approach Vol, veh/h		339			630			414			183	
Approach Delay, s/veh		19.8			30.7			24.8			24.2	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	22.3	10.5	19.9	7.1	27.2	8.0	22.4
Change Period (Y+Rc), s	5.4	5.9	5.4	6.7	5.4	5.9	5.4	6.7
Max Green Setting (Gmax), s	6.6	36.4	5.6	38.0	6.1	36.9	5.2	38.4
Max Q Clear Time (g_c+I1), s	7.6	4.3	5.9	3.5	3.1	8.7	3.1	5.2
Green Ext Time (p_c), s	0.0	2.3	0.0	0.3	0.0	1.2	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	26.0
HCM 6th LOS	C

Notes

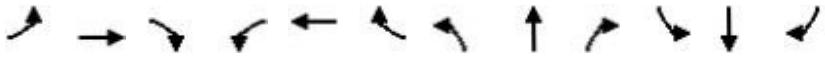
User approved pedestrian interval to be less than phase max green.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	812	1493	562	0	0	1888
Future Volume (vph)	812	1493	562	0	0	1888
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	7.5			7.5
Lane Util. Factor	0.97	0.88	0.91			0.86
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	2787	5085			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	2787	5085			6408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	883	1623	611	0	0	2052
RTOR Reduction (vph)	0	32	0	0	0	0
Lane Group Flow (vph)	883	1591	611	0	0	2052
Confl. Peds. (#/hr)				5		
Confl. Bikes (#/hr)				2		
Turn Type	Prot	custom	NA			NA
Protected Phases	8	1 8	2			6
Permitted Phases						
Actuated Green, G (s)	44.9	76.6	19.3			51.0
Effective Green, g (s)	44.9	76.6	19.3			51.0
Actuated g/C Ratio	0.40	0.69	0.17			0.46
Clearance Time (s)	7.5		7.5			7.5
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	1389	1925	884			2946
v/s Ratio Prot	0.26	c0.57	0.12			c0.32
v/s Ratio Perm						
v/c Ratio	0.63	0.82	0.69			0.69
Uniform Delay, d1	26.4	12.3	43.0			23.8
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.7	2.9	1.8			0.5
Delay (s)	27.1	15.2	44.8			24.3
Level of Service	C	B	D			C
Approach Delay (s/veh)	19.4		44.8			24.3
Approach LOS	B		D			C

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	110.9	Sum of lost time (s)	22.5
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	245	316	32	285	411	330	438	38	455	497	320
Future Volume (veh/h)	294	245	316	32	285	411	330	438	38	455	497	320
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	326	258	343	35	310	447	359	476	41	495	540	348
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	802	421	681	274	546	663	756	562	48	933	453	292
Arrive On Green	0.23	0.23	0.23	0.15	0.15	0.15	0.22	0.17	0.17	0.27	0.22	0.22
Sat Flow, veh/h	3563	1870	1486	1781	3554	1532	3456	3306	284	3456	2048	1318
Grp Volume(v), veh/h	326	258	343	35	310	447	359	255	262	495	469	419
Grp Sat Flow(s),veh/h/ln	1781	1870	1486	1781	1777	1532	1728	1777	1812	1728	1777	1589
Q Serve(g_s), s	12.5	19.8	26.7	2.7	12.9	0.0	14.5	22.3	22.4	19.5	35.4	35.4
Cycle Q Clear(g_c), s	12.5	19.8	26.7	2.7	12.9	0.0	14.5	22.3	22.4	19.5	35.4	35.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.83
Lane Grp Cap(c), veh/h	802	421	681	274	546	663	756	302	308	933	393	352
V/C Ratio(X)	0.41	0.61	0.50	0.13	0.57	0.67	0.47	0.84	0.85	0.53	1.19	1.19
Avail Cap(c_a), veh/h	868	456	709	345	689	725	756	430	438	933	393	352
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	55.7	32.2	58.5	62.8	37.0	54.5	64.3	64.4	49.8	62.3	62.3
Incr Delay (d2), s/veh	0.9	4.3	1.6	0.8	3.3	4.5	2.0	7.9	8.3	0.6	108.9	111.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	9.8	10.0	1.3	6.1	15.0	6.6	10.8	11.1	8.6	27.9	25.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.8	60.0	33.8	59.2	66.1	41.5	56.5	72.3	72.7	50.3	171.2	173.9
LnGrp LOS	D	E	C	E	E	D	E	E	E	D	F	F
Approach Vol, veh/h		927			792			876			1383	
Approach Delay, s/veh		48.1			51.9			65.9			128.7	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	40.9	48.1	32.1	29.5	39.9	40.3
Change Period (Y+Rc), s	4.9	4.9	* 4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	39.0	32.1	* 39	31.0	35.0	35.4
Max Q Clear Time (g_c+I1), s	28.7	21.5	24.4	14.9	16.5	37.4
Green Ext Time (p_c), s	5.8	1.4	2.0	8.2	1.0	0.0

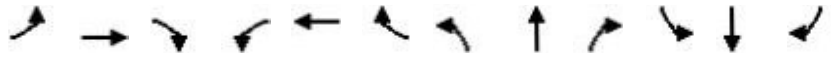
Intersection Summary	
HCM 6th Ctrl Delay, s/veh	80.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



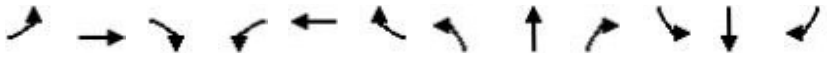
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	663	0	6	548	105	0	0	0	81	0	101
Future Volume (veh/h)	113	663	0	6	548	105	0	0	0	81	0	101
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	123	721	0	7	596	114				88	0	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	131	1991	0	81	1574	294				714	0	629
Arrive On Green	0.07	0.39	0.00	0.09	0.74	0.74				0.40	0.00	0.40
Sat Flow, veh/h	1781	5274	0	1781	4279	801				1781	0	1568
Grp Volume(v), veh/h	123	721	0	7	471	239				88	0	110
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1676				1781	0	1568
Q Serve(g_s), s	6.2	9.0	0.0	0.3	4.6	4.7				2.8	0.0	4.1
Cycle Q Clear(g_c), s	6.2	9.0	0.0	0.3	4.6	4.7				2.8	0.0	4.1
Prop In Lane	1.00		0.00	1.00		0.48				1.00		1.00
Lane Grp Cap(c), veh/h	131	1991	0	81	1252	616				714	0	629
V/C Ratio(X)	0.94	0.36	0.00	0.09	0.38	0.39				0.12	0.00	0.17
Avail Cap(c_a), veh/h	131	1991	0	91	1252	616				714	0	629
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.00	0.87	0.87	0.87				1.00	0.00	1.00
Uniform Delay (d), s/veh	41.5	19.5	0.0	39.2	8.1	8.2				17.0	0.0	17.4
Incr Delay (d2), s/veh	52.0	0.4	0.0	0.1	0.8	1.6				0.4	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	3.5	0.0	0.1	1.5	1.6				1.2	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	93.5	19.9	0.0	39.3	8.9	9.7				17.3	0.0	18.0
LnGrp LOS	F	B		D	A	A				B		B
Approach Vol, veh/h		844			717						198	
Approach Delay, s/veh		30.6			9.5						17.7	
Approach LOS		C			A						B	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	9.0	40.0		41.0	11.0	38.0
Change Period (Y+Rc), s	4.9	* 4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	4.1	* 35		36.1	6.6	33.1
Max Q Clear Time (g_c+I1), s	2.3	11.0		6.1	8.2	6.7
Green Ext Time (p_c), s	0.0	6.0		0.5	0.0	5.8

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		20.5
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



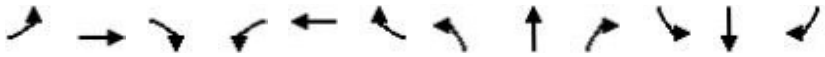
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	513	97	109	564	120	109	130	112	120	40	160
Future Volume (veh/h)	170	513	97	109	564	120	109	130	112	120	40	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.84	1.00		0.81	1.00		0.71	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	185	558	105	118	613	130	118	141	122	130	43	174
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	1282	232	133	1200	244	589	254	220	139	25	102
Arrive On Green	0.17	0.61	0.61	0.07	0.29	0.29	0.33	0.33	0.33	0.08	0.08	0.08
Sat Flow, veh/h	1781	4207	760	1781	4070	828	1781	767	664	1781	324	1311
Grp Volume(v), veh/h	185	447	216	118	508	235	118	0	263	130	0	217
Grp Sat Flow(s),veh/h/ln	1781	1702	1563	1781	1702	1495	1781	0	1431	1781	0	1634
Q Serve(g_s), s	7.6	6.3	6.7	5.9	11.1	11.8	4.3	0.0	13.6	6.5	0.0	7.0
Cycle Q Clear(g_c), s	7.6	6.3	6.7	5.9	11.1	11.8	4.3	0.0	13.6	6.5	0.0	7.0
Prop In Lane	1.00		0.49	1.00		0.55	1.00		0.46	1.00		0.80
Lane Grp Cap(c), veh/h	150	1037	476	133	1003	440	589	0	473	139	0	127
V/C Ratio(X)	1.23	0.43	0.45	0.89	0.51	0.53	0.20	0.00	0.56	0.94	0.00	1.71
Avail Cap(c_a), veh/h	150	1037	476	133	1003	440	614	0	493	139	0	127
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	0.49	0.00	0.49	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	13.4	13.5	41.3	26.3	26.5	21.6	0.0	24.7	41.3	0.0	41.5
Incr Delay (d2), s/veh	146.8	1.3	3.0	45.6	1.8	4.6	0.0	0.0	0.3	57.2	0.0	349.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	2.1	2.3	4.2	4.6	4.6	1.8	0.0	4.5	5.0	0.0	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	184.2	14.7	16.5	86.8	28.1	31.1	21.6	0.0	25.0	98.5	0.0	390.8
LnGrp LOS	F	B	B	F	C	C	C		C	F		F
Approach Vol, veh/h		848			861			381			347	
Approach Delay, s/veh		52.1			37.0			24.0			281.3	
Approach LOS		D			D			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	31.4		34.7	11.1	32.3		11.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	7.6	25.3		31.0	6.7	26.2		7.0				
Max Q Clear Time (g_c+I1), s	9.6	13.8		15.6	7.9	8.7		9.0				
Green Ext Time (p_c), s	0.0	5.6		1.2	0.0	6.5		0.0				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	75.0
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	515	58	81	517	70	105	30	78	150	30	140
Future Volume (veh/h)	120	515	58	81	517	70	105	30	78	150	30	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.57	1.00		0.86	1.00		0.71	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	560	63	88	562	76	114	33	85	163	33	152
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	1125	118	112	1050	138	481	139	488	248	39	180
Arrive On Green	0.09	0.26	0.26	0.06	0.23	0.23	0.34	0.34	0.34	0.14	0.14	0.14
Sat Flow, veh/h	1781	4330	454	1781	4471	588	1396	404	1128	1781	281	1294
Grp Volume(v), veh/h	130	432	191	88	424	214	147	0	85	163	0	185
Grp Sat Flow(s),veh/h/ln	1781	1702	1381	1781	1702	1655	1801	0	1128	1781	0	1575
Q Serve(g_s), s	7.1	10.6	11.8	4.8	10.8	11.2	5.8	0.0	4.8	8.6	0.0	11.3
Cycle Q Clear(g_c), s	7.1	10.6	11.8	4.8	10.8	11.2	5.8	0.0	4.8	8.6	0.0	11.3
Prop In Lane	1.00		0.33	1.00		0.36	0.78		1.00	1.00		0.82
Lane Grp Cap(c), veh/h	157	885	359	112	799	389	620	0	488	248	0	220
V/C Ratio(X)	0.83	0.49	0.53	0.78	0.53	0.55	0.24	0.00	0.17	0.66	0.00	0.84
Avail Cap(c_a), veh/h	157	885	359	186	799	389	656	0	511	325	0	287
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.3	31.0	31.4	45.6	33.0	33.2	23.1	0.0	18.8	40.3	0.0	41.5
Incr Delay (d2), s/veh	27.9	1.9	5.6	4.5	2.5	5.5	0.1	0.0	0.1	1.2	0.0	12.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	4.5	4.4	2.2	4.6	5.0	2.4	0.0	1.2	3.8	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.2	32.9	37.0	50.1	35.6	38.7	23.2	0.0	18.8	41.4	0.0	54.3
LnGrp LOS	E	C	D	D	D	D	C		B	D		D
Approach Vol, veh/h		753			726			232			348	
Approach Delay, s/veh		40.7			38.3			21.6			48.3	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	30.6		18.7	13.1	28.1		38.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	10.3	21.6		18.0	8.7	23.2		36.0				
Max Q Clear Time (g_c+I1), s	6.8	13.8		13.3	9.1	13.2		7.8				
Green Ext Time (p_c), s	0.0	2.9		0.5	0.0	2.0		0.8				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	39.0
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	716	23	117	840	0	101
Future Vol, veh/h	716	23	117	840	0	101
Conflicting Peds, #/hr	0	80	0	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	778	25	127	913	0	110

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	883	0	-	485
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	5.34	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.12	-	-	3.92
Pot Cap-1 Maneuver	-	-	446	-	0	452
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	412	-	-	416
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.2	16.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	412	-
HCM Lane V/C Ratio	0.264	-	-	0.309	-
HCM Control Delay (s/veh)	16.7	-	-	17.6	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q (veh)	1	-	-	1.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	731	12	219	902	30	43	20	217	30	110	210
Future Volume (veh/h)	40	731	12	219	902	30	43	20	217	30	110	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.80	1.00		1.00	1.00		0.94	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	795	13	238	980	33	47	22	236	33	120	228
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	1745	28	236	1985	67	76	22	521	55	165	557
Arrive On Green	0.07	0.34	0.34	0.13	0.39	0.39	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1781	5151	84	1781	5073	171	1	63	1484	0	470	1585
Grp Volume(v), veh/h	43	525	283	238	657	356	69	0	236	153	0	228
Grp Sat Flow(s),veh/h/ln	1781	1702	1831	1781	1702	1840	64	0	1484	470	0	1585
Q Serve(g_s), s	1.8	9.6	9.7	10.6	11.7	11.7	0.0	0.0	9.8	0.0	0.0	8.7
Cycle Q Clear(g_c), s	1.8	9.6	9.7	10.6	11.7	11.7	28.1	0.0	9.8	28.1	0.0	8.7
Prop In Lane	1.00		0.05	1.00		0.09	0.68		1.00	0.22		1.00
Lane Grp Cap(c), veh/h	131	1153	620	236	1332	720	98	0	521	220	0	557
V/C Ratio(X)	0.33	0.45	0.46	1.01	0.49	0.49	0.70	0.00	0.45	0.70	0.00	0.41
Avail Cap(c_a), veh/h	140	1153	620	236	1332	720	98	0	521	220	0	557
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.2	20.7	20.7	34.7	18.4	18.4	31.2	0.0	20.0	21.1	0.0	19.7
Incr Delay (d2), s/veh	1.4	1.3	2.4	19.6	0.1	0.2	17.1	0.0	0.2	7.8	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.8	4.3	5.7	4.3	4.6	1.8	0.0	3.3	2.4	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.6	22.0	23.1	54.3	18.5	18.6	48.3	0.0	20.2	28.9	0.0	19.8
LnGrp LOS	D	C	C	F	B	B	D		C	C		B
Approach Vol, veh/h		851			1251			305			381	
Approach Delay, s/veh		23.1			25.3			26.6			23.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	32.0		33.0	10.8	36.2		33.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	10.6	27.1		28.1	6.3	* 31		28.1				
Max Q Clear Time (g_c+I1), s	12.6	11.7		30.1	3.8	13.7		30.1				
Green Ext Time (p_c), s	0.0	7.4		0.0	0.0	8.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			24.5									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



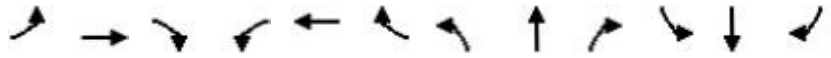
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	540	109	166	563	70	147	135	176	37	123	64
Future Volume (veh/h)	67	540	109	166	563	70	147	135	176	37	123	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.94	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	587	118	180	612	76	154	156	191	40	134	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	1861	814	231	1331	165	259	272	323	243	256	206
Arrive On Green	0.17	0.52	0.52	0.02	0.14	0.14	0.15	0.15	0.15	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1554	3456	3164	392	1781	1870	1497	1781	1870	1505
Grp Volume(v), veh/h	73	587	118	180	343	345	154	156	191	40	134	70
Grp Sat Flow(s),veh/h/ln	1781	1777	1554	1728	1777	1779	1781	1870	1497	1781	1870	1505
Q Serve(g_s), s	5.3	14.1	5.9	7.8	26.6	26.8	12.1	11.7	17.3	3.0	10.0	6.3
Cycle Q Clear(g_c), s	5.3	14.1	5.9	7.8	26.6	26.8	12.1	11.7	17.3	3.0	10.0	6.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	1861	814	231	747	748	259	272	323	243	256	206
V/C Ratio(X)	0.25	0.32	0.14	0.78	0.46	0.46	0.59	0.57	0.59	0.16	0.52	0.34
Avail Cap(c_a), veh/h	297	1861	814	498	747	748	298	313	356	441	463	372
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.34	0.84	0.84	0.84	1.00	1.00	1.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	54.3	20.4	18.4	72.3	48.9	48.9	60.0	59.8	53.4	57.2	60.2	58.6
Incr Delay (d2), s/veh	0.1	0.2	0.1	1.8	1.7	1.7	1.1	0.7	1.2	0.1	0.5	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	6.0	2.2	3.6	13.2	13.2	5.6	5.6	6.7	1.4	4.8	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.4	20.5	18.5	74.1	50.6	50.7	61.1	60.5	54.5	57.3	60.7	58.9
LnGrp LOS	D	C	B	E	D	D	E	E	D	E	E	E
Approach Vol, veh/h		778			868			501			244	
Approach Delay, s/veh		23.4			55.5			58.4			59.6	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.4	83.5		25.4	29.9	68.0		26.7
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9
Max Green Setting (Gmax), s	21.6	47.1		37.1	5.6	* 63		25.1
Max Q Clear Time (g_c+I1), s	19.8	16.1		12.0	7.3	28.8		19.3
Green Ext Time (p_c), s	0.2	7.0		0.6	0.0	8.3		0.7

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	46.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	908	12	13	835	291	11	3	7	154	9	89
Future Volume (veh/h)	75	908	12	13	835	291	11	3	7	154	9	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	0.98		0.87
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	987	13	14	908	316	12	3	8	167	10	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	2683	35	362	1874	649	135	38	73	165	8	74
Arrive On Green	0.01	0.25	0.25	0.01	0.73	0.73	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3589	47	1781	2555	885	672	263	499	868	52	504
Grp Volume(v), veh/h	82	489	511	14	630	594	23	0	0	274	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1860	1781	1777	1663	1434	0	0	1424	0	0
Q Serve(g_s), s	1.7	34.2	34.2	0.3	22.0	22.2	0.0	0.0	0.0	20.2	0.0	0.0
Cycle Q Clear(g_c), s	1.7	34.2	34.2	0.3	22.0	22.2	1.7	0.0	0.0	21.9	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.53	0.52		0.35	0.61		0.35
Lane Grp Cap(c), veh/h	361	1328	1390	362	1303	1220	246	0	0	247	0	0
V/C Ratio(X)	0.23	0.37	0.37	0.04	0.48	0.49	0.09	0.00	0.00	1.11	0.00	0.00
Avail Cap(c_a), veh/h	678	1328	1390	389	1303	1220	246	0	0	247	0	0
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.46	0.46	0.46	1.00	0.00	0.00	0.75	0.00	0.00
Uniform Delay (d), s/veh	6.7	27.1	27.1	8.4	8.3	8.3	55.4	0.0	0.0	65.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.7	0.7	0.0	0.6	0.6	0.1	0.0	0.0	83.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	16.6	17.4	0.1	8.2	7.8	0.8	0.0	0.0	15.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.8	27.9	27.8	8.4	8.8	8.9	55.5	0.0	0.0	148.6	0.0	0.0
LnGrp LOS	A	C	C	A	A	A	E			F		
Approach Vol, veh/h		1082			1238			23			274	
Approach Delay, s/veh		26.3			8.9			55.5			148.6	
Approach LOS		C			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	117.0		26.8	8.3	114.9		26.8				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	4.1	109.8		21.9	30.6	83.3		21.9				
Max Q Clear Time (g_c+I1), s	2.3	36.2		23.9	3.7	24.2		3.7				
Green Ext Time (p_c), s	0.0	9.3		0.0	0.1	13.6		0.0				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	31.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	143	156	213	0	0
Future Volume (veh/h)	0	143	156	213	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	0	155	170	232		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1577	1407	1258	1660		
Arrive On Green	0.00	0.89	0.89	0.89		
Sat Flow, veh/h	1870	1585	1232	1870		
Grp Volume(v), veh/h	0	155	170	232		
Grp Sat Flow(s),veh/h/ln	1777	1585	1232	1870		
Q Serve(g_s), s	0.0	0.5	0.8	0.6		
Cycle Q Clear(g_c), s	0.0	0.5	1.3	0.6		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1577	1407	1258	1660		
V/C Ratio(X)	0.00	0.11	0.14	0.14		
Avail Cap(c_a), veh/h	1577	1407	1258	1660		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.0	0.3	0.4	0.3		
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.2		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.1		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	0.0	0.4	0.6	0.5		
LnGrp LOS		A	A	A		
Approach Vol, veh/h	155			402		
Approach Delay, s/veh	0.4			0.5		
Approach LOS	A			A		

Timer - Assigned Phs	2				6
Phs Duration (G+Y+Rc), s	40.0				40.0
Change Period (Y+Rc), s	4.5				4.5
Max Green Setting (Gmax), s	35.5				35.5
Max Q Clear Time (g_c+I1), s	2.5				3.3
Green Ext Time (p_c), s	1.0				2.0

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		0.5
HCM 6th LOS		A

LANE SUMMARY

Site: 1 [2050 CP PM_Kurtz Street at Hancock Street: Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Hancock Street															
Lane 1[d]	328	2.0	328	2.0	1355	0.242	100	3.9	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	328	2.0	328	2.0		0.242		3.9	LOS A	0.0	0.0				
West: Hancock Street															
Lane 1[d]	167	2.0	167	2.0	1144	0.146	100	4.4	LOS A	0.7	17.0	Full	1600	0.0	0.0
Approach	167	2.0	167	2.0		0.146		4.4	LOS A	0.7	17.0				
All Vehicles	496	2.0	496	2.0		0.242		4.0	LOS A	0.7	17.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Hancock Street

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	160	168	328	2.0	1355	0.242	100	NA	NA
Approach	160	168	328	2.0		0.242			

West: Hancock Street

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	166	167	2.0	1144	0.146	100	NA	NA
Approach	1	166	167	2.0		0.146			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	496	2.0	0.242

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0
West: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0

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Project: K:\SND_TPTO\195497001_Midway Rising\ANALYSIS\SIDRA\Kurtz at Hancock.sip9

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	239	0	0	0	0	0	0	0	156	0	0
Future Vol, veh/h	63	239	0	0	0	0	0	0	0	156	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	260	0	0	0	0	0	0	0	170	0	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	9.3	0	9.4
HCM LOS	A	-	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	44%	0%	100%
Vol Thru, %	100%	56%	100%	0%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	143	159	156
LT Vol	0	63	0	156
Through Vol	0	80	159	0
RT Vol	0	0	0	0
Lane Flow Rate	0	155	173	170
Geometry Grp	2	5	5	2
Degree of Util (X)	0	0.224	0.239	0.231
Departure Headway (Hd)	4.936	5.189	4.967	4.912
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	693	724	733
Service Time	2.967	2.912	2.691	2.93
HCM Lane V/C Ratio	0	0.224	0.239	0.232
HCM Control Delay, s/veh	8	9.4	9.3	9.4
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.9	0.9	0.9

Intersection	
Intersection Delay, s/veh	108.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	447	260	0	0	0	0	0	0	56	720	0
Future Vol, veh/h	19	447	260	0	0	0	0	0	0	56	720	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	486	283	0	0	0	0	0	0	61	783	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	32.8	0	179.8
HCM LOS	D	-	F

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	8%	0%	7%
Vol Thru, %	100%	92%	46%	93%
Vol Right, %	0%	0%	54%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	243	484	776
LT Vol	0	19	0	56
Through Vol	0	224	224	720
RT Vol	0	0	260	0
Lane Flow Rate	0	264	526	843
Geometry Grp	2	5	5	2
Degree of Util (X)	0	0.473	0.882	1.335
Departure Headway (Hd)	7.442	7.213	6.788	5.698
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	503	536	633
Service Time	5.442	4.913	4.488	3.769
HCM Lane V/C Ratio	0	0.525	0.981	1.332
HCM Control Delay, s/veh	10.4	16.2	41.2	179.8
HCM Lane LOS	N	C	E	F
HCM 95th-tile Q	0	2.5	9.9	35

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	67	276	26	60	13	0	0	84	10
Future Vol, veh/h	0	0	0	67	276	26	60	13	0	0	84	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	73	300	28	65	14	0	0	91	11
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	9.8	8.9	8.7
HCM LOS	A	A	A

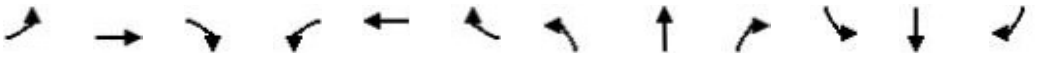
Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	82%	33%	0%	0%
Vol Thru, %	18%	67%	84%	89%
Vol Right, %	0%	0%	16%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	205	164	94
LT Vol	60	67	0	0
Through Vol	13	138	138	84
RT Vol	0	0	26	10
Lane Flow Rate	79	223	178	102
Geometry Grp	2	5	5	2
Degree of Util (X)	0.114	0.319	0.241	0.139
Departure Headway (Hd)	5.156	5.152	4.876	4.9
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	695	697	736	732
Service Time	3.187	2.884	2.608	2.931
HCM Lane V/C Ratio	0.114	0.32	0.242	0.139
HCM Control Delay, s/veh	8.9	10.3	9.2	8.7
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.4	1.4	0.9	0.5

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	21	258	37	18	6	0	0	23	86
Future Vol, veh/h	0	0	0	21	258	37	18	6	0	0	23	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	23	280	40	20	7	0	0	25	93
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.9	8.2	8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	75%	14%	0%	0%
Vol Thru, %	25%	86%	78%	21%
Vol Right, %	0%	0%	22%	79%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	150	166	109
LT Vol	18	21	0	0
Through Vol	6	129	129	23
RT Vol	0	0	37	86
Lane Flow Rate	26	163	180	118
Geometry Grp	2	5	5	2
Degree of Util (X)	0.036	0.22	0.232	0.141
Departure Headway (Hd)	5.001	4.854	4.627	4.273
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	719	730	765	844
Service Time	3.009	2.648	2.422	2.275
HCM Lane V/C Ratio	0.036	0.223	0.235	0.14
HCM Control Delay, s/veh	8.2	9	8.8	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.8	0.9	0.5



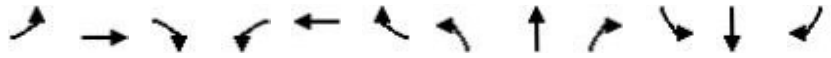
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	117	198	168	46	1778	16	0	1853	101
Future Volume (veh/h)	0	0	0	117	198	168	46	1778	16	0	1853	101
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				127	215	183	50	1933	17	0	2014	110
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	2	0	2	2
Cap, veh/h				157	271	243	64	3863	34	0	3446	1060
Arrive On Green				0.19	0.19	0.19	0.07	1.00	1.00	0.00	0.67	0.67
Sat Flow, veh/h				808	1394	1250	1781	5220	46	0	5274	1571
Grp Volume(v), veh/h				287	0	238	50	1260	690	0	2014	110
Grp Sat Flow(s),veh/h/ln				1830	0	1622	1781	1702	1862	0	1702	1571
Q Serve(g_s), s				22.5	0.0	20.7	4.1	0.0	0.0	0.0	31.8	3.7
Cycle Q Clear(g_c), s				22.5	0.0	20.7	4.1	0.0	0.0	0.0	31.8	3.7
Prop In Lane				0.44		0.77	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h				356	0	316	64	2519	1378	0	3446	1060
V/C Ratio(X)				0.81	0.00	0.75	0.78	0.50	0.50	0.00	0.58	0.10
Avail Cap(c_a), veh/h				537	0	476	126	2519	1378	0	3446	1060
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.75	0.75	0.75	0.00	1.00	1.00
Uniform Delay (d), s/veh				57.7	0.0	57.0	69.0	0.0	0.0	0.0	13.1	8.5
Incr Delay (d2), s/veh				3.0	0.0	1.4	5.7	0.5	1.0	0.0	0.7	0.2
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				10.8	0.0	8.7	1.9	0.2	0.4	0.0	11.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				60.7	0.0	58.4	74.8	0.5	1.0	0.0	13.8	8.7
LnGrp LOS				E		E	E	A	A		B	A
Approach Vol, veh/h					525			2000			2124	
Approach Delay, s/veh					59.6			2.5			13.6	
Approach LOS					E			A			B	

Timer - Assigned Phs	2		4	5	6							
Phs Duration (G+Y+Rc), s	115.9		34.1	9.8	106.1							
Change Period (Y+Rc), s	4.9		4.9	4.4	4.9							
Max Green Setting (Gmax), s	96.2		44.0	10.6	81.2							
Max Q Clear Time (g_c+I1), s	2.0		24.5	6.1	33.8							
Green Ext Time (p_c), s	6.2		1.2	0.0	7.3							

Intersection Summary		
HCM 6th Ctrl Delay, s/veh	14.0	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.



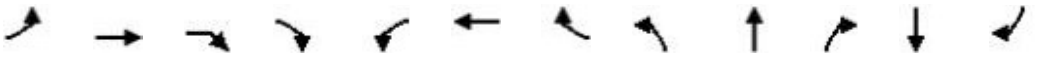
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	275	109	0	0	0	0	1626	64	91	1836	0
Future Volume (veh/h)	227	275	109	0	0	0	0	1626	64	91	1836	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	247	299	118				0	1767	70	99	1996	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	316	331	276				0	3488	138	64	4873	0
Arrive On Green	0.18	0.18	0.18				0.00	1.00	1.00	0.07	1.00	0.00
Sat Flow, veh/h	1781	1870	1559				0	5207	199	1781	6696	0
Grp Volume(v), veh/h	247	299	118				0	1193	644	99	1996	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1559				0	1702	1834	1781	1609	0
Q Serve(g_s), s	19.9	23.5	10.1				0.0	0.0	0.0	5.4	0.0	0.0
Cycle Q Clear(g_c), s	19.9	23.5	10.1				0.0	0.0	0.0	5.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	316	331	276				0	2356	1270	64	4873	0
V/C Ratio(X)	0.78	0.90	0.43				0.00	0.51	0.51	1.54	0.41	0.00
Avail Cap(c_a), veh/h	538	565	471				0	2356	1270	64	4873	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.55	0.55	0.79	0.79	0.00
Uniform Delay (d), s/veh	58.9	60.4	54.9				0.0	0.0	0.0	69.6	0.0	0.0
Incr Delay (d2), s/veh	1.6	5.9	0.4				0.0	0.4	0.8	296.6	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	11.7	4.0				0.0	0.1	0.3	7.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.6	66.3	55.3				0.0	0.4	0.8	366.2	0.2	0.0
LnGrp LOS	E	E	E					A	A	F	A	
Approach Vol, veh/h		664						1837			2095	
Approach Delay, s/veh		62.2						0.6			17.5	
Approach LOS		E						A			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.8	108.7		31.5		118.5
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9
Max Green Setting (Gmax), s	5.4	85.1		45.3		94.9
Max Q Clear Time (g_c+I1), s	7.4	2.0		25.5		2.0
Green Ext Time (p_c), s	0.0	5.1		0.7		7.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	17.2
HCM 6th LOS	B

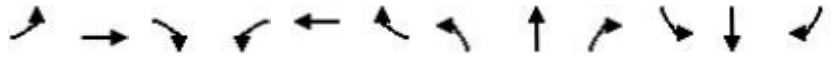
Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	374	403	263	0	179	237	7	428	1311	447	1312	607
Future Volume (vph)	374	403	263	0	179	237	7	428	1311	447	1312	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	14	12	12	12	12
Total Lost time (s)	5.9	5.9	5.9		5.9	5.9		5.4	5.9		5.9	5.9
Lane Util. Factor	0.95	0.95	1.00		0.91	0.91		0.97	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.94
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.99		1.00	0.96		1.00	0.85
Flt Protected	0.95	0.99	1.00		0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (prot)	1681	1762	1583		1610	3342		3662	4856		5085	1494
Flt Permitted	0.95	0.99	1.00		0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (perm)	1681	1762	1583		1610	3342		3662	4856		5085	1494
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	407	438	286	0	195	258	8	465	1425	486	1426	660
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	0	334
Lane Group Flow (vph)	366	479	286	0	150	310	0	465	1911	0	1426	326
Confl. Peds. (#/hr)				4			37			11		28
Confl. Bikes (#/hr)				2			3			1		1
Turn Type	Split	NA	Perm	Perm	Split	NA		Prot	NA		NA	Perm
Protected Phases	4	4			8	8		5	2		6	
Permitted Phases			4	4								6
Actuated Green, G (s)	39.3	39.3	39.3		14.9	14.9		9.6	78.1		63.1	63.1
Effective Green, g (s)	39.3	39.3	39.3		14.9	14.9		9.6	78.1		63.1	63.1
Actuated g/C Ratio	0.26	0.26	0.26		0.10	0.10		0.06	0.52		0.42	0.42
Clearance Time (s)	5.9	5.9	5.9		5.9	5.9		5.4	5.9		5.9	5.9
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lane Grp Cap (vph)	440	461	414		159	331		234	2528		2139	628
v/s Ratio Prot	0.22	c0.27			c0.09	0.09		c0.13	c0.39		0.28	
v/s Ratio Perm			0.18									0.22
v/c Ratio	0.83	1.03	0.69		0.94	0.93		1.98	0.75		0.66	0.51
Uniform Delay, d1	52.2	55.3	49.8		67.1	67.0		70.1	28.4		34.9	32.2
Progression Factor	1.00	1.00	1.00		1.15	1.15		1.36	0.31		0.61	0.97
Incremental Delay, d2	12.1	52.4	3.9		51.5	31.1		454.5	1.4		1.5	2.8
Delay (s)	64.3	107.7	53.8		129.1	108.5		550.3	10.4		22.9	34.1
Level of Service	E	F	D		F	F		F	B		C	C
Approach Delay (s/veh)		80.0				115.2			116.0		26.5	
Approach LOS		F				F			F		C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	78.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	605	229	171	682	312	286	1530	131	286	1273	193
Future Volume (veh/h)	188	605	229	171	682	312	286	1530	131	286	1273	193
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.94	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	204	658	249	186	741	339	311	1663	142	311	1384	210
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	741	321	169	831	350	357	2028	173	468	2051	311
Arrive On Green	0.02	0.07	0.07	0.09	0.23	0.23	0.03	0.14	0.14	0.14	0.46	0.46
Sat Flow, veh/h	3456	3554	1537	1781	3554	1495	3456	4768	406	3456	4452	675
Grp Volume(v), veh/h	204	658	249	186	741	339	311	1186	619	311	1058	536
Grp Sat Flow(s),veh/h/ln	1728	1777	1537	1781	1777	1495	1728	1702	1770	1728	1702	1723
Q Serve(g_s), s	8.8	27.5	18.9	14.2	30.3	24.6	13.4	50.8	51.0	12.8	36.5	36.5
Cycle Q Clear(g_c), s	8.8	27.5	18.9	14.2	30.3	24.6	13.4	50.8	51.0	12.8	36.5	36.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		0.39
Lane Grp Cap(c), veh/h	251	741	321	169	831	350	357	1448	753	468	1568	794
V/C Ratio(X)	0.81	0.89	0.78	1.10	0.89	0.97	0.87	0.82	0.82	0.66	0.67	0.68
Avail Cap(c_a), veh/h	405	862	373	169	831	350	417	1448	753	468	1568	794
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	68.1	41.5	67.9	55.6	30.4	71.4	58.9	59.0	61.6	31.7	31.7
Incr Delay (d2), s/veh	2.4	8.7	6.7	99.6	11.5	39.6	14.4	5.3	9.8	2.9	1.0	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	14.2	8.4	11.1	14.8	12.7	7.0	24.4	26.4	5.8	14.9	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.6	76.8	48.2	167.5	67.1	70.0	85.9	64.2	68.8	64.5	32.6	33.5
LnGrp LOS	E	E	D	F	E	E	F	E	E	E	C	C
Approach Vol, veh/h		1111			1266			2116			1905	
Approach Delay, s/veh		70.0			82.6			68.7			38.1	
Approach LOS		E			F			E			D	

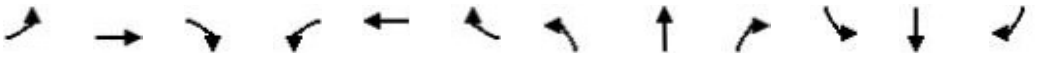
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	68.7	19.1	36.2	19.9	74.8	15.3	40.0
Change Period (Y+Rc), s	5.7	* 4.9	4.9	* 4.9	4.4	5.7	4.4	4.9
Max Green Setting (Gmax), s	17.3	* 64	14.2	* 36	18.1	61.9	17.6	33.0
Max Q Clear Time (g_c+I1), s	14.8	53.0	16.2	29.5	15.4	38.5	10.8	32.3
Green Ext Time (p_c), s	0.1	3.9	0.0	1.3	0.1	4.1	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	62.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	430	6	172	0	265	0	514	338	117	230	0
Future Volume (vph)	100	430	6	172	0	265	0	514	338	117	230	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.4		4.4		4.9		4.4	4.9	
Lane Util. Factor	1.00	1.00		1.00		1.00		0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00		0.93		0.88		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00		1.00	1.00	
Frt	1.00	0.99		1.00		0.85		0.94		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	1859		1770		1478		2961		1770	3539	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.15	1.00	
Satd. Flow (perm)	1770	1859		1770		1478		2961		286	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	467	7	187	0	288	0	559	367	127	250	0
RTOR Reduction (vph)	0	0	0	0	0	143	0	58	0	0	0	0
Lane Group Flow (vph)	109	474	0	187	0	145	0	868	0	127	250	0
Confl. Peds. (#/hr)						22			75			12
Confl. Bikes (#/hr)									12			6
Turn Type	Split	NA		Prot		Perm		NA		pm+pt	NA	
Protected Phases	4	4		3				2		1	6	
Permitted Phases						3				6		
Actuated Green, G (s)	38.1	38.1		17.8		17.8		60.6		79.9	79.9	
Effective Green, g (s)	38.1	38.1		17.8		17.8		60.6		79.9	79.9	
Actuated g/C Ratio	0.25	0.25		0.12		0.12		0.40		0.53	0.53	
Clearance Time (s)	4.9	4.9		4.4		4.4		4.9		4.4	4.9	
Vehicle Extension (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lane Grp Cap (vph)	449	472		210		175		1196		299	1885	
v/s Ratio Prot	0.06	c0.26		c0.11				c0.29		c0.04	0.07	
v/s Ratio Perm						0.10				0.18		
v/c Ratio	0.24	1.00		0.89		0.82		0.72		0.42	0.13	
Uniform Delay, d1	44.4	55.9		65.1		64.6		37.6		22.2	17.6	
Progression Factor	1.06	0.92		1.00		1.00		0.78		1.00	1.00	
Incremental Delay, d2	0.0	40.2		33.3		25.4		1.7		0.3	0.1	
Delay (s)	47.2	91.9		98.4		90.0		31.4		22.5	17.7	
Level of Service	D	F		F		F		C		C	B	
Approach Delay (s/veh)		83.6			93.3			31.4			19.3	
Approach LOS		F			F			C			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	54.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

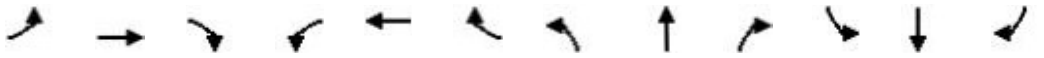
Intersection	
Int Delay, s/veh	2

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	274	627	346	125	0	1
Future Vol, veh/h	274	627	346	125	0	1
Conflicting Peds, #/hr	0	0	0	13	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	298	682	376	136	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	525	0	-	0	-	269
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	1038	-	-	-	0	729
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1025	-	-	-	-	720
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	NB	SB	SE
HCM Control Delay, s/v	3	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1025	-	720	-	-
HCM Lane V/C Ratio	0.291	-	0.002	-	-
HCM Control Delay (s/veh)	9.9	-	10	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	1.2	-	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	543	118	361	239	84	164	145	581	83	295	78
Future Volume (veh/h)	58	543	118	361	239	84	164	145	581	83	295	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.89	1.00		0.93	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	590	128	392	260	91	178	158	632	90	321	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	1229	538	467	618	469	213	1068	1157	151	797	349
Arrive On Green	0.05	0.24	0.24	0.14	0.33	0.33	0.12	0.30	0.30	0.04	0.22	0.22
Sat Flow, veh/h	1781	5106	1448	3456	1870	1417	1781	3554	2595	3456	3554	1553
Grp Volume(v), veh/h	63	590	128	392	260	91	178	158	632	90	321	85
Grp Sat Flow(s),veh/h/ln	1781	1702	1448	1728	1870	1417	1781	1777	1297	1728	1777	1553
Q Serve(g_s), s	2.9	8.3	5.2	9.2	9.0	3.8	8.2	2.7	15.2	2.1	6.4	3.8
Cycle Q Clear(g_c), s	2.9	8.3	5.2	9.2	9.0	3.8	8.2	2.7	15.2	2.1	6.4	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	1229	538	467	618	469	213	1068	1157	151	797	349
V/C Ratio(X)	0.78	0.48	0.24	0.84	0.42	0.19	0.83	0.15	0.55	0.60	0.40	0.24
Avail Cap(c_a), veh/h	143	2223	820	488	929	704	222	1760	1662	289	1615	706
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	27.2	18.8	35.3	21.8	20.0	36.0	21.4	17.6	39.2	27.6	26.6
Incr Delay (d2), s/veh	6.0	0.4	0.3	11.1	0.2	0.1	21.1	0.1	0.4	1.4	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.3	1.6	4.5	3.8	1.2	4.6	1.1	4.0	0.9	2.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.5	27.6	19.0	46.3	22.0	20.1	57.1	21.5	18.0	40.7	27.8	26.7
LnGrp LOS	D	C	B	D	C	C	E	C	B	D	C	C
Approach Vol, veh/h		781			743			968			496	
Approach Delay, s/veh		27.6			34.6			25.8			29.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	26.0	15.4	25.5	9.2	33.5	9.1	31.8
Change Period (Y+Rc), s	5.4	5.9	5.4	6.7	5.4	5.9	5.4	6.7
Max Green Setting (Gmax), s	11.8	36.4	10.4	38.0	6.7	41.5	7.0	41.4
Max Q Clear Time (g_c+I1), s	11.2	10.3	10.2	8.4	4.9	11.0	4.1	17.2
Green Ext Time (p_c), s	0.1	5.8	0.0	1.3	0.0	1.3	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	29.1
HCM 6th LOS	C

Appendix I

Horizon Year (2050) Baseline (CP) Scenario 95th Percentile Queue Worksheets

Intersection: 1: Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp

Movement	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	R	R	T	T	T	T	T	T	T
Maximum Queue (ft)	284	281	384	375	229	185	48	198	191	155	60
Average Queue (ft)	179	183	192	196	130	81	6	132	122	64	12
95th Queue (ft)	262	262	314	318	191	159	34	186	182	133	41
Link Distance (ft)	2519	2519	2519	2519				1722	1722	1722	1722
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)					400						
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	T	R	L	T	T	R	L	L	T	TR
Maximum Queue (ft)	230	256	207	42	17	59	61	181	81	141	232	254
Average Queue (ft)	114	140	65	3	1	9	11	43	19	38	128	152
95th Queue (ft)	189	213	164	21	8	36	42	134	61	93	210	232
Link Distance (ft)		1924	1924	1924		608	608	608			1494	1494
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360				150				230	230		
Storage Blk Time (%)		0								0	0	
Queuing Penalty (veh)		0								0	1	

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	SB	SB	SB	SB
Directions Served	L	L	T	TR
Maximum Queue (ft)	133	165	238	274
Average Queue (ft)	28	61	126	139
95th Queue (ft)	88	129	209	234
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		

Intersection: 3: Commercial Dwy 1/Hancock St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R
Maximum Queue (ft)	135	104	104	136	39	112	203	303	65	56
Average Queue (ft)	53	44	43	55	7	46	63	178	22	25
95th Queue (ft)	108	88	90	111	26	89	141	275	57	52
Link Distance (ft)		608	608	608		956	956	956		
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	160				100					
Storage Blk Time (%)	0					0				
Queuing Penalty (veh)	0					0				

Intersection: 4: Kemper St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	TR	L	TR
Maximum Queue (ft)	172	106	164	219	146	129	147	158	150	158	218	461
Average Queue (ft)	76	50	58	94	86	59	47	113	62	59	144	245
95th Queue (ft)	144	88	118	165	149	110	119	180	118	117	254	489
Link Distance (ft)		956	956	956						702		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	440				175				100		150	
Storage Blk Time (%)					0				2	2	9	33
Queuing Penalty (veh)					0				3	2	23	53

Intersection: 5: West Dr/Frontier Dr & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (ft)	143	176	161	96	118	132	130	91	95	64	106	96
Average Queue (ft)	69	136	83	38	58	119	68	23	34	20	46	42
95th Queue (ft)	126	190	158	79	104	147	133	59	76	50	89	81
Link Distance (ft)									437			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	330				175					50	150	
Storage Blk Time (%)									7	0	0	0
Queuing Penalty (veh)									4	0	0	0

Intersection: 6: Target Dwy & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	WB
Directions Served	T	T	TR	L	T	T	T
Maximum Queue (ft)	39	39	12	66	6	6	27
Average Queue (ft)	2	3	0	24	0	0	1
95th Queue (ft)	16	18	6	56	6	4	12
Link Distance (ft)					375	375	375
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)				125			
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 7: East Dr/Greenwood St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	LT	R
Maximum Queue (ft)	75	133	167	104	154	143	104	125	74	74	70	40
Average Queue (ft)	23	60	79	35	83	39	43	64	19	31	15	16
95th Queue (ft)	58	116	145	85	142	99	89	109	54	61	45	35
Link Distance (ft)		375	375	375		1067	1067	1067	921		334	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	125				125					100		100
Storage Blk Time (%)		0			3	0			0	0	0	
Queuing Penalty (veh)		0			5	0			0	0	0	

Intersection: 8: Kemper St & Midway Dr

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	L	T	TR	L	LT	R	L
Maximum Queue (ft)	122	227	220	82	113	110	203	192	163	191	75	64
Average Queue (ft)	54	97	103	21	50	14	98	99	51	95	31	19
95th Queue (ft)	104	190	193	56	94	59	177	175	126	164	63	49
Link Distance (ft)		1494	1494				1839	1839		355	355	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	320			150	250	250			90			100
Storage Blk Time (%)			5				0		1	13		
Queuing Penalty (veh)			4				0		2	8		

Intersection: 8: Kemper St & Midway Dr

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	105	64
Average Queue (ft)	41	26
95th Queue (ft)	89	55
Link Distance (ft)	702	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		115
Storage Blk Time (%)	1	
Queuing Penalty (veh)	1	

Intersection: 9: Commercial Dwy 2/East Dr & Midway Dr

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	104	239	240	32	267	281	48	156
Average Queue (ft)	20	64	83	6	113	133	10	51
95th Queue (ft)	61	164	183	22	227	240	33	111
Link Distance (ft)		1839	1839		968	968	270	921
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	90			100				
Storage Blk Time (%)	0	5			9			
Queuing Penalty (veh)	0	2			1			

Intersection: 10: Hancock St & Channel Way

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 11: Kurtz St & Hancock St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 12: H1 Dwy 2/Sherman St & Kurtz St

Movement	EB	EB	SB
Directions Served	LT	TR	LT
Maximum Queue (ft)	60	73	54
Average Queue (ft)	33	39	32
95th Queue (ft)	51	62	44
Link Distance (ft)			310
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Greenwood St & Kurtz St

Movement	EB	EB	SB
Directions Served	LT	TR	LT
Maximum Queue (ft)	55	98	123
Average Queue (ft)	31	53	59
95th Queue (ft)	44	81	96
Link Distance (ft)	455	455	320
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Sherman St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	66	70	39	55
Average Queue (ft)	36	44	26	25
95th Queue (ft)	54	65	44	50
Link Distance (ft)	468	468	310	513
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Greenwood St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	86	90	30	71
Average Queue (ft)	48	49	10	40
95th Queue (ft)	75	77	32	61
Link Distance (ft)	249	249	320	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Camino Del Rio W & Moore St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 17: Camino Del Rio W & Hancock St

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	TR	L	T	T	TR	T	T	T	R
Maximum Queue (ft)	168	254	99	190	184	180	162	156	155	118
Average Queue (ft)	72	99	15	88	92	81	140	115	125	20
95th Queue (ft)	136	191	55	162	157	150	163	170	176	76
Link Distance (ft)	526	526		288	288	288				
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			100							130
Storage Blk Time (%)			0	9					18	0
Queuing Penalty (veh)			0	3					13	0

Intersection: 18: Camino Del Rio W & Kurtz St

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T	T	T
Maximum Queue (ft)	137	245	96	208	216	237	174	314	284	128	66
Average Queue (ft)	60	140	15	59	71	68	131	144	69	11	7
95th Queue (ft)	110	225	72	153	168	176	195	313	234	62	35
Link Distance (ft)	541	541		348	348	348		288	288	288	288
Upstream Blk Time (%)								2	0		
Queuing Penalty (veh)								11	1		
Storage Bay Dist (ft)			200				100				
Storage Blk Time (%)		2					35	5			
Queuing Penalty (veh)		1					172	10			

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	B45
Directions Served	L	LT	R	L	LT	TR	L	L	T	T	TR	T
Maximum Queue (ft)	207	523	274	195	232	215	164	170	177	198	243	4
Average Queue (ft)	109	177	134	80	137	120	79	91	60	82	111	0
95th Queue (ft)	184	349	229	154	206	192	143	148	136	166	199	0
Link Distance (ft)	1067	1067			314	314			362	362	362	252
Upstream Blk Time (%)		0			0							
Queuing Penalty (veh)		0			0							
Storage Bay Dist (ft)			300	180			260	260				
Storage Blk Time (%)		1	0	0	3							
Queuing Penalty (veh)		1	0	0	3							

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	B45	SB	SB	SB	SB
Directions Served	T	T	T	T	R
Maximum Queue (ft)	15	387	382	368	224
Average Queue (ft)	1	188	186	164	88
95th Queue (ft)	8	357	350	322	180
Link Distance (ft)	252	348	348	348	348
Upstream Blk Time (%)		1	1	1	
Queuing Penalty (veh)		7	5	3	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 20: Rosecrans St & Midway Dr

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T
Maximum Queue (ft)	121	152	198	197	147	298	343	304	221	209	354	440
Average Queue (ft)	46	72	81	93	60	184	187	160	85	113	179	274
95th Queue (ft)	97	129	155	164	114	305	313	267	161	187	310	393
Link Distance (ft)			968	968								
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100	100			240	250			180	280	280	
Storage Blk Time (%)	1	4	6	0		10	1	5	0		0	8
Queuing Penalty (veh)	1	6	9	0		25	1	11	1		0	24

Intersection: 20: Rosecrans St & Midway Dr

Movement	NB	NB	SB	SB	SB	SB	SB	B45	B45	B45
Directions Served	T	TR	L	L	T	T	TR	T	T	T
Maximum Queue (ft)	398	383	193	235	271	284	292	121	140	154
Average Queue (ft)	240	237	82	112	183	187	189	6	8	11
95th Queue (ft)	346	363	161	210	269	287	301	59	61	72
Link Distance (ft)					252	252	252	362	362	362
Upstream Blk Time (%)				0	2	4	5			
Queuing Penalty (veh)				0	10	22	29			
Storage Bay Dist (ft)			320	320						
Storage Blk Time (%)				0	2					
Queuing Penalty (veh)				0	4					

Intersection: 21: Rosecrans St & N Evergreen St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: Rosecrans St & Lytton St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 23: Rosecrans St & Kurtz St

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	R	T	TR	L	T	T
Maximum Queue (ft)	98	275	320	145	132	184	100	120	65
Average Queue (ft)	29	209	133	97	55	88	34	40	18
95th Queue (ft)	75	300	245	163	110	149	74	87	48
Link Distance (ft)	261	261			314	314		265	265
Upstream Blk Time (%)		4							
Queuing Penalty (veh)		9							
Storage Bay Dist (ft)				70			100		
Storage Blk Time (%)			29	7			0	0	
Queuing Penalty (veh)			82	17			0	0	

Intersection: 24: Rosecrans St & Hancock St

Movement	NB	SB	SE
Directions Served	L	TR	R
Maximum Queue (ft)	85	18	24
Average Queue (ft)	34	1	1
95th Queue (ft)	69	9	9
Link Distance (ft)		645	526
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	L	T	R	L	T	T
Maximum Queue (ft)	44	37	101	114	59	114	112	104	60	130	70	46
Average Queue (ft)	7	5	32	59	23	92	72	68	12	52	21	4
95th Queue (ft)	29	23	72	95	50	115	134	121	37	109	53	23
Link Distance (ft)			242	242								
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	120	120			100	150	150			150		
Storage Blk Time (%)			0	0						1		
Queuing Penalty (veh)			0	0						0		

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	R	R	L	L	T	T	R
Maximum Queue (ft)	107	74	24	71	72	29	30
Average Queue (ft)	34	10	6	24	19	3	3
95th Queue (ft)	84	45	21	56	49	15	16
Link Distance (ft)					1531	1531	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		320	230	230			65
Storage Blk Time (%)						0	
Queuing Penalty (veh)						0	

Intersection: 26: Kurtz St & Pacific Hwy

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 1: Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp

Movement	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	R	R	T	T	T	T	T	T	T
Maximum Queue (ft)	384	503	1007	1007	336	288	159	341	334	289	245
Average Queue (ft)	234	241	343	345	227	172	50	254	244	200	115
95th Queue (ft)	341	391	692	694	320	265	133	326	317	278	227
Link Distance (ft)	2519	2519	2519	2519				1722	1722	1722	1722
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)					400						
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	T	R	L	T	T	R	L	L	T	TR
Maximum Queue (ft)	251	466	453	395	56	191	202	217	163	268	499	454
Average Queue (ft)	126	160	102	49	7	69	70	50	31	61	137	152
95th Queue (ft)	209	277	269	283	38	158	158	151	106	184	332	333
Link Distance (ft)		1924	1924	1924		608	608	608			1494	1494
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360				150				230	230		
Storage Blk Time (%)					0	1			0	0	5	
Queuing Penalty (veh)					0	0			0	1	17	

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	SB	SB	SB	SB
Directions Served	L	L	T	TR
Maximum Queue (ft)	264	305	320	344
Average Queue (ft)	110	141	262	317
95th Queue (ft)	229	271	356	331
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)	1	6		
Queuing Penalty (veh)	2	13		

Intersection: 3: Commercial Dwy 1/Hancock St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R
Maximum Queue (ft)	167	162	152	174	31	63	134	230	111	78
Average Queue (ft)	77	61	57	66	4	22	30	123	40	34
95th Queue (ft)	146	127	123	146	18	50	85	204	90	67
Link Distance (ft)		608	608	608		956	956	956		
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	160				100					
Storage Blk Time (%)	1	0				0				
Queuing Penalty (veh)	3	0				0				

Intersection: 4: Kemper St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	TR	L	TR
Maximum Queue (ft)	426	261	230	181	146	160	156	178	166	297	219	318
Average Queue (ft)	244	68	80	89	81	107	93	142	50	95	99	137
95th Queue (ft)	439	203	182	159	139	162	164	186	124	206	185	298
Link Distance (ft)		956	956	956						702		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	440				175				100		150	
Storage Blk Time (%)	5	0			0	0			2	9	8	9
Queuing Penalty (veh)	9	0			0	0			4	10	16	11

Intersection: 5: West Dr/Frontier Dr & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	L	TR
Maximum Queue (ft)	163	180	168	139	122	152	135	132	153	106	191	219
Average Queue (ft)	93	161	116	49	57	126	108	55	61	33	88	73
95th Queue (ft)	158	190	178	107	104	146	154	119	113	76	149	143
Link Distance (ft)									437			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	330				175					50	150	
Storage Blk Time (%)						0			19	1	1	1
Queuing Penalty (veh)						0			15	1	2	2

Intersection: 6: Target Dwy & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	WB
Directions Served	T	T	TR	L	T	T	T
Maximum Queue (ft)	46	29	6	60	6	6	6
Average Queue (ft)	3	3	0	14	0	0	0
95th Queue (ft)	24	18	4	44	5	4	4
Link Distance (ft)					375	375	375
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)				125			
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 7: East Dr/Greenwood St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LT	R	LT	R
Maximum Queue (ft)	107	231	304	233	197	1080	1083	706	86	133	355	174
Average Queue (ft)	30	119	162	119	136	443	222	101	16	41	190	48
95th Queue (ft)	78	200	266	223	231	1166	827	385	51	99	420	143
Link Distance (ft)		375	375	375		1067	1067	1067	921		334	
Upstream Blk Time (%)			0			23	10	0			42	
Queuing Penalty (veh)			0			93	43	0			0	
Storage Bay Dist (ft)	125				125					100		100
Storage Blk Time (%)		6			51	0			0	2	49	1
Queuing Penalty (veh)		2			151	1			0	1	102	2

Intersection: 8: Kemper St & Midway Dr

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	B53
Directions Served	L	T	T	R	L	L	T	TR	L	LT	R	T
Maximum Queue (ft)	394	1094	1117	225	173	255	313	250	165	436	344	465
Average Queue (ft)	217	383	350	32	61	46	45	33	113	273	121	120
95th Queue (ft)	440	1111	1090	138	147	165	182	131	204	494	342	474
Link Distance (ft)		1494	1494				1839	1839		355	355	701
Upstream Blk Time (%)		7	8							21	13	3
Queuing Penalty (veh)		31	31							0	0	0
Storage Bay Dist (ft)	320			150	250	250			90			
Storage Blk Time (%)	32	16	28			0	1		41	65		
Queuing Penalty (veh)	86	10	30			0	1		84	48		

Intersection: 8: Kemper St & Midway Dr

Movement	B53	SB	SB	SB
Directions Served	T	L	T	R
Maximum Queue (ft)	413	174	465	190
Average Queue (ft)	76	60	176	50
95th Queue (ft)	386	153	364	149
Link Distance (ft)	701		702	
Upstream Blk Time (%)	2		0	
Queuing Penalty (veh)	0		1	
Storage Bay Dist (ft)		100		115
Storage Blk Time (%)		11	37	0
Queuing Penalty (veh)		19	37	0

Intersection: 9: Commercial Dwy 2/East Dr & Midway Dr

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	164	1849	1857	27	85	103	150	936
Average Queue (ft)	40	902	906	3	15	29	46	660
95th Queue (ft)	144	2131	2137	15	53	73	167	1177
Link Distance (ft)		1839	1839		968	968	270	921
Upstream Blk Time (%)		21	21				7	47
Queuing Penalty (veh)		76	79				0	157
Storage Bay Dist (ft)	90			100				
Storage Blk Time (%)	0	66			0			
Queuing Penalty (veh)	1	50			0			

Intersection: 10: Hancock St & Channel Way

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 11: Kurtz St & Hancock St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 12: H1 Dwy 2/Sherman St & Kurtz St

Movement	EB	EB	SB
Directions Served	LT	TR	LT
Maximum Queue (ft)	70	104	116
Average Queue (ft)	38	46	40
95th Queue (ft)	66	82	101
Link Distance (ft)			310
Upstream Blk Time (%)			1
Queuing Penalty (veh)			1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Greenwood St & Kurtz St

Movement	EB	EB	SB
Directions Served	LT	TR	LT
Maximum Queue (ft)	320	366	229
Average Queue (ft)	155	229	194
95th Queue (ft)	327	379	215
Link Distance (ft)	455	455	320
Upstream Blk Time (%)		3	
Queuing Penalty (veh)		5	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Sherman St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	55	64	53	88
Average Queue (ft)	33	38	28	34
95th Queue (ft)	52	57	47	60
Link Distance (ft)	468	468	310	513
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Greenwood St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	78	89	35	63
Average Queue (ft)	36	38	15	36
95th Queue (ft)	69	70	40	57
Link Distance (ft)	249	249	320	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Camino Del Rio W & Moore St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 17: Camino Del Rio W & Hancock St

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	TR	L	T	T	TR	T	T	T	R
Maximum Queue (ft)	358	374	60	152	173	139	149	147	157	93
Average Queue (ft)	191	185	11	61	63	26	119	76	92	13
95th Queue (ft)	394	407	40	133	139	90	186	172	199	56
Link Distance (ft)	526	526		288	288	288				
Upstream Blk Time (%)	0	6								
Queuing Penalty (veh)	1	12								
Storage Bay Dist (ft)			100							130
Storage Blk Time (%)				4					24	1
Queuing Penalty (veh)				2					24	4

Intersection: 18: Camino Del Rio W & Kurtz St

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T	T	T
Maximum Queue (ft)	366	517	275	226	297	318	174	343	288	174	320
Average Queue (ft)	162	315	131	108	170	201	133	245	111	44	130
95th Queue (ft)	303	506	324	207	309	364	221	423	293	132	323
Link Distance (ft)	541	541		348	348	348		288	288	288	288
Upstream Blk Time (%)	0	5			0	4		45	0		12
Queuing Penalty (veh)	0	13			1	25		224	2		56
Storage Bay Dist (ft)			200				100				
Storage Blk Time (%)		43	1				66	12			
Queuing Penalty (veh)		48	4				306	10			

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	B45
Directions Served	L	LT	R	L	LT	TR	L	L	T	T	TR	T
Maximum Queue (ft)	999	1076	375	224	322	277	297	335	425	284	330	334
Average Queue (ft)	541	772	345	100	180	157	286	333	402	45	79	265
95th Queue (ft)	924	1146	464	185	296	275	317	339	414	175	237	316
Link Distance (ft)	1067	1067			314	314			362	362	362	252
Upstream Blk Time (%)	0	1			14	10			95	0	1	82
Queuing Penalty (veh)	1	7			29	21			640	0	8	552
Storage Bay Dist (ft)			300	180			260	260				
Storage Blk Time (%)		48	28	4	22		66	98	0			
Queuing Penalty (veh)		128	167	8	20		287	426	2			

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	B45	B45	SB	SB	SB	SB
Directions Served	T	T	T	T	T	R
Maximum Queue (ft)	265	90	356	372	348	428
Average Queue (ft)	28	9	156	144	135	201
95th Queue (ft)	154	71	367	340	307	437
Link Distance (ft)	252	252	348	348	348	348
Upstream Blk Time (%)	0	0	3	1	0	21
Queuing Penalty (veh)	1	0	15	4	2	100
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 20: Rosecrans St & Midway Dr

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T
Maximum Queue (ft)	137	175	1002	1014	315	324	1285	1300	255	222	355	661
Average Queue (ft)	115	161	842	487	107	73	829	1195	240	70	270	623
95th Queue (ft)	146	191	1273	1168	322	250	1687	1568	282	173	509	690
Link Distance (ft)			968	968								
Upstream Blk Time (%)			65	15								
Queuing Penalty (veh)			348	80								
Storage Bay Dist (ft)	100	100			240	250			180	280	280	
Storage Blk Time (%)	82	44	28	22	0	0	13	17	92	0	0	94
Queuing Penalty (veh)	249	133	53	51	0	0	23	52	314	0	2	269

Intersection: 20: Rosecrans St & Midway Dr

Movement	NB	NB	SB	SB	SB	SB	SB	B45	B45	B45
Directions Served	T	TR	L	L	T	T	TR	T	T	T
Maximum Queue (ft)	630	595	228	239	273	253	242	185	192	124
Average Queue (ft)	424	308	110	118	156	125	117	54	25	11
95th Queue (ft)	728	578	235	254	280	229	224	261	160	103
Link Distance (ft)					252	252	252	362	362	362
Upstream Blk Time (%)			1	9	12	2	2	3	0	0
Queuing Penalty (veh)			0	0	61	10	10	15	1	0
Storage Bay Dist (ft)			320	320						
Storage Blk Time (%)			1	9	12					
Queuing Penalty (veh)			2	37	35					

Intersection: 21: Rosecrans St & N Evergreen St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: Rosecrans St & Lytton St

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23: Rosecrans St & Kurtz St

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	R	T	TR	L	T	T
Maximum Queue (ft)	180	281	613	145	314	338	167	273	207
Average Queue (ft)	72	259	287	110	144	181	52	89	41
95th Queue (ft)	165	333	622	191	271	310	117	241	169
Link Distance (ft)	261	261			314	314		265	265
Upstream Blk Time (%)	2	63			2	1		9	5
Queuing Penalty (veh)	5	137			10	2		16	9
Storage Bay Dist (ft)				70			100		
Storage Blk Time (%)			59	14			1	15	
Queuing Penalty (veh)			156	24			1	17	

Intersection: 24: Rosecrans St & Hancock St

Movement	NB	NB	NB	SB	SB	B73	SE
Directions Served	L	T	T	T	TR	T	R
Maximum Queue (ft)	158	175	104	340	324	57	6
Average Queue (ft)	63	31	5	49	51	10	0
95th Queue (ft)	149	170	62	306	283	92	4
Link Distance (ft)		265	265	645	645	242	526
Upstream Blk Time (%)		9	0	4	0	3	
Queuing Penalty (veh)		37	0	9	0	16	
Storage Bay Dist (ft)	120						
Storage Blk Time (%)	13						
Queuing Penalty (veh)	39						

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	L	T	R	L	T	T
Maximum Queue (ft)	84	131	180	196	167	112	110	111	63	216	444	309
Average Queue (ft)	17	37	81	98	38	92	81	68	15	143	123	67
95th Queue (ft)	54	104	150	168	106	122	133	127	45	250	380	292
Link Distance (ft)			242	242								
Upstream Blk Time (%)			0	0								
Queuing Penalty (veh)			0	0								
Storage Bay Dist (ft)	120	120			100	150	150			150		
Storage Blk Time (%)		0	2	10	0		0			30	0	
Queuing Penalty (veh)		0	5	12	0		0			22	0	

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	R	R	L	L	T	T	R
Maximum Queue (ft)	293	225	54	90	186	182	50
Average Queue (ft)	143	103	11	33	77	45	11
95th Queue (ft)	235	191	35	74	144	133	36
Link Distance (ft)					1531	1531	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		320	230	230			65
Storage Blk Time (%)	0					5	3
Queuing Penalty (veh)	0					4	5

Intersection: 26: Kurtz St & Pacific Hwy

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

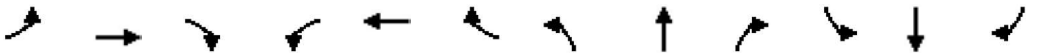
Appendix J

Horizon Year (2050) Plus Full Project Buildout (CPA) Event Day Scenario Intersection LOS Worksheets



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	808	1314	422	0	0	1378
Future Volume (vph)	808	1314	422	0	0	1378
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	10.5			7.5
Lane Util. Factor	0.94	0.88	0.91			0.86
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	4990	2787	5085			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	4990	2787	5085			6408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	878	1428	459	0	0	1498
RTOR Reduction (vph)	0	154	0	0	0	0
Lane Group Flow (vph)	878	1274	459	0	0	1498
Confl. Bikes (#/hr)				1		
Turn Type	Prot	custom	NA			NA
Protected Phases	8	1 8	2			6
Permitted Phases						
Actuated Green, G (s)	18.5	45.1	17.0			43.6
Effective Green, g (s)	18.5	45.1	14.0			43.6
Actuated g/C Ratio	0.24	0.58	0.18			0.57
Clearance Time (s)	7.5		7.5			7.5
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	1197	1630	923			3623
v/s Ratio Prot	0.18	c0.46	0.09			c0.23
v/s Ratio Perm						
v/c Ratio	0.73	0.78	0.49			0.41
Uniform Delay, d1	27.0	12.2	28.3			9.4
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	2.0	2.3	0.1			0.0
Delay (s)	29.0	14.5	28.5			9.5
Level of Service	C	B	C			A
Approach Delay (s/veh)	20.0		28.5			9.5
Approach LOS	C		C			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	77.1	Sum of lost time (s)	25.5
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



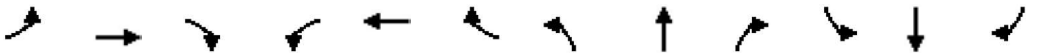
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	220	208	27	185	414	159	340	27	309	335	132
Future Volume (veh/h)	287	220	208	27	185	414	159	340	27	309	335	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	312	239	226	29	201	450	173	370	29	336	364	143
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1576	827	774	338	674	472	223	444	35	389	450	174
Arrive On Green	0.44	0.44	0.44	0.19	0.19	0.19	0.06	0.13	0.13	0.11	0.18	0.18
Sat Flow, veh/h	3563	1870	1519	1781	3554	1550	3456	3335	260	3456	2487	960
Grp Volume(v), veh/h	312	239	226	29	201	450	173	196	203	336	258	249
Grp Sat Flow(s),veh/h/ln	1781	1870	1519	1781	1777	1550	1728	1777	1819	1728	1777	1670
Q Serve(g_s), s	8.6	13.1	13.8	2.1	7.8	27.1	7.9	17.2	17.4	15.3	22.3	22.9
Cycle Q Clear(g_c), s	8.6	13.1	13.8	2.1	7.8	27.1	7.9	17.2	17.4	15.3	22.3	22.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.57
Lane Grp Cap(c), veh/h	1576	827	774	338	674	472	223	236	242	389	322	302
V/C Ratio(X)	0.20	0.29	0.29	0.09	0.30	0.95	0.78	0.83	0.84	0.86	0.80	0.82
Avail Cap(c_a), veh/h	1576	827	774	345	689	479	713	389	398	758	412	387
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	28.5	22.9	53.4	55.7	54.6	73.7	67.6	67.7	69.8	62.8	63.0
Incr Delay (d2), s/veh	0.3	0.9	1.0	0.4	0.9	30.3	4.4	4.7	5.2	3.6	8.0	10.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	6.1	5.3	1.0	3.6	13.8	3.7	8.2	8.5	7.0	10.8	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.6	29.4	23.8	53.8	56.6	84.9	78.1	72.3	72.8	73.4	70.8	73.1
LnGrp LOS	C	C	C	D	E	F	E	E	E	E	E	E
Approach Vol, veh/h		777			680			572			843	
Approach Delay, s/veh		27.0			75.2			74.3			72.5	
Approach LOS		C			E			E			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		75.7	22.9	26.2		35.2	15.2	33.9				
Change Period (Y+Rc), s		4.9	4.9	4.9		4.9	4.9	4.9				
Max Green Setting (Gmax), s		39.3	35.1	35.0		31.0	33.0	37.1				
Max Q Clear Time (g_c+I1), s		15.8	17.3	19.4		29.1	9.9	24.9				
Green Ext Time (p_c), s		8.1	0.7	1.6		1.2	0.4	2.2				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			61.2									
HCM 6th LOS			E									

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	524	8	9	542	64	0	0	0	62	0	60
Future Volume (veh/h)	77	524	8	9	542	64	0	0	0	62	0	60
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98				1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	84	570	9	10	589	70				67	0	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	108	966	15	18	760	334				149	0	128
Arrive On Green	0.06	0.27	0.27	0.02	0.43	0.43				0.08	0.00	0.08
Sat Flow, veh/h	1781	3577	56	1781	3554	1559				1781	0	1534
Grp Volume(v), veh/h	84	283	296	10	589	70				67	0	65
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1777	1559				1781	0	1534
Q Serve(g_s), s	4.2	12.4	12.5	0.5	12.8	2.5				3.2	0.0	3.7
Cycle Q Clear(g_c), s	4.2	12.4	12.5	0.5	12.8	2.5				3.2	0.0	3.7
Prop In Lane	1.00		0.03	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	108	480	502	18	760	334				149	0	128
V/C Ratio(X)	0.78	0.59	0.59	0.57	0.77	0.21				0.45	0.00	0.51
Avail Cap(c_a), veh/h	170	713	745	91	1267	556				695	0	598
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.88	0.88	0.88				1.00	0.00	1.00
Uniform Delay (d), s/veh	41.7	28.5	28.5	43.9	23.9	21.0				39.3	0.0	39.5
Incr Delay (d2), s/veh	4.3	1.3	1.3	9.2	6.7	1.3				0.8	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	5.3	5.5	0.3	4.7	1.0				1.4	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.0	29.8	29.8	53.1	30.6	22.2				40.1	0.0	40.6
LnGrp LOS	D	C	C	D	C	C				D		D
Approach Vol, veh/h		663			669						132	
Approach Delay, s/veh		31.9			30.1						40.4	
Approach LOS		C			C						D	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	5.3	29.2		12.4	10.3	24.2
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9
Max Green Setting (Gmax), s	4.6	36.1		35.1	8.6	* 32
Max Q Clear Time (g_c+I1), s	2.5	14.5		5.7	6.2	14.8
Green Ext Time (p_c), s	0.0	4.1		0.3	0.0	3.9

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		31.8	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	358	160	72	372	43	164	62	47	27	116	157
Future Volume (veh/h)	73	358	160	72	372	43	164	62	47	27	116	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	389	174	78	404	47	178	67	51	29	126	171
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1615	701	101	1614	713	284	322	245	431	238	323
Arrive On Green	0.06	0.45	0.45	0.06	0.45	0.45	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	3554	1542	1781	3554	1569	1082	972	740	1247	719	976
Grp Volume(v), veh/h	79	389	174	78	404	47	178	0	118	29	0	297
Grp Sat Flow(s),veh/h/ln	1781	1777	1542	1781	1777	1569	1082	0	1713	1247	0	1695
Q Serve(g_s), s	3.9	6.0	6.2	3.9	6.3	1.5	14.4	0.0	4.5	1.5	0.0	12.8
Cycle Q Clear(g_c), s	3.9	6.0	6.2	3.9	6.3	1.5	27.2	0.0	4.5	6.0	0.0	12.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		0.58
Lane Grp Cap(c), veh/h	102	1615	701	101	1614	713	284	0	567	431	0	561
V/C Ratio(X)	0.78	0.24	0.25	0.77	0.25	0.07	0.63	0.00	0.21	0.07	0.00	0.53
Avail Cap(c_a), veh/h	190	1615	701	289	1614	713	324	0	630	477	0	623
HCM 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
Upstream Filter(I)	0.99	0.99	0.99	1.00	1.00	1.00	0.73	0.00	0.73	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.9	15.0	15.1	41.9	15.1	13.8	35.4	0.0	21.6	23.8	0.0	24.4
Incr Delay (d2), s/veh	4.7	0.3	0.8	4.7	0.4	0.2	1.3	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.4	2.2	1.8	2.5	0.5	3.8	0.0	1.8	0.4	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.6	15.4	15.9	46.6	15.5	14.0	36.7	0.0	21.7	23.8	0.0	24.7
LnGrp LOS	D	B	B	D	B	B	D		C	C		C
Approach Vol, veh/h		642			529			296			326	
Approach Delay, s/veh		19.4			20.0			30.7			24.6	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	45.8		34.7	9.5	45.8		34.7				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	9.6	33.1		33.1	14.6	28.1		33.1				
Max Q Clear Time (g_c+I1), s	5.9	8.3		29.2	5.9	8.0		14.8				
Green Ext Time (p_c), s	0.0	4.2		0.3	0.0	3.0		1.2				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			22.4									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	516	4	137	458	37	5	9	111	151	9	166
Future Volume (veh/h)	90	516	4	137	458	37	5	9	111	151	9	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	561	4	149	498	40	5	10	121	164	10	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1709	733	178	1818	1008	60	120	312	248	12	210
Arrive On Green	0.07	0.48	0.48	0.10	0.51	0.51	0.10	0.10	0.10	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1524	1781	3554	1539	613	1226	1561	1781	84	1514
Grp Volume(v), veh/h	98	561	4	149	498	40	15	0	121	164	0	190
Grp Sat Flow(s),veh/h/ln	1781	1777	1524	1781	1777	1539	1840	0	1561	1781	0	1598
Q Serve(g_s), s	5.7	10.2	0.1	8.6	8.4	1.0	0.8	0.0	7.1	9.2	0.0	12.2
Cycle Q Clear(g_c), s	5.7	10.2	0.1	8.6	8.4	1.0	0.8	0.0	7.1	9.2	0.0	12.2
Prop In Lane	1.00		1.00	1.00		1.00	0.33		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	123	1709	733	178	1818	1008	181	0	312	248	0	222
V/C Ratio(X)	0.80	0.33	0.01	0.84	0.27	0.04	0.08	0.00	0.39	0.66	0.00	0.86
Avail Cap(c_a), veh/h	151	1709	733	183	1818	1008	631	0	694	305	0	274
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.1	16.8	14.2	46.4	14.6	6.6	43.0	0.0	36.6	42.9	0.0	44.2
Incr Delay (d2), s/veh	17.0	0.5	0.0	25.3	0.4	0.1	0.1	0.0	0.3	2.1	0.0	16.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.1	0.1	5.0	3.3	0.5	0.4	0.0	2.7	4.2	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.2	17.3	14.2	71.8	14.9	6.6	43.1	0.0	36.9	44.9	0.0	60.8
LnGrp LOS	E	B	B	E	B	A	D		D	D		E
Approach Vol, veh/h		663			687			136			354	
Approach Delay, s/veh		24.4			26.8			37.6			53.5	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.9	55.4		19.5	11.7	58.6		15.2				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	10.8	21.1		18.0	8.9	23.0		36.0				
Max Q Clear Time (g_c+I1), s	10.6	12.2		14.2	7.7	10.4		9.1				
Green Ext Time (p_c), s	0.0	2.8		0.4	0.0	1.7		0.2				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			31.8									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	716	18	115	803	0	40
Future Vol, veh/h	716	18	115	803	0	40
Conflicting Peds, #/hr	0	11	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	0	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	778	20	125	873	0	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	809	0	-	400
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	812	-	0	600
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	803	-	-	594
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.3	11.5
HCM LOS			B

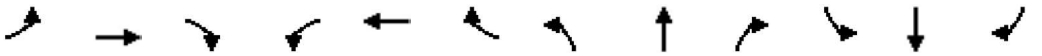
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	594	-	-	803	-
HCM Lane V/C Ratio	0.073	-	-	0.156	-
HCM Control Delay (s/veh)	11.5	-	-	10.3	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q (veh)	0.2	-	-	0.6	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	591	22	123	784	26	78
Future Volume (veh/h)	591	22	123	784	26	78
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	642	24	134	852	28	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1823	780	171	2513	150	133
Arrive On Green	0.51	0.51	0.10	0.71	0.08	0.08
Sat Flow, veh/h	3647	1521	1781	3647	1781	1585
Grp Volume(v), veh/h	642	24	134	852	28	85
Grp Sat Flow(s),veh/h/ln	1777	1521	1781	1777	1781	1585
Q Serve(g_s), s	4.8	0.4	3.3	4.2	0.7	2.3
Cycle Q Clear(g_c), s	4.8	0.4	3.3	4.2	0.7	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1823	780	171	2513	150	133
V/C Ratio(X)	0.35	0.03	0.78	0.34	0.19	0.64
Avail Cap(c_a), veh/h	1823	780	261	2513	218	194
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.61	0.61	1.00	1.00
Uniform Delay (d), s/veh	6.5	5.4	19.9	2.5	19.2	19.9
Incr Delay (d2), s/veh	0.5	0.1	2.3	0.2	0.6	5.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	1.3	0.4	0.3	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	7.0	5.5	22.2	2.8	19.8	24.9
LnGrp LOS	A	A	C	A	B	C
Approach Vol, veh/h	666			986	113	
Approach Delay, s/veh	7.0			5.4	23.7	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.7	28.0				36.7	8.3
Change Period (Y+Rc), s	4.4	4.9				4.9	4.5
Max Green Setting (Gmax), s	6.6	19.1				30.1	5.5
Max Q Clear Time (g_c+I1), s	5.3	6.8				6.2	4.3
Green Ext Time (p_c), s	0.0	5.2				8.3	0.0

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		7.2
HCM 6th LOS		A

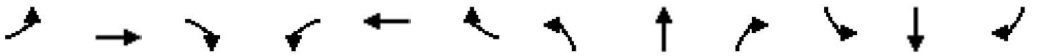


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	433	84	70	368	53	116	108	106	43	80	68
Future Volume (veh/h)	90	433	84	70	368	53	116	108	106	43	80	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	471	91	76	400	58	122	123	115	47	87	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	122	2032	894	122	1676	241	201	211	231	215	226	183
Arrive On Green	0.07	0.57	0.57	0.04	0.54	0.54	0.11	0.11	0.11	0.12	0.12	0.12
Sat Flow, veh/h	1781	3554	1563	3456	3110	448	1781	1870	1556	1781	1870	1514
Grp Volume(v), veh/h	98	471	91	76	227	231	122	123	115	47	87	74
Grp Sat Flow(s),veh/h/ln	1781	1777	1563	1728	1777	1781	1781	1870	1556	1781	1870	1514
Q Serve(g_s), s	6.5	7.8	3.2	2.6	8.1	8.2	7.8	7.5	8.2	2.9	5.1	5.4
Cycle Q Clear(g_c), s	6.5	7.8	3.2	2.6	8.1	8.2	7.8	7.5	8.2	2.9	5.1	5.4
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	2032	894	122	957	960	201	211	231	215	226	183
V/C Ratio(X)	0.80	0.23	0.10	0.62	0.24	0.24	0.61	0.58	0.50	0.22	0.38	0.40
Avail Cap(c_a), veh/h	157	2032	894	141	957	960	505	530	497	490	514	416
HCM 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
Upstream Filter(I)	0.91	0.91	0.91	0.88	0.88	0.88	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	55.1	12.7	11.7	57.1	14.6	14.7	50.7	50.6	47.0	47.6	48.6	48.8
Incr Delay (d2), s/veh	14.6	0.2	0.2	3.2	0.5	0.5	1.1	1.0	0.6	0.2	0.4	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	3.2	1.2	1.2	3.4	3.5	3.6	3.6	3.2	1.3	2.4	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	69.7	12.9	11.9	60.3	15.1	15.2	51.8	51.5	47.6	47.8	49.0	49.2
LnGrp LOS	E	B	B	E	B	B	D	D	D	D	D	D
Approach Vol, veh/h		660			534			360			208	
Approach Delay, s/veh		21.2			21.6			50.4			48.8	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	73.5		19.4	12.6	69.6		18.4				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	4.9	29.0		33.0	10.6	23.3		34.0				
Max Q Clear Time (g_c+I1), s	4.6	9.8		7.4	8.5	10.2		10.2				
Green Ext Time (p_c), s	0.0	4.6		0.5	0.0	3.4		0.8				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			30.5									
HCM 6th LOS			C									

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	594	16	16	787	171	13	4	2	52	6	45
Future Volume (veh/h)	46	594	16	16	787	171	13	4	2	52	6	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.96	0.96		1.00	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	646	17	17	855	186	14	4	2	57	7	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	2094	55	565	1644	358	253	67	24	181	41	102
Arrive On Green	0.05	0.79	0.79	0.02	0.57	0.57	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3534	93	1781	2879	626	977	431	156	591	268	658
Grp Volume(v), veh/h	50	325	338	17	528	513	20	0	0	113	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1850	1781	1777	1728	1564	0	0	1516	0	0
Q Serve(g_s), s	0.7	3.1	3.1	0.2	10.9	10.9	0.0	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	3.1	3.1	0.2	10.9	10.9	0.6	0.0	0.0	3.9	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.36	0.70		0.10	0.50		0.43
Lane Grp Cap(c), veh/h	398	1053	1096	565	1015	987	344	0	0	324	0	0
V/C Ratio(X)	0.13	0.31	0.31	0.03	0.52	0.52	0.06	0.00	0.00	0.35	0.00	0.00
Avail Cap(c_a), veh/h	453	1053	1096	655	1015	987	622	0	0	615	0	0
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.58	0.58	0.58	1.00	0.00	0.00	0.88	0.00	0.00
Uniform Delay (d), s/veh	5.7	2.9	2.9	5.2	7.8	7.8	21.7	0.0	0.0	23.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.7	0.7	0.0	0.3	0.3	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	1.0	0.1	3.3	3.2	0.2	0.0	0.0	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	5.8	3.7	3.6	5.2	8.1	8.1	21.7	0.0	0.0	23.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C			C		
Approach Vol, veh/h		713			1058			20			113	
Approach Delay, s/veh		3.8			8.1			21.7			23.3	
Approach LOS		A			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	40.4		14.2	6.7	39.2		14.2				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	4.0	20.7		21.1	4.1	20.6		21.1				
Max Q Clear Time (g_c+I1), s	2.2	5.1		5.9	2.7	12.9		2.6				
Green Ext Time (p_c), s	0.0	3.9		0.3	0.0	4.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			7.5									
HCM 6th LOS			A									



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	103	104	138	424	0
Future Volume (veh/h)	0	103	104	138	424	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	112	113	150	461	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0
Cap, veh/h	0	0	648	680	0	0
Arrive On Green	0.00	0.00	0.36	0.36	0.45	0.00
Sat Flow, veh/h	0		1781	1870	0	0
Grp Volume(v), veh/h	0.0		113	150	0	0
Grp Sat Flow(s),veh/h/ln			1781	1870	0	0
Q Serve(g_s), s			2.1	2.7	0.0	0.0
Cycle Q Clear(g_c), s			2.1	2.7	0.0	0.0
Prop In Lane			1.00		0.00	0.00
Lane Grp Cap(c), veh/h			648	680	0	0
V/C Ratio(X)			0.17	0.22	0.00	0.00
Avail Cap(c_a), veh/h			648	680	0	0
HCM Platoon Ratio			1.00	1.00	1.00	1.00
Upstream Filter(I)			1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh			10.7	10.9	0.0	0.0
Incr Delay (d2), s/veh			0.6	0.7	0.0	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.8	1.1	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh			11.3	11.6	0.0	0.0
LnGrp LOS			B	B		
Approach Vol, veh/h				263	0	
Approach Delay, s/veh				11.5	0.0	
Approach LOS				B		

Timer - Assigned Phs	6	8
Phs Duration (G+Y+Rc), s	22.5	27.0
Change Period (Y+Rc), s	4.5	4.5
Max Green Setting (Gmax), s	18.0	22.5
Max Q Clear Time (g_c+I1), s	4.7	0.0
Green Ext Time (p_c), s	0.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	11.5
HCM 6th LOS	B

LANE SUMMARY

Site: 1 [2050 CPA Event Day AM_Kurtz Street at Hancock Street: Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Kurtz Street															
Lane 1[d]	461	2.0	461	2.0	1355	0.340	100	4.4	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	461	2.0	461	2.0		0.340		4.4	LOS A	0.0	0.0				
East: Hancock Street															
Lane 1[d]	263	2.0	263	2.0	831	0.317	100	7.9	LOS A	1.5	38.0	Full	1600	0.0	0.0
Approach	263	2.0	263	2.0		0.317		7.9	LOS A	1.5	38.0				
West: Hancock Street															
Lane 1[d]	112	2.0	112	2.0	1202	0.093	100	3.7	LOS A	0.4	10.4	Full	1600	0.0	0.0
Approach	112	2.0	112	2.0		0.093		3.7	LOS A	0.4	10.4				
All Vehicles	836	2.0	836	2.0		0.340		5.4	LOS A	1.5	38.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Kurtz Street

Mov. From S To Exit:	L2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	461	461	2.0	1355	0.340	100	NA	NA
Approach	461	461	2.0		0.340			

East: Hancock Street

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	113	150	263	2.0	831	0.317	100	NA	NA
Approach	113	150	263	2.0		0.317			

West: Hancock Street

Mov. From W To Exit:	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.

Lane 1	112	112	2.0		1202	0.093	100	NA	NA
Approach	112	112	2.0			0.093			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	836	2.0	0.340

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Kurtz Street				
Lane 1	0.0	0.0	0.0	0.0
East: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0
West: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	143	0	0	0	0	0	0	0	93	0	0
Future Vol, veh/h	70	143	0	0	0	0	0	0	0	93	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	155	0	0	0	0	0	0	0	101	0	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.8	0	8.4
HCM LOS	A	-	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	33%	100%
Vol Thru, %	100%	67%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	213	93
LT Vol	0	70	93
Through Vol	0	143	0
RT Vol	0	0	0
Lane Flow Rate	0	232	101
Geometry Grp	1	1	1
Degree of Util (X)	0	0.269	0.131
Departure Headway (Hd)	4.585	4.177	4.664
Convergence, Y/N	Yes	Yes	Yes
Cap	0	850	773
Service Time	2.589	2.257	2.664
HCM Lane V/C Ratio	0	0.273	0.131
HCM Control Delay, s/veh	7.6	8.8	8.4
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	1.1	0.4

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	406	0	0	82	0
Future Vol, veh/h	10	406	0	0	82	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	441	0	0	89	0
Number of Lanes	0	2	0	0	1	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	1	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	2
HCM Control Delay, s/veh	9.8	8.9
HCM LOS	A	A

Lane	EBLn1	EBLn2	SBLn1
Vol Left, %	7%	0%	100%
Vol Thru, %	93%	100%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	145	271	82
LT Vol	10	0	82
Through Vol	135	271	0
RT Vol	0	0	0
Lane Flow Rate	158	294	89
Geometry Grp	5	5	2
Degree of Util (X)	0.207	0.383	0.127
Departure Headway (Hd)	4.725	4.69	5.127
Convergence, Y/N	Yes	Yes	Yes
Cap	749	756	703
Service Time	2.52	2.485	3.127
HCM Lane V/C Ratio	0.211	0.389	0.127
HCM Control Delay, s/veh	8.8	10.4	8.9
HCM Lane LOS	A	B	A
HCM 95th-tile Q	0.8	1.8	0.4

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	66	266	64	50	16	0	0	41	12
Future Vol, veh/h	0	0	0	66	266	64	50	16	0	0	41	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	72	289	70	54	17	0	0	45	13
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	9.5	8.7	8.3
HCM LOS	A	A	A

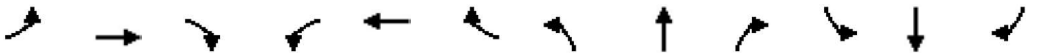
Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	76%	33%	0%	0%
Vol Thru, %	24%	67%	68%	77%
Vol Right, %	0%	0%	32%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	199	197	53
LT Vol	50	66	0	0
Through Vol	16	133	133	41
RT Vol	0	0	64	12
Lane Flow Rate	72	216	214	58
Geometry Grp	2	5	5	2
Degree of Util (X)	0.102	0.302	0.276	0.078
Departure Headway (Hd)	5.109	5.027	4.633	4.844
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	702	716	777	740
Service Time	3.133	2.748	2.354	2.868
HCM Lane V/C Ratio	0.103	0.302	0.275	0.078
HCM Control Delay, s/veh	8.7	9.9	9.1	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	1.3	1.1	0.3

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	25	331	23	9	4	0	0	31	90
Future Vol, veh/h	0	0	0	25	331	23	9	4	0	0	31	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	27	360	25	10	4	0	0	34	98
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	9.5	8.3	8.3
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	69%	13%	0%	0%
Vol Thru, %	31%	87%	88%	26%
Vol Right, %	0%	0%	12%	74%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	191	189	121
LT Vol	9	25	0	0
Through Vol	4	166	166	31
RT Vol	0	0	23	90
Lane Flow Rate	14	207	205	132
Geometry Grp	2	5	5	2
Degree of Util (X)	0.02	0.285	0.268	0.162
Departure Headway (Hd)	5.152	4.955	4.703	4.424
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	696	729	752	814
Service Time	3.172	2.655	2.503	2.434
HCM Lane V/C Ratio	0.02	0.284	0.273	0.162
HCM Control Delay, s/veh	8.3	9.6	9.3	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	1.2	1.1	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	53	193	236	36	1890	105	0	2492	96
Future Volume (veh/h)	0	0	0	53	193	236	36	1890	105	0	2492	96
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				58	210	257	39	2054	114	0	2709	104
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	2	0	2	2
Cap, veh/h				79	288	312	368	3565	197	0	2413	744
Arrive On Green				0.20	0.20	0.20	0.41	1.00	1.00	0.00	0.47	0.47
Sat Flow, veh/h				400	1450	1573	1781	4951	274	0	5274	1575
Grp Volume(v), veh/h				268	0	257	39	1409	759	0	2709	104
Grp Sat Flow(s),veh/h/ln				1850	0	1573	1781	1702	1821	0	1702	1575
Q Serve(g_s), s				16.3	0.0	18.8	1.6	0.0	0.0	0.0	56.7	4.5
Cycle Q Clear(g_c), s				16.3	0.0	18.8	1.6	0.0	0.0	0.0	56.7	4.5
Prop In Lane				0.22		1.00	1.00		0.15	0.00		1.00
Lane Grp Cap(c), veh/h				367	0	312	368	2451	1311	0	2413	744
V/C Ratio(X)				0.73	0.00	0.82	0.11	0.58	0.58	0.00	1.12	0.14
Avail Cap(c_a), veh/h				678	0	577	368	2451	1311	0	2413	744
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.35	0.35	0.35	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.1	0.0	46.1	28.4	0.0	0.0	0.0	31.6	17.9
Incr Delay (d2), s/veh				1.1	0.0	2.1	0.0	0.3	0.7	0.0	61.4	0.4
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.6	0.0	7.5	0.7	0.1	0.2	0.0	35.4	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				46.1	0.0	48.2	28.4	0.3	0.7	0.0	93.1	18.3
LnGrp LOS				D		D	C	A	A		F	B
Approach Vol, veh/h					525			2207			2813	
Approach Delay, s/veh					47.1			1.0			90.3	
Approach LOS					D			A			F	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	91.3	28.7	29.7	61.6
Change Period (Y+Rc), s	4.9	4.9	4.9	* 4.9
Max Green Setting (Gmax), s	66.2	44.0	5.1	* 57
Max Q Clear Time (g_c+I1), s	2.0	20.8	3.6	58.7
Green Ext Time (p_c), s	7.7	1.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	50.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	355	207	57	0	0	0	0	1697	17	237	2164	0
Future Volume (veh/h)	355	207	57	0	0	0	0	1697	17	237	2164	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	386	225	62				0	1845	18	258	2352	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	427	337	93				0	2687	26	226	4366	0
Arrive On Green	0.24	0.24	0.24				0.00	0.52	0.52	0.25	1.00	0.00
Sat Flow, veh/h	1781	1405	387				0	5383	51	1781	6696	0
Grp Volume(v), veh/h	386	0	287				0	1204	659	258	2352	0
Grp Sat Flow(s),veh/h/ln	1781	0	1792				0	1702	1861	1781	1609	0
Q Serve(g_s), s	25.2	0.0	17.4				0.0	31.8	31.9	15.2	0.0	0.0
Cycle Q Clear(g_c), s	25.2	0.0	17.4				0.0	31.8	31.9	15.2	0.0	0.0
Prop In Lane	1.00		0.22				0.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	427	0	430				0	1754	959	226	4366	0
V/C Ratio(X)	0.90	0.00	0.67				0.00	0.69	0.69	1.14	0.54	0.00
Avail Cap(c_a), veh/h	669	0	674				0	1754	959	226	4366	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.65	0.65	0.49	0.49	0.00
Uniform Delay (d), s/veh	44.3	0.0	41.3				0.0	21.8	21.8	44.8	0.0	0.0
Incr Delay (d2), s/veh	7.5	0.0	0.7				0.0	1.4	2.6	87.5	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	0.0	7.8				0.0	12.3	13.8	11.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.7	0.0	42.0				0.0	23.3	24.4	132.3	0.2	0.0
LnGrp LOS	D		D					C	C	F	A	
Approach Vol, veh/h		673						1863			2610	
Approach Delay, s/veh		47.6						23.7			13.3	
Approach LOS		D						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.6	66.7		33.7		86.3
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9
Max Green Setting (Gmax), s	15.2	45.5		45.1		65.1
Max Q Clear Time (g_c+I1), s	17.2	33.9		27.2		2.0
Green Ext Time (p_c), s	0.0	4.1		0.7		10.0

Intersection Summary			
HCM 6th Ctrl Delay, s/veh			21.5
HCM 6th LOS			C

Notes

User approved pedestrian interval to be less than phase max green.



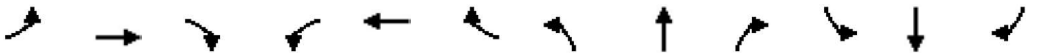
Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	282	227	164	207	203	302	11	305	1438	296	1502	467
Future Volume (vph)	282	227	164	207	203	302	11	305	1438	296	1502	467
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	14	12	12	12	12
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9	5.9		5.4	5.9		5.9	5.9
Lane Util. Factor	0.95	0.95	1.00	1.00	0.91	0.91		0.97	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.97	1.00	0.99		1.00	0.99		1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	0.85	1.00	0.99		1.00	0.97		1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (prot)	1681	1758	1583	1551	1610	3350		3662	4945		5085	1529
Flt Permitted	0.95	0.99	1.00	1.00	0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (perm)	1681	1758	1583	1551	1610	3350		3662	4945		5085	1529
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	307	247	178	225	221	328	12	332	1563	322	1633	508
RTOR Reduction (vph)	0	0	0	163	0	2	0	0	0	0	0	208
Lane Group Flow (vph)	270	284	178	62	181	378	0	332	1885	0	1633	300
Confl. Peds. (#/hr)				3			20					13
Confl. Bikes (#/hr)				4			4			1		3
Turn Type	Split	NA	Perm	Perm	Split	NA		Prot	NA		NA	Perm
Protected Phases	4	4			8	8		5	2		6	
Permitted Phases			4	4								6
Actuated Green, G (s)	28.0	28.0	28.0	28.0	20.0	20.0		17.4	84.3		61.5	61.5
Effective Green, g (s)	28.0	28.0	28.0	28.0	20.0	20.0		17.4	84.3		61.5	61.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.13	0.13		0.12	0.56		0.41	0.41
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9	5.9		5.4	5.9		5.9	5.9
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0
Lane Grp Cap (vph)	313	328	295	289	214	446		424	2779		2084	626
v/s Ratio Prot	0.16	c0.16			0.11	c0.11		0.09	c0.38		c0.32	
v/s Ratio Perm			0.11	0.04								0.20
v/c Ratio	0.86	0.86	0.60	0.21	0.84	0.84		0.78	0.67		0.78	0.47
Uniform Delay, d1	59.1	59.1	55.9	51.6	63.4	63.5		64.4	23.2		38.4	32.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.36	0.37		1.00	1.00
Incremental Delay, d2	20.3	19.9	2.3	0.1	24.3	13.4		6.3	1.0		3.0	2.6
Delay (s)	79.4	79.0	58.2	51.8	87.8	76.9		94.3	9.7		41.4	35.0
Level of Service	E	E	E	D	F	E		F	A		D	D
Approach Delay (s/veh)		68.9				80.4			22.4		39.9	
Approach LOS		E				F			C		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NWR2
Lane Configurations	
Traffic Volume (vph)	35
Future Volume (vph)	35
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	5.9
Lane Util. Factor	1.00
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.86
Flt Protected	1.00
Satd. Flow (prot)	1611
Flt Permitted	1.00
Satd. Flow (perm)	1611
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	38
RTOR Reduction (vph)	33
Lane Group Flow (vph)	5
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	20.0
Effective Green, g (s)	20.0
Actuated g/C Ratio	0.13
Clearance Time (s)	5.9
Vehicle Extension (s)	1.0
Lane Grp Cap (vph)	214
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.02
Uniform Delay, d1	56.5
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	56.5
Level of Service	E
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	313	141	195	547	294	258	1538	112	285	1539	180
Future Volume (veh/h)	149	313	141	195	547	294	258	1538	112	285	1539	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	340	153	212	595	320	280	1672	122	310	1673	196
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	537	235	238	800	346	740	2044	149	585	1722	201
Arrive On Green	0.06	0.15	0.15	0.13	0.23	0.23	0.21	0.42	0.42	0.34	0.74	0.74
Sat Flow, veh/h	3456	3554	1554	1781	3554	1538	3456	4843	353	3456	4631	541
Grp Volume(v), veh/h	162	340	153	212	595	320	280	1174	620	310	1228	641
Grp Sat Flow(s),veh/h/ln	1728	1777	1554	1781	1777	1538	1728	1702	1792	1728	1702	1768
Q Serve(g_s), s	6.9	13.5	13.9	17.6	23.4	30.6	10.4	45.7	45.8	10.8	49.8	50.6
Cycle Q Clear(g_c), s	6.9	13.5	13.9	17.6	23.4	30.6	10.4	45.7	45.8	10.8	49.8	50.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.31
Lane Grp Cap(c), veh/h	207	537	235	238	800	346	740	1437	756	585	1266	658
V/C Ratio(X)	0.78	0.63	0.65	0.89	0.74	0.92	0.38	0.82	0.82	0.53	0.97	0.97
Avail Cap(c_a), veh/h	299	808	353	238	941	407	740	1437	756	585	1350	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	0.57	0.57	0.57
Uniform Delay (d), s/veh	69.6	59.8	59.9	63.9	54.1	56.9	50.4	38.3	38.3	44.8	18.5	18.6
Incr Delay (d2), s/veh	4.6	0.5	1.1	30.3	2.1	23.1	0.1	5.3	9.6	0.3	11.8	18.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	6.1	5.5	9.9	10.7	14.0	4.5	19.7	21.7	4.2	10.9	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.2	60.2	61.1	94.2	56.2	80.0	50.5	43.5	47.9	45.1	30.2	37.5
LnGrp LOS	E	E	E	F	E	E	D	D	D	D	C	D
Approach Vol, veh/h		655			1127			2074			2179	
Approach Delay, s/veh		63.9			70.1			45.8			34.5	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.8	68.2	24.5	27.6	36.5	61.5	13.4	38.7
Change Period (Y+Rc), s	4.4	4.9	4.4	4.9	4.4	5.7	4.4	4.9
Max Green Setting (Gmax), s	15.4	63.3	18.6	34.1	18.4	59.5	13.0	39.7
Max Q Clear Time (g_c+I1), s	12.8	47.8	19.6	15.9	12.4	52.6	8.9	32.6
Green Ext Time (p_c), s	0.1	4.4	0.0	0.9	0.1	3.2	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	48.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	332	8	255	0	295	0	260	199	83	238	0
Future Volume (vph)	44	332	8	255	0	295	0	260	199	83	238	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.4		4.4		4.9	4.9	4.4	4.9	
Lane Util. Factor	1.00	1.00		0.97		1.00		1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00		0.95		1.00	0.83	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1855		3433		1513		1863	1326	1770	1863	
Flt Permitted	0.95	1.00		0.95		1.00		1.00	1.00	0.48	1.00	
Satd. Flow (perm)	1770	1855		3433		1513		1863	1326	896	1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	361	9	277	0	321	0	283	216	90	259	0
RTOR Reduction (vph)	0	1	0	0	0	289	0	0	112	0	0	0
Lane Group Flow (vph)	48	369	0	277	0	32	0	283	104	90	259	0
Confl. Peds. (#/hr)			4			5			51			13
Confl. Bikes (#/hr)			2						9			5
Turn Type	Split	NA		Prot		Perm		NA	Perm	pm+pt	NA	
Protected Phases	4	4		3				2		1	6	
Permitted Phases						3			2	6		
Actuated Green, G (s)	25.2	25.2		12.0		12.0		57.7	57.7	68.6	68.6	
Effective Green, g (s)	25.2	25.2		12.0		12.0		57.7	57.7	68.6	68.6	
Actuated g/C Ratio	0.21	0.21		0.10		0.10		0.48	0.48	0.57	0.57	
Clearance Time (s)	4.9	4.9		4.4		4.4		4.9	4.9	4.4	4.9	
Vehicle Extension (s)	1.0	1.0		1.0		1.0		1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)	371	389		343		151		895	637	559	1065	
v/s Ratio Prot	0.03	c0.20		c0.08				c0.15		0.01	c0.14	
v/s Ratio Perm						0.02			0.08	0.08		
v/c Ratio	0.12	0.94		0.80		0.21		0.31	0.16	0.16	0.24	
Uniform Delay, d1	38.4	46.7		52.8		49.6		19.0	17.5	12.1	12.7	
Progression Factor	0.50	0.49		1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	28.2		12.3		0.2		0.9	0.5	0.0	0.5	
Delay (s)	19.3	51.5		65.2		49.9		19.9	18.0	12.2	13.3	
Level of Service	B	D		E		D		B	B	B	B	
Approach Delay (s/veh)		47.8			56.9			19.1			13.0	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

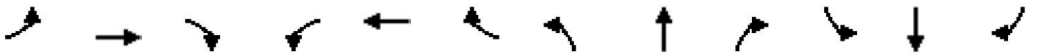
Intersection	
Int Delay, s/veh	2.3

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	249	364	307	138	0	0
Future Vol, veh/h	249	364	307	138	0	0
Conflicting Peds, #/hr	0	0	0	16	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	271	396	334	150	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	500	0	-	0	1288	350
Stage 1	-	-	-	-	350	-
Stage 2	-	-	-	-	938	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1064	-	-	-	181	693
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	381	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1048	-	-	-	130	682
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	375	-

Approach	NB	SB	SE
HCM Control Delay, s/v	3.9	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1048	-	-	-	-
HCM Lane V/C Ratio	0.258	-	-	-	-
HCM Control Delay (s/veh)	9.6	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	1	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	258	78	336	274	81	117	132	201	60	83	43
Future Volume (veh/h)	31	258	78	336	274	81	117	132	201	60	83	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.96	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	280	85	365	298	88	127	143	218	65	90	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	1777	890	377	1094	881	137	585	743	108	423	175
Arrive On Green	0.02	0.50	0.50	0.11	0.59	0.59	0.08	0.16	0.16	0.03	0.12	0.12
Sat Flow, veh/h	1781	3554	1537	3456	1870	1506	1781	3554	2666	3456	3554	1469
Grp Volume(v), veh/h	34	280	85	365	298	88	127	143	218	65	90	47
Grp Sat Flow(s),veh/h/ln	1781	1777	1537	1728	1870	1506	1781	1777	1333	1728	1777	1469
Q Serve(g_s), s	2.3	5.1	3.0	12.6	9.4	3.1	8.5	4.2	7.8	2.2	2.7	3.5
Cycle Q Clear(g_c), s	2.3	5.1	3.0	12.6	9.4	3.1	8.5	4.2	7.8	2.2	2.7	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	43	1777	890	377	1094	881	137	585	743	108	423	175
V/C Ratio(X)	0.79	0.16	0.10	0.97	0.27	0.10	0.93	0.24	0.29	0.60	0.21	0.27
Avail Cap(c_a), veh/h	202	1777	890	377	1094	881	137	1232	1229	161	1125	465
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	16.3	11.4	53.2	12.3	11.0	55.1	43.6	34.5	57.4	47.8	48.1
Incr Delay (d2), s/veh	11.1	0.2	0.2	37.5	0.6	0.2	55.3	0.2	0.2	2.0	0.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.1	1.0	7.4	4.0	1.0	5.8	1.8	2.5	1.0	1.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	69.3	16.5	11.6	90.7	12.9	11.2	110.4	43.9	34.7	59.4	47.9	48.4
LnGrp LOS	E	B	B	F	B	B	F	D	C	E	D	D
Approach Vol, veh/h		399			751			488			202	
Approach Delay, s/veh		19.9			50.5			57.1			51.7	
Approach LOS		B			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	65.9	14.6	21.0	8.3	76.1	9.2	26.4
Change Period (Y+Rc), s	5.4	5.9	5.4	6.7	5.4	5.9	5.4	6.7
Max Green Setting (Gmax), s	13.1	36.3	9.2	38.0	13.6	35.8	5.6	41.6
Max Q Clear Time (g_c+I1), s	14.6	7.1	10.5	5.5	4.3	11.4	4.2	9.8
Green Ext Time (p_c), s	0.0	2.6	0.0	0.4	0.0	1.4	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	45.8
HCM 6th LOS	D



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	882	1474	630	0	0	2017
Future Volume (vph)	882	1474	630	0	0	2017
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	10.5			7.5
Lane Util. Factor	0.94	0.88	0.91			0.86
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	4990	2787	5085			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	4990	2787	5085			6408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	959	1602	685	0	0	2192
RTOR Reduction (vph)	0	19	0	0	0	0
Lane Group Flow (vph)	959	1583	685	0	0	2192
Confl. Peds. (#/hr)				5		
Confl. Bikes (#/hr)				4		
Turn Type	Prot	custom	NA			NA
Protected Phases	8	1 8	2			6
Permitted Phases						
Actuated Green, G (s)	32.1	74.0	21.1			63.0
Effective Green, g (s)	32.1	74.0	18.1			63.0
Actuated g/C Ratio	0.29	0.67	0.16			0.57
Clearance Time (s)	7.5		7.5			7.5
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	1454	1873	835			3666
v/s Ratio Prot	0.19	c0.57	c0.13			0.34
v/s Ratio Perm						
v/c Ratio	0.65	0.84	0.82			0.59
Uniform Delay, d1	34.2	13.7	44.4			15.3
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.8	3.5	6.1			0.1
Delay (s)	35.0	17.2	50.6			15.4
Level of Service	D	B	D			B
Approach Delay (s/veh)	23.9		50.6			15.4
Approach LOS	C		D			B

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	110.1	Sum of lost time (s)	25.5
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



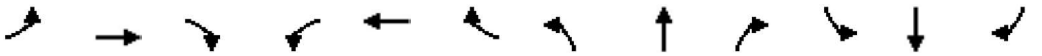
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	262	290	43	307	516	302	467	53	567	532	279
Future Volume (veh/h)	257	262	290	43	307	516	302	467	53	567	532	279
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	316	234	315	47	334	561	328	508	58	616	578	303
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	707	371	612	269	536	741	674	574	65	1114	686	359
Arrive On Green	0.20	0.20	0.20	0.15	0.15	0.15	0.19	0.18	0.18	0.32	0.31	0.31
Sat Flow, veh/h	3563	1870	1527	1781	3554	1527	3456	3208	365	3456	2241	1173
Grp Volume(v), veh/h	316	234	315	47	334	561	328	281	285	616	458	423
Grp Sat Flow(s),veh/h/ln	1781	1870	1527	1781	1777	1527	1728	1777	1796	1728	1777	1637
Q Serve(g_s), s	14.0	20.6	28.4	4.1	15.9	0.0	15.2	27.7	27.9	26.5	43.4	43.5
Cycle Q Clear(g_c), s	14.0	20.6	28.4	4.1	15.9	0.0	15.2	27.7	27.9	26.5	43.4	43.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.72
Lane Grp Cap(c), veh/h	707	371	612	269	536	741	674	318	321	1114	544	501
V/C Ratio(X)	0.45	0.63	0.51	0.17	0.62	0.76	0.49	0.88	0.89	0.55	0.84	0.84
Avail Cap(c_a), veh/h	774	406	641	308	614	775	674	406	410	1114	544	501
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	0.78	0.78	0.78	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	66.1	41.7	66.7	71.6	38.7	64.4	72.1	72.2	50.3	58.4	58.4
Incr Delay (d2), s/veh	1.2	5.3	1.8	0.9	3.6	5.1	2.3	14.2	14.9	0.4	14.7	15.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	10.4	11.2	2.0	7.5	21.4	7.0	14.0	14.3	11.7	21.8	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.7	71.4	43.6	67.6	75.2	43.8	66.7	86.2	87.0	50.8	73.1	74.2
LnGrp LOS	E	E	D	E	E	D	E	F	F	D	E	E
Approach Vol, veh/h		865			942			894			1497	
Approach Delay, s/veh		58.8			56.1			79.3			64.2	
Approach LOS		E			E			E			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		40.6	62.9	37.1		32.1	40.0	60.0				
Change Period (Y+Rc), s		4.9	4.9	4.9		4.9	4.9	4.9				
Max Green Setting (Gmax), s		39.1	49.1	41.1		31.1	35.1	55.1				
Max Q Clear Time (g_c+I1), s		30.4	28.5	29.9		17.9	17.2	45.5				
Green Ext Time (p_c), s		4.8	1.5	2.0		8.3	0.9	3.6				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	64.5
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	822	0	6	685	111	0	0	0	92	0	90
Future Volume (veh/h)	107	822	0	6	685	111	0	0	0	92	0	90
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.94				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	116	893	0	7	745	121				100	0	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	127	1387	0	13	1159	488				757	0	668
Arrive On Green	0.07	0.39	0.00	0.01	0.33	0.33				0.43	0.00	0.43
Sat Flow, veh/h	1781	3647	0	1781	3554	1495				1781	0	1573
Grp Volume(v), veh/h	116	893	0	7	745	121				100	0	98
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1495				1781	0	1573
Q Serve(g_s), s	5.2	16.4	0.0	0.3	14.3	4.7				2.7	0.0	3.1
Cycle Q Clear(g_c), s	5.2	16.4	0.0	0.3	14.3	4.7				2.7	0.0	3.1
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	127	1387	0	13	1159	488				757	0	668
V/C Ratio(X)	0.91	0.64	0.00	0.55	0.64	0.25				0.13	0.00	0.15
Avail Cap(c_a), veh/h	127	1387	0	89	1159	488				757	0	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.00	0.88	0.88	0.88				1.00	0.00	1.00
Uniform Delay (d), s/veh	36.9	19.9	0.0	39.6	23.0	19.8				14.0	0.0	14.1
Incr Delay (d2), s/veh	44.7	1.8	0.0	11.3	2.4	1.1				0.4	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	6.6	0.0	0.2	6.0	1.7				1.1	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.6	21.6	0.0	50.9	25.4	20.8				14.4	0.0	14.6
LnGrp LOS	F	C		D	C	C				B		B
Approach Vol, veh/h		1009			873						198	
Approach Delay, s/veh		28.5			25.0						14.5	
Approach LOS		C			C						B	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	5.0	36.1		38.9	10.1	31.0
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	4.0	27.8		34.0	5.7	26.1
Max Q Clear Time (g_c+I1), s	2.3	18.4		5.1	7.2	16.3
Green Ext Time (p_c), s	0.0	4.6		0.5	0.0	3.6

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		25.7
HCM 6th LOS		C



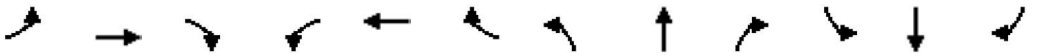
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	191	579	141	66	661	64	170	138	67	65	40	53
Future Volume (veh/h)	191	579	141	66	661	64	170	138	67	65	40	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.93	1.00		0.89	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	208	629	153	72	718	70	185	150	73	71	43	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	321	1046	421	298	999	414	443	282	137	139	56	75
Arrive On Green	0.18	0.29	0.29	0.17	0.28	0.28	0.25	0.25	0.25	0.08	0.08	0.08
Sat Flow, veh/h	1781	3554	1430	1781	3554	1472	1781	1135	553	1781	715	965
Grp Volume(v), veh/h	208	629	153	72	718	70	185	0	223	71	0	101
Grp Sat Flow(s),veh/h/ln	1781	1777	1430	1781	1777	1472	1781	0	1688	1781	0	1680
Q Serve(g_s), s	9.8	13.7	7.6	3.2	16.4	3.2	7.8	0.0	10.3	3.4	0.0	5.3
Cycle Q Clear(g_c), s	9.8	13.7	7.6	3.2	16.4	3.2	7.8	0.0	10.3	3.4	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.57
Lane Grp Cap(c), veh/h	321	1046	421	298	999	414	443	0	420	139	0	131
V/C Ratio(X)	0.65	0.60	0.36	0.24	0.72	0.17	0.42	0.00	0.53	0.51	0.00	0.77
Avail Cap(c_a), veh/h	321	1046	421	298	999	414	614	0	581	139	0	131
HCM 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
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	0.64	0.00	0.64	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	27.2	25.1	32.5	29.1	24.4	28.4	0.0	29.3	39.9	0.0	40.7
Incr Delay (d2), s/veh	2.8	2.0	1.9	0.2	4.4	0.9	0.1	0.0	0.2	1.4	0.0	22.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	5.8	2.7	1.3	7.3	1.2	3.3	0.0	4.1	1.5	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.0	29.2	27.0	32.7	33.6	25.3	28.5	0.0	29.5	41.3	0.0	63.2
LnGrp LOS	D	C	C	C	C	C	C		C	D		E
Approach Vol, veh/h		990			860			408			172	
Approach Delay, s/veh		30.5			32.8			29.1			54.1	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	30.2		27.3	19.4	31.4		11.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	7.6	25.3		31.0	6.4	26.5		7.0				
Max Q Clear Time (g_c+I1), s	11.8	18.4		12.3	5.2	15.7		7.3				
Green Ext Time (p_c), s	0.0	3.6		1.1	0.0	4.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			32.8									
HCM 6th LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	651	12	145	721	145	26	32	184	162	27	184
Future Volume (veh/h)	352	651	12	145	721	145	26	32	184	162	27	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87	1.00		0.89	1.00		0.81	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	383	708	13	158	784	158	28	35	200	176	29	200
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	1055	407	315	856	593	174	218	554	284	32	221
Arrive On Green	0.23	0.30	0.30	0.18	0.24	0.24	0.21	0.21	0.21	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1372	1781	3554	1413	813	1017	1278	1781	201	1388
Grp Volume(v), veh/h	383	708	13	158	784	158	63	0	200	176	0	229
Grp Sat Flow(s),veh/h/ln	1781	1777	1372	1781	1777	1413	1830	0	1278	1781	0	1589
Q Serve(g_s), s	26.3	21.9	0.8	10.0	26.9	9.4	3.5	0.0	0.0	11.5	0.0	17.7
Cycle Q Clear(g_c), s	26.3	21.9	0.8	10.0	26.9	9.4	3.5	0.0	0.0	11.5	0.0	17.7
Prop In Lane	1.00		1.00	1.00		1.00	0.44		1.00	1.00		0.87
Lane Grp Cap(c), veh/h	415	1055	407	315	856	593	392	0	554	284	0	253
V/C Ratio(X)	0.92	0.67	0.03	0.50	0.92	0.27	0.16	0.00	0.36	0.62	0.00	0.90
Avail Cap(c_a), veh/h	415	1055	407	315	856	593	482	0	617	301	0	268
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.8	38.6	31.2	46.5	46.2	25.3	40.0	0.0	26.5	49.0	0.0	51.6
Incr Delay (d2), s/veh	25.6	3.4	0.1	0.5	16.1	1.1	0.1	0.0	0.1	2.4	0.0	29.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	9.9	0.3	4.5	13.6	4.3	1.6	0.0	4.2	5.3	0.0	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.4	42.0	31.3	46.9	62.3	26.4	40.0	0.0	26.7	51.5	0.0	81.0
LnGrp LOS	E	D	C	D	E	C	D		C	D		F
Approach Vol, veh/h		1104			1100			263			405	
Approach Delay, s/veh		52.4			55.0			29.9			68.1	
Approach LOS		D			D			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.5	42.0		24.8	33.5	35.0		31.7				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	14.8	37.1		21.1	21.8	30.1		32.9				
Max Q Clear Time (g_c+I1), s	12.0	23.9		19.7	28.3	28.9		5.5				
Green Ext Time (p_c), s	0.1	4.6		0.2	0.0	0.5		0.7				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			53.5									
HCM 6th LOS			D									

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1108	21	120	1253	0	102
Future Vol, veh/h	1108	21	120	1253	0	102
Conflicting Peds, #/hr	0	26	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	0	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1204	23	130	1362	0	111

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1253	0	-	628
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	551	-	0	426
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	537	-	-	415
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.2	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	415	-	-	537	-
HCM Lane V/C Ratio	0.267	-	-	0.243	-
HCM Control Delay (s/veh)	16.8	-	-	13.8	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q (veh)	1.1	-	-	0.9	-

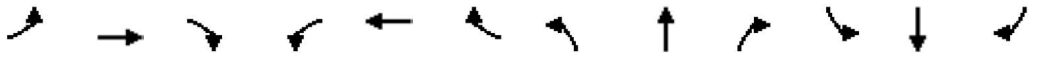
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1027	30	211	1292	108	166
Future Volume (veh/h)	1027	30	211	1292	108	166
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.95	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1116	33	229	1404	117	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1935	816	193	2544	257	228
Arrive On Green	0.54	0.54	0.22	1.00	0.14	0.14
Sat Flow, veh/h	3647	1499	1781	3647	1781	1585
Grp Volume(v), veh/h	1116	33	229	1404	117	180
Grp Sat Flow(s),veh/h/ln	1777	1499	1781	1777	1781	1585
Q Serve(g_s), s	14.6	0.7	7.6	0.0	4.2	7.7
Cycle Q Clear(g_c), s	14.6	0.7	7.6	0.0	4.2	7.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1935	816	193	2544	257	228
V/C Ratio(X)	0.58	0.04	1.18	0.55	0.46	0.79
Avail Cap(c_a), veh/h	1935	816	193	2544	713	634
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.96	0.96
Uniform Delay (d), s/veh	10.6	7.4	27.4	0.0	27.4	28.9
Incr Delay (d2), s/veh	1.3	0.1	87.9	0.1	0.5	2.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.2	7.4	0.0	1.8	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	11.8	7.5	115.3	0.1	27.9	31.1
LnGrp LOS	B	A	F	A	C	C
Approach Vol, veh/h	1149			1633	297	
Approach Delay, s/veh	11.7			16.2	29.9	
Approach LOS	B			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.0	43.0				55.0	15.0
Change Period (Y+Rc), s	4.4	4.9				4.9	4.9
Max Green Setting (Gmax), s	7.6	20.2				32.2	28.0
Max Q Clear Time (g_c+I1), s	9.6	16.6				2.0	9.7
Green Ext Time (p_c), s	0.0	2.9				16.9	0.4

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	15.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	548	104	153	571	82	141	154	164	46	140	78
Future Volume (veh/h)	81	548	104	153	571	82	141	154	164	46	140	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.94	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	596	113	166	621	89	153	167	178	50	152	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	608	1817	793	196	688	98	255	268	314	231	242	200
Arrive On Green	0.34	0.51	0.51	0.06	0.22	0.22	0.14	0.14	0.14	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1551	3456	3092	442	1781	1870	1565	1781	1870	1545
Grp Volume(v), veh/h	88	596	113	166	356	354	153	167	178	50	152	85
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1728	1777	1757	1781	1870	1565	1781	1870	1545
Q Serve(g_s), s	4.1	11.8	4.6	5.7	23.4	23.5	9.7	10.1	12.3	3.0	9.2	6.1
Cycle Q Clear(g_c), s	4.1	11.8	4.6	5.7	23.4	23.5	9.7	10.1	12.3	3.0	9.2	6.1
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	608	1817	793	196	395	391	255	268	314	231	242	200
V/C Ratio(X)	0.14	0.33	0.14	0.85	0.90	0.90	0.60	0.62	0.57	0.22	0.63	0.42
Avail Cap(c_a), veh/h	608	1817	793	196	395	391	505	530	533	490	514	425
HCM 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
Upstream Filter(I)	0.67	0.67	0.67	0.40	0.40	0.40	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	27.4	17.2	15.5	56.1	45.4	45.4	48.2	48.3	43.3	46.8	49.5	48.1
Incr Delay (d2), s/veh	0.0	0.3	0.3	12.5	12.9	13.4	0.8	0.9	0.6	0.2	0.9	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	4.9	1.7	2.8	11.7	11.7	4.4	4.8	4.8	1.4	4.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.4	17.5	15.7	68.6	58.2	58.8	49.0	49.2	43.9	46.9	50.4	48.6
LnGrp LOS	C	B	B	E	E	E	D	D	D	D	D	D
Approach Vol, veh/h		797			876			498			287	
Approach Delay, s/veh		18.4			60.4			47.3			49.3	
Approach LOS		B			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	66.3		20.4	45.9	31.6		22.1				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	6.8	27.1		33.0	7.2	* 27		34.0				
Max Q Clear Time (g_c+I1), s	7.7	13.8		11.2	6.1	25.5		14.3				
Green Ext Time (p_c), s	0.0	4.9		0.7	0.0	0.7		1.1				

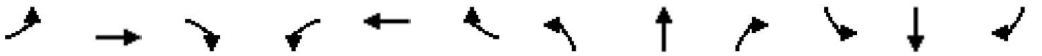
Intersection Summary			
HCM 6th Ctrl Delay, s/veh		42.8	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	912	14	11	841	300	10	3	7	160	10	92
Future Volume (veh/h)	79	912	14	11	841	300	10	3	7	160	10	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	0.96		1.00	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	991	15	12	914	326	11	3	8	174	11	100
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	229	1593	24	262	1034	366	296	92	174	359	39	167
Arrive On Green	0.05	0.44	0.44	0.01	0.41	0.41	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3581	54	1781	2531	897	655	284	537	831	120	514
Grp Volume(v), veh/h	86	492	514	12	640	600	22	0	0	285	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1858	1781	1777	1651	1476	0	0	1465	0	0
Q Serve(g_s), s	1.8	13.8	13.8	0.3	21.6	22.0	0.0	0.0	0.0	9.2	0.0	0.0
Cycle Q Clear(g_c), s	1.8	13.8	13.8	0.3	21.6	22.0	0.6	0.0	0.0	10.5	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.54	0.50		0.36	0.61		0.35
Lane Grp Cap(c), veh/h	229	791	827	262	726	674	562	0	0	565	0	0
V/C Ratio(X)	0.38	0.62	0.62	0.05	0.88	0.89	0.04	0.00	0.00	0.50	0.00	0.00
Avail Cap(c_a), veh/h	258	791	827	351	726	674	562	0	0	565	0	0
HCM 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
Upstream Filter(I)	0.94	0.94	0.94	0.51	0.51	0.51	1.00	0.00	0.00	0.84	0.00	0.00
Uniform Delay (d), s/veh	14.6	13.8	13.8	12.0	17.8	17.9	15.0	0.0	0.0	18.3	0.0	0.0
Incr Delay (d2), s/veh	0.4	3.5	3.3	0.0	8.2	9.3	0.0	0.0	0.0	2.7	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.6	5.8	0.1	9.5	9.1	0.2	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.0	17.3	17.1	12.0	26.0	27.1	15.0	0.0	0.0	21.0	0.0	0.0
LnGrp LOS	B	B	B	B	C	C	B			C		
Approach Vol, veh/h		1092			1252			22			285	
Approach Delay, s/veh		17.0			26.4			15.0			21.0	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	33.8		26.0	7.6	31.4		26.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	4.0	25.7		21.1	4.2	25.5		21.1				
Max Q Clear Time (g_c+I1), s	2.3	15.8		12.5	3.8	24.0		2.6				
Green Ext Time (p_c), s	0.0	4.8		0.8	0.0	1.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		21.9	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	132	195	233	158	0
Future Volume (veh/h)	0	132	195	233	158	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	143	212	253	172	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0
Cap, veh/h	0	0	713	748	0	0
Arrive On Green	0.00	0.00	0.40	0.40	0.40	0.00
Sat Flow, veh/h	0		1781	1870	0	0
Grp Volume(v), veh/h	0.0		212	253	0	0
Grp Sat Flow(s),veh/h/ln			1781	1870	0	0
Q Serve(g_s), s			3.6	4.2	0.0	0.0
Cycle Q Clear(g_c), s			3.6	4.2	0.0	0.0
Prop In Lane			1.00		0.00	0.00
Lane Grp Cap(c), veh/h			713	748	0	0
V/C Ratio(X)			0.30	0.34	0.00	0.00
Avail Cap(c_a), veh/h			713	748	0	0
HCM Platoon Ratio			1.00	1.00	1.00	1.00
Upstream Filter(I)			1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh			9.2	9.4	0.0	0.0
Incr Delay (d2), s/veh			1.1	1.2	0.0	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			1.3	1.6	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh			10.3	10.6	0.0	0.0
LnGrp LOS			B	B		
Approach Vol, veh/h				465	0	
Approach Delay, s/veh				10.4	0.0	
Approach LOS				B		

Timer - Assigned Phs	6	8
Phs Duration (G+Y+Rc), s	22.5	22.5
Change Period (Y+Rc), s	4.5	4.5
Max Green Setting (Gmax), s	18.0	18.0
Max Q Clear Time (g_c+I1), s	6.2	0.0
Green Ext Time (p_c), s	1.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	10.4
HCM 6th LOS	B

LANE SUMMARY

Site: 1 [2050 CPA Event Day PM_Kurtz Street at Hancock Street: Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Kurtz Street															
Lane 1[d]	172	2.0	172	2.0	1355	0.127	100	3.3	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	172	2.0	172	2.0		0.127		3.3	LOS A	0.0	0.0				
East: Hancock Street															
Lane 1[d]	465	2.0	465	2.0	1129	0.412	100	7.3	LOS A	2.5	63.9	Full	1600	0.0	0.0
Approach	465	2.0	465	2.0		0.412		7.3	LOS A	2.5	63.9				
West: Hancock Street															
Lane 1[d]	143	2.0	143	2.0	1082	0.133	100	4.5	LOS A	0.6	15.0	Full	1600	0.0	0.0
Approach	143	2.0	143	2.0		0.133		4.5	LOS A	0.6	15.0				
All Vehicles	780	2.0	780	2.0		0.412		5.9	LOS A	2.5	63.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Kurtz Street

Mov. From S To Exit:	L2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	172	172	2.0	1355	0.127	100	NA	NA
Approach	172	172	2.0		0.127			

East: Hancock Street

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	212	253	465	2.0	1129	0.412	100	NA	NA
Approach	212	253	465	2.0		0.412			

West: Hancock Street

Mov. From W To Exit:	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.

Lane 1	143	143	2.0		1082	0.133	100	NA	NA
Approach	143	143	2.0			0.133			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	780	2.0	0.412

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Kurtz Street				
Lane 1	0.0	0.0	0.0	0.0
East: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0
West: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	239	0	0	0	0	0	0	0	156	0	0
Future Vol, veh/h	63	239	0	0	0	0	0	0	0	156	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	260	0	0	0	0	0	0	0	170	0	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	10.4	0	9.4
HCM LOS	B	-	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	21%	100%
Vol Thru, %	100%	79%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	302	156
LT Vol	0	63	156
Through Vol	0	239	0
RT Vol	0	0	0
Lane Flow Rate	0	328	170
Geometry Grp	1	1	1
Degree of Util (X)	0	0.402	0.231
Departure Headway (Hd)	4.925	4.412	4.902
Convergence, Y/N	Yes	Yes	Yes
Cap	0	817	733
Service Time	2.959	2.43	2.926
HCM Lane V/C Ratio	0	0.401	0.232
HCM Control Delay, s/veh	8	10.4	9.4
HCM Lane LOS	N	B	A
HCM 95th-tile Q	0	2	0.9

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	741	0	0	89	0
Future Vol, veh/h	15	741	0	0	89	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	805	0	0	97	0
Number of Lanes	0	2	0	0	1	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	1	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	2
HCM Control Delay, s/veh	16	9.8
HCM LOS	C	A

Lane	EBLn1	EBLn2	SBLn1
Vol Left, %	6%	0%	100%
Vol Thru, %	94%	100%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	262	494	89
LT Vol	15	0	89
Through Vol	247	494	0
RT Vol	0	0	0
Lane Flow Rate	285	537	97
Geometry Grp	5	5	2
Degree of Util (X)	0.383	0.718	0.154
Departure Headway (Hd)	4.845	4.817	5.715
Convergence, Y/N	Yes	Yes	Yes
Cap	743	752	629
Service Time	2.567	2.538	3.74
HCM Lane V/C Ratio	0.384	0.714	0.154
HCM Control Delay, s/veh	10.6	18.8	9.8
HCM Lane LOS	B	C	A
HCM 95th-tile Q	1.8	6.2	0.5

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	76	360	28	63	11	0	0	76	16
Future Vol, veh/h	0	0	0	76	360	28	63	11	0	0	76	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	83	391	30	68	12	0	0	83	17
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	10.6	9.1	8.9
HCM LOS	B	A	A

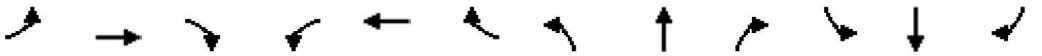
Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	85%	30%	0%	0%
Vol Thru, %	15%	70%	87%	83%
Vol Right, %	0%	0%	13%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	256	208	92
LT Vol	63	76	0	0
Through Vol	11	180	180	76
RT Vol	0	0	28	16
Lane Flow Rate	80	278	226	100
Geometry Grp	2	5	5	2
Degree of Util (X)	0.12	0.398	0.308	0.141
Departure Headway (Hd)	5.356	5.146	4.903	5.058
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	668	698	733	708
Service Time	3.397	2.884	2.64	3.097
HCM Lane V/C Ratio	0.12	0.398	0.308	0.141
HCM Control Delay, s/veh	9.1	11.3	9.8	8.9
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.4	1.9	1.3	0.5

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	23	341	37	19	5	0	0	20	91
Future Vol, veh/h	0	0	0	23	341	37	19	5	0	0	20	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	25	371	40	21	5	0	0	22	99
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	9.6	8.4	8.2
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	79%	12%	0%	0%
Vol Thru, %	21%	88%	82%	18%
Vol Right, %	0%	0%	18%	82%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	194	208	111
LT Vol	19	23	0	0
Through Vol	5	171	171	20
RT Vol	0	0	37	91
Lane Flow Rate	26	210	226	121
Geometry Grp	2	5	5	2
Degree of Util (X)	0.038	0.29	0.299	0.149
Departure Headway (Hd)	5.2	4.957	4.772	4.434
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	689	730	758	810
Service Time	3.23	2.657	2.472	2.457
HCM Lane V/C Ratio	0.038	0.288	0.298	0.149
HCM Control Delay, s/veh	8.4	9.7	9.5	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	1.2	1.3	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	129	246	215	50	2091	21	0	2175	136
Future Volume (veh/h)	0	0	0	129	246	215	50	2091	21	0	2175	136
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				140	267	234	54	2273	23	0	2364	148
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	2	0	2	2
Cap, veh/h				159	308	288	286	3708	37	0	2633	795
Arrive On Green				0.22	0.22	0.22	0.32	1.00	1.00	0.00	0.52	0.52
Sat Flow, veh/h				728	1412	1319	1781	5212	53	0	5274	1542
Grp Volume(v), veh/h				353	0	288	54	1484	812	0	2364	148
Grp Sat Flow(s),veh/h/ln				1834	0	1624	1781	1702	1861	0	1702	1542
Q Serve(g_s), s				26.1	0.0	23.6	3.1	0.0	0.0	0.0	58.5	7.2
Cycle Q Clear(g_c), s				26.1	0.0	23.6	3.1	0.0	0.0	0.0	58.5	7.2
Prop In Lane				0.40		0.81	1.00		0.03	0.00		1.00
Lane Grp Cap(c), veh/h				401	0	355	286	2422	1324	0	2633	795
V/C Ratio(X)				0.88	0.00	0.81	0.19	0.61	0.61	0.00	0.90	0.19
Avail Cap(c_a), veh/h				576	0	511	286	2422	1324	0	2633	795
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.29	0.29	0.29	0.00	1.00	1.00
Uniform Delay (d), s/veh				52.9	0.0	52.0	40.9	0.0	0.0	0.0	30.6	18.2
Incr Delay (d2), s/veh				8.2	0.0	4.1	0.0	0.3	0.6	0.0	5.4	0.5
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.9	0.0	10.0	1.3	0.1	0.2	0.0	24.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				61.1	0.0	56.1	40.9	0.3	0.6	0.0	35.9	18.7
LnGrp LOS				E		E	D	A	A		D	B
Approach Vol, veh/h					641			2350			2512	
Approach Delay, s/veh					58.9			1.4			34.9	
Approach LOS					E			A			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	104.5	35.5	27.4	77.1
Change Period (Y+Rc), s	4.9	4.9	4.9	* 4.9
Max Green Setting (Gmax), s	86.2	44.0	9.6	* 72
Max Q Clear Time (g_c+I1), s	2.0	28.1	5.1	60.5
Green Ext Time (p_c), s	8.5	1.4	0.0	6.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	23.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	665	379	187	0	0	0	0	1656	31	81	2009	0
Future Volume (veh/h)	665	379	187	0	0	0	0	1656	31	81	2009	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	723	412	203				0	1800	34	88	2184	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	581	384	189				0	2399	45	184	3883	0
Arrive On Green	0.33	0.33	0.33				0.00	0.93	0.93	0.21	1.00	0.00
Sat Flow, veh/h	1781	1176	579				0	5328	97	1781	6696	0
Grp Volume(v), veh/h	723	0	615				0	1187	647	88	2184	0
Grp Sat Flow(s),veh/h/ln	1781	0	1755				0	1702	1853	1781	1609	0
Q Serve(g_s), s	45.7	0.0	45.7				0.0	11.3	11.3	6.1	0.0	0.0
Cycle Q Clear(g_c), s	45.7	0.0	45.7				0.0	11.3	11.3	6.1	0.0	0.0
Prop In Lane	1.00		0.33				0.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h	581	0	573				0	1583	862	184	3883	0
V/C Ratio(X)	1.24	0.00	1.07				0.00	0.75	0.75	0.48	0.56	0.00
Avail Cap(c_a), veh/h	581	0	573				0	1583	862	191	3883	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.38	0.38	0.59	0.59	0.00
Uniform Delay (d), s/veh	47.2	0.0	47.2				0.0	3.0	3.0	52.2	0.0	0.0
Incr Delay (d2), s/veh	123.6	0.0	58.9				0.0	1.3	2.3	0.4	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.1	0.0	29.2				0.0	1.7	2.1	2.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	170.7	0.0	106.0				0.0	4.3	5.4	52.6	0.4	0.0
LnGrp LOS	F		F					A	A	D	A	
Approach Vol, veh/h		1338						1834			2272	
Approach Delay, s/veh		141.0						4.7			2.4	
Approach LOS		F						A			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.4	70.0		50.6		89.4
Change Period (Y+Rc), s	4.9	* 4.9		4.9		4.9
Max Green Setting (Gmax), s	15.0	* 65		45.7		84.5
Max Q Clear Time (g_c+I1), s	8.1	13.3		47.7		2.0
Green Ext Time (p_c), s	0.0	5.1		0.0		8.6

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	37.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	459	520	331	394	190	303	7	536	1306	471	1304	738
Future Volume (vph)	459	520	331	394	190	303	7	536	1306	471	1304	738
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	14	12	12	12	12
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9	5.9		5.4	5.9		5.9	5.9
Lane Util. Factor	0.95	0.95	1.00	1.00	0.91	0.91		0.97	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	0.85	1.00	0.99		1.00	0.96		1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (prot)	1681	1762	1583	1559	1610	3354		3662	4862		5085	1515
Flt Permitted	0.95	0.99	1.00	1.00	0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (perm)	1681	1762	1583	1559	1610	3354		3662	4862		5085	1515
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	499	565	360	428	207	329	8	583	1420	512	1417	802
RTOR Reduction (vph)	0	0	0	221	0	1	0	0	0	0	0	437
Lane Group Flow (vph)	449	615	360	207	176	367	0	583	1932	0	1417	365
Confl. Peds. (#/hr)				1			45			3		21
Confl. Bikes (#/hr)				3			7					
Turn Type	Split	NA	Perm	Perm	Split	NA		Prot	NA		NA	Perm
Protected Phases	4	4			8	8		5	2		6	
Permitted Phases			4	4								6
Actuated Green, G (s)	44.1	44.1	44.1	44.1	14.1	14.1		20.6	64.1		38.1	38.1
Effective Green, g (s)	44.1	44.1	44.1	44.1	14.1	14.1		20.6	64.1		38.1	38.1
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.10	0.10		0.15	0.46		0.27	0.27
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9	5.9		5.4	5.9		5.9	5.9
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0
Lane Grp Cap (vph)	529	555	498	491	162	337		538	2226		1383	412
v/s Ratio Prot	0.27	c0.35			0.11	c0.11		c0.16	0.40		c0.28	
v/s Ratio Perm			0.23	0.13								0.24
v/c Ratio	0.84	1.10	0.72	0.42	1.08	1.08		1.08	0.86		1.02	0.88
Uniform Delay, d1	44.8	47.9	42.5	37.8	62.9	62.9		59.7	34.1		50.9	48.8
Progression Factor	1.15	1.12	1.16	1.79	0.95	0.95		1.38	0.60		0.60	1.82
Incremental Delay, d2	10.4	69.2	3.8	0.1	90.4	71.6		54.1	2.7		28.0	19.4
Delay (s)	62.0	123.1	53.4	68.0	150.7	131.8		137.0	23.5		58.7	108.8
Level of Service	E	F	D	E	F	F		F	C		E	F
Approach Delay (s/veh)		82.0				137.9			49.8		76.8	
Approach LOS		F				F			D		E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	73.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NWR2
Lane Configurations	
Traffic Volume (vph)	73
Future Volume (vph)	73
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	5.9
Lane Util. Factor	1.00
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.86
Flt Protected	1.00
Satd. Flow (prot)	1611
Flt Permitted	1.00
Satd. Flow (perm)	1611
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	79
RTOR Reduction (vph)	71
Lane Group Flow (vph)	8
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	14.1
Effective Green, g (s)	14.1
Actuated g/C Ratio	0.10
Clearance Time (s)	5.9
Vehicle Extension (s)	1.0
Lane Grp Cap (vph)	162
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.04
Uniform Delay, d1	56.8
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	56.9
Level of Service	E
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	664	192	201	749	409	243	1549	157	375	1281	182
Future Volume (veh/h)	174	664	192	201	749	409	243	1549	157	375	1281	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.93	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	722	209	218	814	445	264	1684	171	408	1392	198
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	794	339	214	990	423	312	1809	183	427	1910	272
Arrive On Green	0.07	0.22	0.22	0.12	0.28	0.28	0.09	0.39	0.39	0.16	0.56	0.56
Sat Flow, veh/h	3456	3554	1517	1781	3554	1520	3456	4672	473	3456	4503	640
Grp Volume(v), veh/h	189	722	209	218	814	445	264	1225	630	408	1052	538
Grp Sat Flow(s),veh/h/ln	1728	1777	1517	1781	1777	1520	1728	1702	1741	1728	1702	1739
Q Serve(g_s), s	7.5	27.7	13.9	16.8	30.0	28.2	10.5	48.2	48.6	16.4	32.0	32.1
Cycle Q Clear(g_c), s	7.5	27.7	13.9	16.8	30.0	28.2	10.5	48.2	48.6	16.4	32.0	32.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		0.37
Lane Grp Cap(c), veh/h	236	794	339	214	990	423	312	1318	674	427	1444	737
V/C Ratio(X)	0.80	0.91	0.62	1.02	0.82	1.05	0.85	0.93	0.93	0.95	0.73	0.73
Avail Cap(c_a), veh/h	286	871	372	214	1003	429	449	1318	674	427	1444	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00	0.23	0.23	0.23
Uniform Delay (d), s/veh	64.3	53.0	31.2	61.6	47.2	26.4	62.7	41.1	41.2	58.1	24.6	24.6
Incr Delay (d2), s/veh	8.4	10.0	1.3	66.8	5.2	57.7	7.0	12.8	21.9	11.8	0.4	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	13.5	5.2	11.5	13.9	16.9	4.9	22.0	24.3	7.5	11.2	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.6	63.0	32.5	128.4	52.4	84.1	69.7	53.9	63.1	69.9	24.9	25.3
LnGrp LOS	E	E	C	F	D	F	E	D	E	E	C	C
Approach Vol, veh/h		1120			1477			2119			1998	
Approach Delay, s/veh		58.9			73.2			58.6			34.2	
Approach LOS		E			E			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	59.1	21.7	36.2	17.0	65.1	14.0	43.9
Change Period (Y+Rc), s	5.7	* 4.9	4.9	* 4.9	4.4	5.7	4.4	4.9
Max Green Setting (Gmax), s	16.1	* 54	16.8	* 34	18.2	51.3	11.6	39.5
Max Q Clear Time (g_c+I1), s	18.4	50.6	18.8	29.7	12.5	34.1	9.5	32.0
Green Ext Time (p_c), s	0.0	2.0	0.0	1.1	0.1	3.9	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	54.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	455	7	187	0	281	0	634	368	120	285	0
Future Volume (vph)	119	455	7	187	0	281	0	634	368	120	285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.4		4.5		4.9	4.9	4.4	4.9	
Lane Util. Factor	1.00	1.00		0.97		1.00		1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00		0.92		1.00	0.66	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1858		3433		1461		1863	1055	1770	1863	
Flt Permitted	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1858		3433		1461		1863	1055	1770	1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	129	495	8	203	0	305	0	689	400	130	310	0
RTOR Reduction (vph)	0	1	0	0	0	239	0	0	117	0	0	0
Lane Group Flow (vph)	129	502	0	203	0	66	0	689	283	130	310	0
Confl. Peds. (#/hr)			3			15			94			11
Confl. Bikes (#/hr)									12			9
Turn Type	Prot	NA		Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	7	4		3				2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	13.7	35.3		8.8		30.3		62.6	62.6	14.7	81.7	
Effective Green, g (s)	13.7	35.3		8.8		30.3		62.6	62.6	14.7	81.7	
Actuated g/C Ratio	0.10	0.25		0.06		0.22		0.45	0.45	0.11	0.58	
Clearance Time (s)	4.9	4.9		4.4		4.5		4.9	4.9	4.4	4.9	
Vehicle Extension (s)	1.0	1.0		1.0		3.0		1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)	173	468		215		316		833	471	185	1087	
v/s Ratio Prot	0.07	c0.27		c0.06				c0.37		c0.07	0.17	
v/s Ratio Perm						0.05			0.27			
v/c Ratio	0.74	1.07		0.94		0.20		0.82	0.60	0.70	0.28	
Uniform Delay, d1	61.4	52.3		65.3		45.0		33.9	29.2	60.5	14.5	
Progression Factor	1.26	0.82		1.00		1.00		0.83	0.86	1.00	1.00	
Incremental Delay, d2	8.4	53.0		45.1		0.3		3.3	1.9	9.4	0.6	
Delay (s)	86.3	96.4		110.5		45.3		31.5	27.3	69.9	15.2	
Level of Service	F	F		F		D		C	C	E	B	
Approach Delay (s/veh)		94.3			71.3			30.0			31.4	
Approach LOS		F			E			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	53.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.2
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

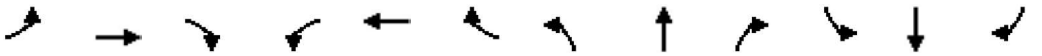
Intersection	
Int Delay, s/veh	2.3

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	334	732	403	153	0	0
Future Vol, veh/h	334	732	403	153	0	0
Conflicting Peds, #/hr	0	0	0	23	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	363	796	438	166	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	627	0	-	0	1983	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	1522	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	955	-	-	-	67	600
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	199	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	934	-	-	-	39	587
Mov Cap-2 Maneuver	-	-	-	-	133	-
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	195	-

Approach	NB	SB	SE
HCM Control Delay, s/v	3.5	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	934	-	-	-	-
HCM Lane V/C Ratio	0.389	-	-	-	-
HCM Control Delay (s/veh)	11.3	-	0	-	-
HCM Lane LOS	B	-	A	-	-
HCM 95th %tile Q (veh)	1.9	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	648	136	440	286	93	192	166	697	93	335	85
Future Volume (veh/h)	62	648	136	440	286	93	192	166	697	93	335	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.91	1.00		0.92	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	704	148	478	311	101	209	180	758	101	364	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	998	605	931	947	726	203	791	1324	149	540	226
Arrive On Green	0.05	0.28	0.28	0.27	0.51	0.51	0.11	0.22	0.22	0.04	0.15	0.15
Sat Flow, veh/h	1781	3554	1513	3456	1870	1435	1781	3554	2571	3456	3554	1484
Grp Volume(v), veh/h	67	704	148	478	311	101	209	180	758	101	364	92
Grp Sat Flow(s),veh/h/ln	1781	1777	1513	1728	1870	1435	1781	1777	1285	1728	1777	1484
Q Serve(g_s), s	4.8	23.1	2.9	15.2	12.8	4.9	14.8	5.4	4.6	3.7	12.6	7.3
Cycle Q Clear(g_c), s	4.8	23.1	2.9	15.2	12.8	4.9	14.8	5.4	4.6	3.7	12.6	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	86	998	605	931	947	726	203	791	1324	149	540	226
V/C Ratio(X)	0.78	0.71	0.24	0.51	0.33	0.14	1.03	0.23	0.57	0.68	0.67	0.41
Avail Cap(c_a), veh/h	144	998	605	931	947	726	203	1219	1634	218	1039	434
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	41.9	10.1	40.3	19.0	17.1	57.6	41.4	10.2	61.3	52.1	49.8
Incr Delay (d2), s/veh	5.8	4.2	1.0	0.2	0.9	0.4	71.4	0.1	0.4	2.0	0.5	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	10.7	1.4	6.5	5.7	1.6	10.5	2.3	4.3	1.7	5.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	67.0	46.1	11.1	40.5	19.9	17.5	129.0	41.5	10.5	63.3	52.6	50.3
LnGrp LOS	E	D	B	D	B	B	F	D	B	E	D	D
Approach Vol, veh/h		919			890			1147			557	
Approach Delay, s/veh		42.0			30.7			37.0			54.2	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.9	42.4	20.2	26.5	11.6	71.7	11.0	35.6
Change Period (Y+Rc), s	5.9	* 5.9	5.4	6.7	5.4	5.9	5.4	6.7
Max Green Setting (Gmax), s	17.3	* 37	14.8	38.0	10.5	43.3	8.2	44.6
Max Q Clear Time (g_c+I1), s	17.2	25.1	16.8	14.6	6.8	14.8	5.7	7.4
Green Ext Time (p_c), s	0.0	4.7	0.0	1.5	0.0	1.5	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	39.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Appendix K

Horizon Year (2050) Plus Full Project Buildout (CPA) Non-Event Day Scenario Intersection LOS Worksheets



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	505	1454	474	0	0	1343
Future Volume (vph)	505	1454	474	0	0	1343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	10.5			7.5
Lane Util. Factor	0.94	0.88	0.91			0.86
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	4990	2787	5085			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	4990	2787	5085			6408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	549	1580	515	0	0	1460
RTOR Reduction (vph)	0	124	0	0	0	0
Lane Group Flow (vph)	549	1456	515	0	0	1460
Confl. Bikes (#/hr)				1		
Turn Type	Prot	custom	NA			NA
Protected Phases	8	1 8	2			6
Permitted Phases						
Actuated Green, G (s)	18.5	45.5	17.0			44.0
Effective Green, g (s)	18.5	45.5	14.0			44.0
Actuated g/C Ratio	0.24	0.59	0.18			0.57
Clearance Time (s)	7.5		7.5			7.5
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	1191	1636	918			3638
v/s Ratio Prot	0.11	c0.52	c0.10			0.23
v/s Ratio Perm						
v/c Ratio	0.46	0.88	0.56			0.40
Uniform Delay, d1	25.2	13.8	28.9			9.3
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.1	6.1	0.4			0.0
Delay (s)	25.3	20.0	29.4			9.4
Level of Service	C	C	C			A
Approach Delay (s/veh)	21.3		29.4			9.4
Approach LOS	C		C			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	77.5	Sum of lost time (s)	25.5
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

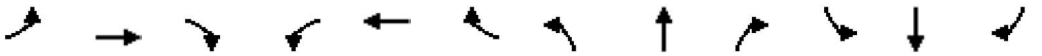
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	358	198	185	17	172	350	129	339	38	329	339	111
Future Volume (veh/h)	358	198	185	17	172	350	129	339	38	329	339	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	389	215	201	18	187	380	140	368	41	358	368	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1651	867	791	282	563	434	189	440	49	412	527	171
Arrive On Green	0.46	0.46	0.46	0.16	0.16	0.16	0.05	0.14	0.14	0.12	0.20	0.20
Sat Flow, veh/h	3563	1870	1520	1781	3554	1547	3456	3220	356	3456	2623	849
Grp Volume(v), veh/h	389	215	201	18	187	380	140	202	207	358	247	242
Grp Sat Flow(s),veh/h/ln	1781	1870	1520	1781	1777	1547	1728	1777	1799	1728	1777	1694
Q Serve(g_s), s	10.5	11.2	11.7	1.4	7.5	18.0	6.4	17.7	18.0	16.3	20.7	21.3
Cycle Q Clear(g_c), s	10.5	11.2	11.7	1.4	7.5	18.0	6.4	17.7	18.0	16.3	20.7	21.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.50
Lane Grp Cap(c), veh/h	1651	867	791	282	563	434	189	243	246	412	357	341
V/C Ratio(X)	0.24	0.25	0.25	0.06	0.33	0.88	0.74	0.83	0.84	0.87	0.69	0.71
Avail Cap(c_a), veh/h	1651	867	791	345	689	489	713	389	394	758	412	393
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	26.0	21.4	57.2	59.8	55.0	74.5	67.3	67.4	69.2	59.3	59.5
Incr Delay (d2), s/veh	0.3	0.7	0.8	0.4	1.3	19.7	4.4	5.4	6.1	3.6	3.7	4.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	5.1	4.5	0.7	3.5	8.6	3.0	8.4	8.7	7.4	9.8	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.2	26.7	22.2	57.6	61.1	74.7	78.9	72.7	73.5	72.9	63.1	64.1
LnGrp LOS	C	C	C	E	E	E	E	E	E	E	E	E
Approach Vol, veh/h		805			585			549			847	
Approach Delay, s/veh		25.3			69.8			74.6			67.5	
Approach LOS		C			E			E			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		79.1	24.0	26.8		30.2	13.6	37.1				
Change Period (Y+Rc), s		4.9	4.9	4.9		4.9	4.9	4.9				
Max Green Setting (Gmax), s		39.3	35.1	35.0		31.0	33.0	37.1				
Max Q Clear Time (g_c+I1), s		13.7	18.3	20.0		20.0	8.4	23.3				
Green Ext Time (p_c), s		8.6	0.8	1.6		4.7	0.3	2.2				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			57.2									
HCM 6th LOS			E									

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	484	3	7	526	53	0	0	0	49	3	60
Future Volume (veh/h)	67	484	3	7	526	53	0	0	0	49	3	60
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98				1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	73	526	3	8	572	58				53	3	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	94	942	5	14	745	327				139	8	126
Arrive On Green	0.05	0.26	0.26	0.02	0.42	0.42				0.08	0.08	0.08
Sat Flow, veh/h	1781	3622	21	1781	3554	1559				1690	96	1534
Grp Volume(v), veh/h	73	258	271	8	572	58				56	0	65
Grp Sat Flow(s),veh/h/ln	1781	1777	1865	1781	1777	1559				1786	0	1534
Q Serve(g_s), s	3.6	11.3	11.3	0.4	12.4	2.1				2.7	0.0	3.7
Cycle Q Clear(g_c), s	3.6	11.3	11.3	0.4	12.4	2.1				2.7	0.0	3.7
Prop In Lane	1.00		0.01	1.00		1.00				0.95		1.00
Lane Grp Cap(c), veh/h	94	462	485	14	745	327				147	0	126
V/C Ratio(X)	0.78	0.56	0.56	0.56	0.77	0.18				0.38	0.00	0.51
Avail Cap(c_a), veh/h	170	713	748	91	1267	556				696	0	598
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.88	0.88	0.88				1.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	28.8	28.8	44.1	24.2	21.3				39.1	0.0	39.6
Incr Delay (d2), s/veh	4.7	1.2	1.1	10.6	6.6	1.0				0.6	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	4.8	5.0	0.2	4.7	0.8				1.2	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.8	30.0	29.9	54.7	30.8	22.3				39.7	0.0	40.8
LnGrp LOS	D	C	C	D	C	C				D		D
Approach Vol, veh/h		602			638						121	
Approach Delay, s/veh		32.0			30.4						40.3	
Approach LOS		C			C						D	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	5.1	28.3		12.3	9.6	23.8
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9
Max Green Setting (Gmax), s	4.6	36.1		35.1	8.6	* 32
Max Q Clear Time (g_c+I1), s	2.4	13.3		5.7	5.6	14.4
Green Ext Time (p_c), s	0.0	3.7		0.3	0.0	3.8

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		32.0
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	289	152	60	342	43	146	62	75	27	116	157
Future Volume (veh/h)	73	289	152	60	342	43	146	62	75	27	116	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	314	165	65	372	47	159	67	82	29	126	171
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1688	733	84	1653	730	270	241	295	388	230	312
Arrive On Green	0.06	0.47	0.47	0.05	0.47	0.47	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3554	1542	1781	3554	1570	1082	752	921	1213	719	976
Grp Volume(v), veh/h	79	314	165	65	372	47	159	0	149	29	0	297
Grp Sat Flow(s),veh/h/ln	1781	1777	1542	1781	1777	1570	1082	0	1673	1213	0	1695
Q Serve(g_s), s	3.9	4.6	5.7	3.2	5.6	1.5	12.8	0.0	6.0	1.6	0.0	13.0
Cycle Q Clear(g_c), s	3.9	4.6	5.7	3.2	5.6	1.5	25.8	0.0	6.0	7.6	0.0	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.55	1.00		0.58
Lane Grp Cap(c), veh/h	102	1688	733	84	1653	730	270	0	536	388	0	542
V/C Ratio(X)	0.78	0.19	0.23	0.77	0.23	0.06	0.59	0.00	0.28	0.07	0.00	0.55
Avail Cap(c_a), veh/h	190	1688	733	289	1653	730	322	0	615	446	0	623
HCM 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
Upstream Filter(I)	0.99	0.99	0.99	1.00	1.00	1.00	0.74	0.00	0.74	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.9	13.6	13.9	42.4	14.4	13.3	35.8	0.0	22.8	25.7	0.0	25.2
Incr Delay (d2), s/veh	4.7	0.2	0.7	5.6	0.3	0.2	0.6	0.0	0.1	0.0	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.8	2.0	1.5	2.2	0.5	3.3	0.0	2.3	0.5	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.6	13.8	14.6	48.0	14.7	13.4	36.4	0.0	22.9	25.7	0.0	25.5
LnGrp LOS	D	B	B	D	B	B	D		C	C		C
Approach Vol, veh/h		558			484			308			326	
Approach Delay, s/veh		18.7			19.0			29.9			25.6	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	46.8		33.7	8.6	47.6		33.7				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	9.6	33.1		33.1	14.6	28.1		33.1				
Max Q Clear Time (g_c+I1), s	5.9	7.6		27.8	5.2	6.6		15.0				
Green Ext Time (p_c), s	0.0	3.8		0.5	0.0	2.2		1.2				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		22.2	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	479	3	144	429	37	6	9	122	151	9	166
Future Volume (veh/h)	90	479	3	144	429	37	6	9	122	151	9	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	521	3	157	466	40	7	10	133	164	10	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1675	718	183	1794	997	79	113	327	248	12	210
Arrive On Green	0.07	0.47	0.47	0.10	0.50	0.50	0.10	0.10	0.10	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1523	1781	3554	1538	755	1078	1562	1781	84	1514
Grp Volume(v), veh/h	98	521	3	157	466	40	17	0	133	164	0	190
Grp Sat Flow(s),veh/h/ln	1781	1777	1523	1781	1777	1538	1833	0	1562	1781	0	1598
Q Serve(g_s), s	5.7	9.5	0.1	9.1	7.8	1.0	0.9	0.0	7.7	9.2	0.0	12.2
Cycle Q Clear(g_c), s	5.7	9.5	0.1	9.1	7.8	1.0	0.9	0.0	7.7	9.2	0.0	12.2
Prop In Lane	1.00		1.00	1.00		1.00	0.41		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	123	1675	718	183	1794	997	192	0	327	248	0	222
V/C Ratio(X)	0.80	0.31	0.00	0.86	0.26	0.04	0.09	0.00	0.41	0.66	0.00	0.86
Avail Cap(c_a), veh/h	151	1675	718	183	1794	997	628	0	699	305	0	274
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.1	17.2	14.7	46.3	14.8	6.8	42.4	0.0	36.0	42.9	0.0	44.2
Incr Delay (d2), s/veh	17.0	0.5	0.0	29.7	0.4	0.1	0.1	0.0	0.3	2.1	0.0	16.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.9	0.0	5.5	3.1	0.5	0.4	0.0	3.0	4.2	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.2	17.7	14.7	76.0	15.2	6.9	42.5	0.0	36.3	44.9	0.0	60.8
LnGrp LOS	E	B	B	E	B	A	D		D	D		E
Approach Vol, veh/h		622			663			150			354	
Approach Delay, s/veh		25.2			29.1			37.0			53.5	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	54.4		19.5	11.7	57.9		15.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	10.8	21.1		18.0	8.9	23.0		36.0				
Max Q Clear Time (g_c+I1), s	11.1	11.5		14.2	7.7	9.8		9.7				
Green Ext Time (p_c), s	0.0	2.7		0.4	0.0	1.5		0.3				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			33.2									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	699	16	90	791	0	55
Future Vol, veh/h	699	16	90	791	0	55
Conflicting Peds, #/hr	0	11	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	0	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	760	17	98	860	0	60

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	788	0	-	391
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	827	-	0	608
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	818	-	-	602
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1	11.6
HCM LOS			B

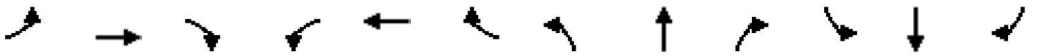
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	602	-	-	818	-
HCM Lane V/C Ratio	0.099	-	-	0.12	-
HCM Control Delay (s/veh)	11.6	-	-	10	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q (veh)	0.3	-	-	0.4	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	555	13	129	710	34	83
Future Volume (veh/h)	555	13	129	710	34	83
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	603	14	140	772	37	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1793	767	179	2497	157	140
Arrive On Green	0.50	0.50	0.10	0.70	0.09	0.09
Sat Flow, veh/h	3647	1520	1781	3647	1781	1585
Grp Volume(v), veh/h	603	14	140	772	37	90
Grp Sat Flow(s),veh/h/ln	1777	1520	1781	1777	1781	1585
Q Serve(g_s), s	4.6	0.2	3.5	3.7	0.9	2.5
Cycle Q Clear(g_c), s	4.6	0.2	3.5	3.7	0.9	2.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1793	767	179	2497	157	140
V/C Ratio(X)	0.34	0.02	0.78	0.31	0.23	0.64
Avail Cap(c_a), veh/h	1793	767	261	2497	218	194
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.64	0.64	1.00	1.00
Uniform Delay (d), s/veh	6.7	5.6	19.8	2.5	19.1	19.8
Incr Delay (d2), s/veh	0.5	0.0	3.3	0.2	0.8	4.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.1	1.4	0.4	0.4	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	7.2	5.6	23.0	2.7	19.9	24.7
LnGrp LOS	A	A	C	A	B	C
Approach Vol, veh/h	617			912	127	
Approach Delay, s/veh	7.1			5.9	23.3	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.9	27.6				36.5	8.5
Change Period (Y+Rc), s	4.4	4.9				4.9	4.5
Max Green Setting (Gmax), s	6.6	19.1				30.1	5.5
Max Q Clear Time (g_c+I1), s	5.5	6.6				5.7	4.5
Green Ext Time (p_c), s	0.0	5.0				7.4	0.0

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		7.7
HCM 6th LOS		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	329	60	111	380	88	88	102	150	56	72	87
Future Volume (veh/h)	94	329	60	111	380	88	88	102	150	56	72	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	102	358	65	121	413	96	96	111	163	61	78	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	1891	832	141	1435	330	245	257	279	232	244	198
Arrive On Green	0.07	0.53	0.53	0.04	0.50	0.50	0.14	0.14	0.14	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1563	3456	2857	657	1781	1870	1561	1781	1870	1519
Grp Volume(v), veh/h	102	358	65	121	255	254	96	111	163	61	78	95
Grp Sat Flow(s),veh/h/ln	1781	1777	1563	1728	1777	1738	1781	1870	1561	1781	1870	1519
Q Serve(g_s), s	6.8	6.3	2.4	4.2	10.0	10.2	5.9	6.5	11.5	3.7	4.5	7.0
Cycle Q Clear(g_c), s	6.8	6.3	2.4	4.2	10.0	10.2	5.9	6.5	11.5	3.7	4.5	7.0
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	1891	832	141	892	873	245	257	279	232	244	198
V/C Ratio(X)	0.81	0.19	0.08	0.86	0.29	0.29	0.39	0.43	0.58	0.26	0.32	0.48
Avail Cap(c_a), veh/h	157	1891	832	141	892	873	505	530	507	490	514	418
HCM 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
Upstream Filter(I)	0.89	0.89	0.89	0.85	0.85	0.85	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	54.9	14.6	13.7	57.2	17.4	17.4	47.2	47.5	45.2	47.0	47.3	48.4
Incr Delay (d2), s/veh	16.0	0.2	0.2	32.1	0.7	0.7	0.4	0.4	0.7	0.2	0.2	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	2.6	0.9	2.5	4.3	4.2	2.7	3.1	4.5	1.7	2.1	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.9	14.8	13.9	89.3	18.1	18.1	47.6	47.9	46.0	47.2	47.6	49.0
LnGrp LOS	E	B	B	F	B	B	D	D	D	D	D	D
Approach Vol, veh/h		525			630			370			234	
Approach Delay, s/veh		25.6			31.8			47.0			48.0	
Approach LOS		C			C			D			D	

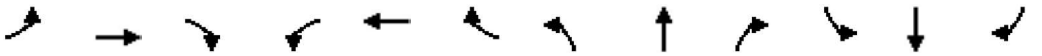
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	68.8		20.6	12.9	65.2		21.4				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	4.9	29.0		33.0	10.6	23.3		34.0				
Max Q Clear Time (g_c+I1), s	6.2	8.3		9.0	8.8	12.2		13.5				
Green Ext Time (p_c), s	0.0	3.5		0.5	0.0	3.5		0.8				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			35.3									
HCM 6th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	589	16	17	848	176	9	3	1	79	5	48
Future Volume (veh/h)	44	589	16	17	848	176	9	3	1	79	5	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.97		1.00	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	640	17	18	922	191	10	3	1	86	5	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	367	2053	54	558	1634	338	270	73	18	221	31	90
Arrive On Green	0.05	0.77	0.77	0.02	0.56	0.56	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3533	94	1781	2908	602	1012	442	112	760	189	543
Grp Volume(v), veh/h	48	322	335	18	563	550	14	0	0	143	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1849	1781	1777	1733	1566	0	0	1493	0	0
Q Serve(g_s), s	0.7	3.2	3.3	0.3	12.2	12.2	0.0	0.0	0.0	3.9	0.0	0.0
Cycle Q Clear(g_c), s	0.7	3.2	3.3	0.3	12.2	12.2	0.4	0.0	0.0	5.2	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.35	0.71		0.07	0.60		0.36
Lane Grp Cap(c), veh/h	367	1033	1075	558	998	974	361	0	0	342	0	0
V/C Ratio(X)	0.13	0.31	0.31	0.03	0.56	0.56	0.04	0.00	0.00	0.42	0.00	0.00
Avail Cap(c_a), veh/h	423	1033	1075	646	998	974	625	0	0	614	0	0
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.57	0.57	0.57	1.00	0.00	0.00	0.84	0.00	0.00
Uniform Delay (d), s/veh	6.3	3.2	3.2	5.4	8.4	8.4	21.1	0.0	0.0	23.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.8	0.7	0.0	0.4	0.5	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.0	1.0	0.1	3.8	3.7	0.2	0.0	0.0	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.3	4.0	4.0	5.4	8.9	8.9	21.1	0.0	0.0	23.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C			C		
Approach Vol, veh/h		705			1131			14			143	
Approach Delay, s/veh		4.1			8.8			21.1			23.3	
Approach LOS		A			A			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	39.8		14.8	6.6	38.6		14.8				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	4.0	20.7		21.1	4.1	20.6		21.1				
Max Q Clear Time (g_c+I1), s	2.3	5.3		7.2	2.7	14.2		2.4				
Green Ext Time (p_c), s	0.0	3.9		0.4	0.0	3.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			8.3									
HCM 6th LOS			A									



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	86	114	149	424	0
Future Volume (veh/h)	0	86	114	149	424	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	93	124	162	461	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0
Cap, veh/h	0	0	648	680	0	0
Arrive On Green	0.00	0.00	0.36	0.36	0.45	0.00
Sat Flow, veh/h	0		1781	1870	0	0
Grp Volume(v), veh/h	0.0		124	162	0	0
Grp Sat Flow(s),veh/h/ln			1781	1870	0	0
Q Serve(g_s), s			2.4	3.0	0.0	0.0
Cycle Q Clear(g_c), s			2.4	3.0	0.0	0.0
Prop In Lane			1.00		0.00	0.00
Lane Grp Cap(c), veh/h			648	680	0	0
V/C Ratio(X)			0.19	0.24	0.00	0.00
Avail Cap(c_a), veh/h			648	680	0	0
HCM Platoon Ratio			1.00	1.00	1.00	1.00
Upstream Filter(I)			1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh			10.8	11.0	0.0	0.0
Incr Delay (d2), s/veh			0.7	0.8	0.0	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			0.9	1.2	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh			11.4	11.8	0.0	0.0
LnGrp LOS			B	B		
Approach Vol, veh/h				286	0	
Approach Delay, s/veh				11.6	0.0	
Approach LOS				B		

Timer - Assigned Phs	6	8
Phs Duration (G+Y+Rc), s	22.5	27.0
Change Period (Y+Rc), s	4.5	4.5
Max Green Setting (Gmax), s	18.0	22.5
Max Q Clear Time (g_c+I1), s	5.0	0.0
Green Ext Time (p_c), s	1.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	11.6
HCM 6th LOS	B

LANE SUMMARY

Site: 1 [2050 CPA Non-Event Day AM_Kurtz Street at Hancock Street: Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Kurtz Street															
Lane 1[d]	461	2.0	461	2.0	1355	0.340	100	4.4	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	461	2.0	461	2.0		0.340		4.4	LOS A	0.0	0.0				
East: Hancock Street															
Lane 1[d]	286	2.0	286	2.0	831	0.344	100	8.3	LOS A	1.7	42.2	Full	1600	0.0	0.0
Approach	286	2.0	286	2.0		0.344		8.3	LOS A	1.7	42.2				
West: Hancock Street															
Lane 1[d]	93	2.0	93	2.0	1188	0.079	100	3.7	LOS A	0.3	8.7	Full	1600	0.0	0.0
Approach	93	2.0	93	2.0		0.079		3.7	LOS A	0.3	8.7				
All Vehicles	840	2.0	840	2.0		0.344		5.6	LOS A	1.7	42.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Kurtz Street

Mov. From S To Exit:	L2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	461	461	2.0	1355	0.340	100	NA	NA
Approach	461	461	2.0		0.340			

East: Hancock Street

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	124	162	286	2.0	831	0.344	100	NA	NA
Approach	124	162	286	2.0		0.344			

West: Hancock Street

Mov. From W To Exit:	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.

Lane 1	93	93	2.0	1188	0.079	100	NA	NA	
Approach	93	93	2.0		0.079				

	Total	%HV	Deg.Satn (v/c)
All Vehicles	840	2.0	0.344

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Kurtz Street				
Lane 1	0.0	0.0	0.0	0.0
East: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0
West: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	143	0	0	0	0	0	0	0	93	0	0
Future Vol, veh/h	70	143	0	0	0	0	0	0	0	93	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	155	0	0	0	0	0	0	0	101	0	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.8	0	8.4
HCM LOS	A	-	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	33%	100%
Vol Thru, %	100%	67%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	213	93
LT Vol	0	70	93
Through Vol	0	143	0
RT Vol	0	0	0
Lane Flow Rate	0	232	101
Geometry Grp	1	1	1
Degree of Util (X)	0	0.269	0.131
Departure Headway (Hd)	4.585	4.177	4.664
Convergence, Y/N	Yes	Yes	Yes
Cap	0	850	773
Service Time	2.589	2.257	2.664
HCM Lane V/C Ratio	0	0.273	0.131
HCM Control Delay, s/veh	7.6	8.8	8.4
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	1.1	0.4

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	392	0	0	60	0
Future Vol, veh/h	5	392	0	0	60	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	426	0	0	65	0
Number of Lanes	0	2	0	0	1	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	1	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	2
HCM Control Delay, s/veh	9.6	8.6
HCM LOS	A	A

Lane	EBLn1	EBLn2	SBLn1
Vol Left, %	4%	0%	100%
Vol Thru, %	96%	100%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	136	261	60
LT Vol	5	0	60
Through Vol	131	261	0
RT Vol	0	0	0
Lane Flow Rate	147	284	65
Geometry Grp	5	5	2
Degree of Util (X)	0.191	0.367	0.092
Departure Headway (Hd)	4.667	4.649	5.082
Convergence, Y/N	Yes	Yes	Yes
Cap	762	767	710
Service Time	2.434	2.416	3.082
HCM Lane V/C Ratio	0.193	0.37	0.092
HCM Control Delay, s/veh	8.5	10.1	8.6
HCM Lane LOS	A	B	A
HCM 95th-tile Q	0.7	1.7	0.3

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	66	266	64	50	16	0	0	41	12
Future Vol, veh/h	0	0	0	66	266	64	50	16	0	0	41	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	72	289	70	54	17	0	0	45	13
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	9.5	8.7	8.3
HCM LOS	A	A	A

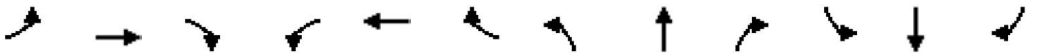
Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	76%	33%	0%	0%
Vol Thru, %	24%	67%	68%	77%
Vol Right, %	0%	0%	32%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	199	197	53
LT Vol	50	66	0	0
Through Vol	16	133	133	41
RT Vol	0	0	64	12
Lane Flow Rate	72	216	214	58
Geometry Grp	2	5	5	2
Degree of Util (X)	0.102	0.302	0.276	0.078
Departure Headway (Hd)	5.109	5.027	4.633	4.844
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	702	716	777	740
Service Time	3.133	2.748	2.354	2.868
HCM Lane V/C Ratio	0.103	0.302	0.275	0.078
HCM Control Delay, s/veh	8.7	9.9	9.1	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	1.3	1.1	0.3

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	18	369	14	4	3	0	0	16	35
Future Vol, veh/h	0	0	0	18	369	14	4	3	0	0	16	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	20	401	15	4	3	0	0	17	38
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	9.2	8.1	7.8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	57%	9%	0%	0%
Vol Thru, %	43%	91%	93%	31%
Vol Right, %	0%	0%	7%	69%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	7	203	199	51
LT Vol	4	18	0	0
Through Vol	3	185	185	16
RT Vol	0	0	14	35
Lane Flow Rate	8	220	216	55
Geometry Grp	2	5	5	2
Degree of Util (X)	0.011	0.287	0.275	0.069
Departure Headway (Hd)	5.059	4.688	4.594	4.471
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	711	764	779	806
Service Time	3.063	2.435	2.341	2.472
HCM Lane V/C Ratio	0.011	0.288	0.277	0.068
HCM Control Delay, s/veh	8.1	9.3	9.1	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	1.2	1.1	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	50	172	197	45	1840	24	0	2618	122
Future Volume (veh/h)	0	0	0	50	172	197	45	1840	24	0	2618	122
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				54	187	214	49	2000	26	0	2846	133
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	2	0	2	2
Cap, veh/h				70	241	264	319	3957	51	0	2797	864
Arrive On Green				0.17	0.17	0.17	0.36	1.00	1.00	0.00	0.55	0.55
Sat Flow, veh/h				414	1435	1571	1781	5195	67	0	5274	1576
Grp Volume(v), veh/h				241	0	214	49	1310	716	0	2846	133
Grp Sat Flow(s),veh/h/ln				1850	0	1571	1781	1702	1858	0	1702	1576
Q Serve(g_s), s				17.4	0.0	18.4	2.6	0.0	0.0	0.0	76.7	5.8
Cycle Q Clear(g_c), s				17.4	0.0	18.4	2.6	0.0	0.0	0.0	76.7	5.8
Prop In Lane				0.22		1.00	1.00		0.04	0.00		1.00
Lane Grp Cap(c), veh/h				311	0	264	319	2593	1416	0	2797	864
V/C Ratio(X)				0.77	0.00	0.81	0.15	0.51	0.51	0.00	1.02	0.15
Avail Cap(c_a), veh/h				581	0	494	319	2593	1416	0	2797	864
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.57	0.57	0.57	0.00	1.00	1.00
Uniform Delay (d), s/veh				55.7	0.0	56.1	37.7	0.0	0.0	0.0	31.6	15.6
Incr Delay (d2), s/veh				1.6	0.0	2.3	0.0	0.4	0.7	0.0	21.5	0.4
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.3	0.0	7.5	1.1	0.1	0.3	0.0	35.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				57.3	0.0	58.3	37.8	0.4	0.7	0.0	53.2	16.0
LnGrp LOS				E		E	D	A	A		F	B
Approach Vol, veh/h					455			2075			2979	
Approach Delay, s/veh					57.8			1.4			51.5	
Approach LOS					E			A			D	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		111.6		28.4	30.0	81.6						
Change Period (Y+Rc), s		4.9		4.9	4.9	* 4.9						
Max Green Setting (Gmax), s		86.2		44.0	5.1	* 77						
Max Q Clear Time (g_c+I1), s		2.0		20.4	4.6	78.7						
Green Ext Time (p_c), s		6.7		1.0	0.0	0.0						

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			33.1									
HCM 6th LOS			C									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	171	57	0	0	0	0	1582	25	271	2239	0
Future Volume (veh/h)	342	171	57	0	0	0	0	1582	25	271	2239	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	372	186	62				0	1720	27	295	2434	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	406	304	101				0	2564	40	312	4517	0
Arrive On Green	0.23	0.23	0.23				0.00	0.50	0.50	0.35	1.00	0.00
Sat Flow, veh/h	1781	1335	445				0	5347	81	1781	6696	0
Grp Volume(v), veh/h	372	0	248				0	1131	616	295	2434	0
Grp Sat Flow(s),veh/h/ln	1781	0	1780				0	1702	1856	1781	1609	0
Q Serve(g_s), s	28.5	0.0	17.5				0.0	35.1	35.2	22.5	0.0	0.0
Cycle Q Clear(g_c), s	28.5	0.0	17.5				0.0	35.1	35.2	22.5	0.0	0.0
Prop In Lane	1.00		0.25				0.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	406	0	406				0	1686	919	312	4517	0
V/C Ratio(X)	0.92	0.00	0.61				0.00	0.67	0.67	0.94	0.54	0.00
Avail Cap(c_a), veh/h	576	0	576				0	1686	919	351	4517	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.71	0.71	0.52	0.52	0.00
Uniform Delay (d), s/veh	52.7	0.0	48.5				0.0	26.7	26.7	44.8	0.0	0.0
Incr Delay (d2), s/veh	12.6	0.0	0.6				0.0	1.5	2.8	19.9	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	0.0	7.9				0.0	14.1	15.7	9.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.3	0.0	49.0				0.0	28.2	29.5	64.7	0.2	0.0
LnGrp LOS	E		D					C	C	E	A	
Approach Vol, veh/h		620						1747			2729	
Approach Delay, s/veh		58.8						28.7			7.2	
Approach LOS		E						C			A	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	29.0	74.2		36.8		103.2						
Change Period (Y+Rc), s	4.4	4.9		4.9		4.9						
Max Green Setting (Gmax), s	27.6	52.9		45.3		84.9						
Max Q Clear Time (g_c+I1), s	24.5	37.2		30.5		2.0						
Green Ext Time (p_c), s	0.0	4.2		0.6		10.8						

Intersection Summary			
HCM 6th Ctrl Delay, s/veh			20.8
HCM 6th LOS			C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	269	227	177	422	199	262	11	218	1296	295	1798	437
Future Volume (vph)	269	227	177	422	199	262	11	218	1296	295	1798	437
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	14	12	12	12	12
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9	5.9		5.4	5.9		5.9	5.9
Lane Util. Factor	0.95	0.95	1.00	1.00	0.91	0.91		0.97	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	0.85	1.00	0.99		1.00	0.97		1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (prot)	1681	1760	1583	1552	1610	3341		3662	4932		5085	1530
Flt Permitted	0.95	0.99	1.00	1.00	0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (perm)	1681	1760	1583	1552	1610	3341		3662	4932		5085	1530
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	292	247	192	459	216	285	12	237	1409	321	1954	475
RTOR Reduction (vph)	0	0	0	160	0	2	0	0	0	0	0	156
Lane Group Flow (vph)	263	276	192	299	166	345	0	237	1730	0	1954	319
Confl. Peds. (#/hr)				3			20					13
Confl. Bikes (#/hr)				4			4			1		3
Turn Type	Split	NA	Perm	Perm	Split	NA		Prot	NA		NA	Perm
Protected Phases	4	4			8	8		5	2		6	
Permitted Phases			4	4								6
Actuated Green, G (s)	31.2	31.2	31.2	31.2	18.9	18.9		12.1	82.2		64.7	64.7
Effective Green, g (s)	31.2	31.2	31.2	31.2	18.9	18.9		12.1	82.2		64.7	64.7
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.13	0.13		0.08	0.55		0.43	0.43
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9	5.9		5.4	5.9		5.9	5.9
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0
Lane Grp Cap (vph)	349	366	329	322	202	420		295	2702		2193	659
v/s Ratio Prot	0.16	0.16			0.10	c0.10		c0.06	0.35		c0.38	
v/s Ratio Perm			0.12	c0.19								0.21
v/c Ratio	0.75	0.75	0.58	0.92	0.82	0.82		0.80	0.64		0.89	0.48
Uniform Delay, d1	55.7	55.7	53.5	58.3	63.9	63.9		67.7	23.6		39.3	30.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.34	0.34		1.00	1.00
Incremental Delay, d2	7.9	7.6	1.7	31.4	21.8	11.6		10.8	0.8		5.9	2.5
Delay (s)	63.7	63.4	55.2	89.7	85.7	75.5		102.0	8.9		45.3	33.1
Level of Service	E	E	E	F	F	E		F	A		D	C
Approach Delay (s/veh)		72.3				78.8			20.1		42.9	
Approach LOS		E				E			C		D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	44.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NWR2
Lane Configurations	
Traffic Volume (vph)	31
Future Volume (vph)	31
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	5.9
Lane Util. Factor	1.00
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.86
Flt Protected	1.00
Satd. Flow (prot)	1611
Flt Permitted	1.00
Satd. Flow (perm)	1611
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	34
RTOR Reduction (vph)	30
Lane Group Flow (vph)	4
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	18.9
Effective Green, g (s)	18.9
Actuated g/C Ratio	0.13
Clearance Time (s)	5.9
Vehicle Extension (s)	1.0
Lane Grp Cap (vph)	202
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.02
Uniform Delay, d1	57.4
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	57.4
Level of Service	E
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	300	167	154	567	294	233	1430	85	310	1616	166
Future Volume (veh/h)	172	300	167	154	567	294	233	1430	85	310	1616	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	187	326	182	167	616	320	253	1554	92	337	1757	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	576	252	232	800	346	677	2076	123	559	1799	184
Arrive On Green	0.07	0.16	0.16	0.13	0.23	0.23	0.20	0.42	0.42	0.32	0.76	0.76
Sat Flow, veh/h	3456	3554	1556	1781	3554	1538	3456	4919	291	3456	4704	480
Grp Volume(v), veh/h	187	326	182	167	616	320	253	1075	571	337	1270	667
Grp Sat Flow(s),veh/h/ln	1728	1777	1556	1781	1777	1538	1728	1702	1806	1728	1702	1780
Q Serve(g_s), s	8.0	12.7	16.7	13.5	24.4	30.5	9.5	40.0	40.1	12.3	51.8	52.9
Cycle Q Clear(g_c), s	8.0	12.7	16.7	13.5	24.4	30.5	9.5	40.0	40.1	12.3	51.8	52.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.27
Lane Grp Cap(c), veh/h	231	576	252	232	800	346	677	1437	762	559	1302	681
V/C Ratio(X)	0.81	0.57	0.72	0.72	0.77	0.92	0.37	0.75	0.75	0.60	0.98	0.98
Avail Cap(c_a), veh/h	299	808	354	232	941	407	677	1437	762	559	1350	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.32	0.32	0.32
Uniform Delay (d), s/veh	69.0	58.0	59.6	62.6	54.5	56.8	52.3	36.6	36.6	46.7	17.0	17.1
Incr Delay (d2), s/veh	8.9	0.3	1.9	9.1	2.7	22.9	0.1	3.6	6.7	0.4	8.7	14.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	5.8	6.7	6.7	11.2	14.0	4.1	17.0	18.7	4.7	9.4	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.9	58.3	61.5	71.7	57.1	79.8	52.4	40.2	43.3	47.1	25.7	31.5
LnGrp LOS	E	E	E	E	E	E	D	D	D	D	C	C
Approach Vol, veh/h		695			1103			1899			2274	
Approach Delay, s/veh		64.4			65.9			42.8			30.6	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.7	68.2	23.9	29.2	33.8	63.1	14.4	38.7
Change Period (Y+Rc), s	4.4	4.9	4.4	4.9	4.4	5.7	4.4	4.9
Max Green Setting (Gmax), s	15.4	63.3	18.6	34.1	18.4	59.5	13.0	39.7
Max Q Clear Time (g_c+I1), s	14.3	42.1	15.5	18.7	11.5	54.9	10.0	32.5
Green Ext Time (p_c), s	0.0	4.2	0.0	0.8	0.1	2.5	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	44.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	389	15	220	0	267	0	322	215	66	198	0
Future Volume (vph)	74	389	15	220	0	267	0	322	215	66	198	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.4		4.4		4.9	4.9	4.4	4.9	
Lane Util. Factor	1.00	1.00		0.97		1.00		1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00		0.95		1.00	0.81	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1851		3433		1509		1863	1291	1770	1863	
Flt Permitted	0.95	1.00		0.95		1.00		1.00	1.00	0.42	1.00	
Satd. Flow (perm)	1770	1851		3433		1509		1863	1291	789	1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	80	423	16	239	0	290	0	350	234	72	215	0
RTOR Reduction (vph)	0	1	0	0	0	264	0	0	120	0	0	0
Lane Group Flow (vph)	80	438	0	239	0	26	0	350	114	72	215	0
Confl. Peds. (#/hr)			4			5			51			13
Confl. Bikes (#/hr)			2						9			5
Turn Type	Split	NA		Prot		Perm		NA	Perm	pm+pt	NA	
Protected Phases	4	4		3				2		1	6	
Permitted Phases						3			2	6		
Actuated Green, G (s)	35.2	35.2		12.6		12.6		68.2	68.2	78.0	78.0	
Effective Green, g (s)	35.2	35.2		12.6		12.6		68.2	68.2	78.0	78.0	
Actuated g/C Ratio	0.25	0.25		0.09		0.09		0.49	0.49	0.56	0.56	
Clearance Time (s)	4.9	4.9		4.4		4.4		4.9	4.9	4.4	4.9	
Vehicle Extension (s)	1.0	1.0		1.0		1.0		1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)	445	465		308		135		907	628	477	1037	
v/s Ratio Prot	0.05	c0.24		c0.07				c0.19		0.01	c0.12	
v/s Ratio Perm						0.02			0.09	0.08		
v/c Ratio	0.17	0.94		0.77		0.19		0.38	0.18	0.15	0.20	
Uniform Delay, d1	41.0	51.4		62.3		58.9		22.6	20.1	15.3	15.5	
Progression Factor	0.39	0.49		1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	22.7		10.6		0.2		1.2	0.6	0.0	0.4	
Delay (s)	16.4	48.2		72.9		59.2		23.9	20.8	15.4	15.9	
Level of Service	B	D		E		E		C	C	B	B	
Approach Delay (s/veh)		43.3			65.4			22.6			15.8	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.3

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	251	363	308	136	0	0
Future Vol, veh/h	251	363	308	136	0	0
Conflicting Peds, #/hr	0	0	0	16	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	273	395	335	148	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	499	0	-	0	1292	351
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	941	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1065	-	-	-	180	692
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	380	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1049	-	-	-	129	681
Mov Cap-2 Maneuver	-	-	-	-	255	-
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	374	-

Approach	NB	SB	SE
HCM Control Delay, s/v	3.9	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1049	-	-	-	-
HCM Lane V/C Ratio	0.26	-	-	-	-
HCM Control Delay (s/veh)	9.6	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	1	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	279	60	301	242	98	102	160	189	57	103	60
Future Volume (veh/h)	33	279	60	301	242	98	102	160	189	57	103	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.92	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	303	65	327	263	107	111	174	205	62	112	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	1808	896	363	1100	886	128	573	709	104	425	176
Arrive On Green	0.03	0.51	0.51	0.11	0.59	0.59	0.07	0.16	0.16	0.03	0.12	0.12
Sat Flow, veh/h	1781	3554	1537	3456	1870	1506	1781	3554	2580	3456	3554	1470
Grp Volume(v), veh/h	36	303	65	327	263	107	111	174	205	62	112	65
Grp Sat Flow(s),veh/h/ln	1781	1777	1537	1728	1870	1506	1781	1777	1290	1728	1777	1470
Q Serve(g_s), s	2.4	5.5	2.2	11.2	8.1	3.8	7.4	5.2	7.6	2.1	3.4	4.9
Cycle Q Clear(g_c), s	2.4	5.5	2.2	11.2	8.1	3.8	7.4	5.2	7.6	2.1	3.4	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	1808	896	363	1100	886	128	573	709	104	425	176
V/C Ratio(X)	0.79	0.17	0.07	0.90	0.24	0.12	0.87	0.30	0.29	0.60	0.26	0.37
Avail Cap(c_a), veh/h	99	1808	896	363	1100	886	128	1217	1177	158	1125	465
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	15.8	11.0	53.1	11.9	11.0	55.1	44.4	35.1	57.5	48.0	48.7
Incr Delay (d2), s/veh	10.4	0.2	0.2	24.0	0.5	0.3	41.7	0.3	0.2	2.0	0.1	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.3	0.7	6.0	3.4	1.2	4.7	2.3	0.0	0.9	1.5	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.6	16.0	11.2	77.1	12.4	11.2	96.9	44.7	35.3	59.5	48.1	49.1
LnGrp LOS	E	B	B	E	B	B	F	D	D	E	D	D
Approach Vol, veh/h		404			697			490			239	
Approach Delay, s/veh		19.9			42.6			52.6			51.4	
Approach LOS		B			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	66.9	14.0	21.1	8.5	76.5	9.0	26.0
Change Period (Y+Rc), s	5.4	5.9	5.4	6.7	5.4	5.9	5.4	6.7
Max Green Setting (Gmax), s	12.6	37.4	8.6	38.0	6.7	43.3	5.5	41.1
Max Q Clear Time (g_c+I1), s	13.2	7.5	9.4	6.9	4.4	10.1	4.1	9.6
Green Ext Time (p_c), s	0.0	2.8	0.0	0.5	0.0	1.3	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	41.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	643	1171	638	0	0	1773
Future Volume (vph)	643	1171	638	0	0	1773
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	10.5			7.5
Lane Util. Factor	0.94	0.88	0.91			0.86
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	4990	2787	5085			6408
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	4990	2787	5085			6408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	699	1273	693	0	0	1927
RTOR Reduction (vph)	0	22	0	0	0	0
Lane Group Flow (vph)	699	1251	693	0	0	1927
Confl. Peds. (#/hr)				5		
Confl. Bikes (#/hr)				4		
Turn Type	Prot	custom	NA			NA
Protected Phases	8	1 8	2			6
Permitted Phases						
Actuated Green, G (s)	29.9	54.5	19.9			44.5
Effective Green, g (s)	29.9	54.5	16.9			44.5
Actuated g/C Ratio	0.33	0.61	0.19			0.50
Clearance Time (s)	7.5		7.5			7.5
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	1668	1699	961			3189
v/s Ratio Prot	0.14	c0.45	0.14			c0.30
v/s Ratio Perm						
v/c Ratio	0.41	0.73	0.72			0.60
Uniform Delay, d1	23.0	12.3	34.0			16.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.0	1.4	2.2			0.2
Delay (s)	23.0	13.8	36.3			16.3
Level of Service	C	B	D			B
Approach Delay (s/veh)	17.1		36.3			16.3
Approach LOS	B		D			B

Intersection Summary			
HCM 2000 Control Delay (s/veh)	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	25.5
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	325	308	50	377	443	265	376	59	482	474	271
Future Volume (veh/h)	246	325	308	50	377	443	265	376	59	482	474	271
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	207	437	335	54	410	482	288	409	64	524	515	295
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	766	627	281	560	788	674	478	74	1194	663	378
Arrive On Green	0.20	0.20	0.20	0.26	0.26	0.26	0.19	0.16	0.16	0.35	0.31	0.31
Sat Flow, veh/h	1781	3741	1551	1781	3554	1529	3456	3072	477	3456	2165	1236
Grp Volume(v), veh/h	207	437	335	54	410	482	288	235	238	524	422	388
Grp Sat Flow(s),veh/h/ln	1781	1870	1551	1781	1777	1529	1728	1777	1772	1728	1777	1625
Q Serve(g_s), s	18.8	18.9	29.8	4.2	19.0	0.0	13.2	23.2	23.6	21.1	38.9	39.1
Cycle Q Clear(g_c), s	18.8	18.9	29.8	4.2	19.0	0.0	13.2	23.2	23.6	21.1	38.9	39.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		0.76
Lane Grp Cap(c), veh/h	365	766	627	281	560	788	674	277	276	1194	544	497
V/C Ratio(X)	0.57	0.57	0.53	0.19	0.73	0.61	0.43	0.85	0.86	0.44	0.78	0.78
Avail Cap(c_a), veh/h	387	813	646	308	614	812	674	406	405	1194	544	497
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.4	64.4	41.4	57.4	62.8	26.5	63.6	73.9	74.1	45.5	56.8	56.9
Incr Delay (d2), s/veh	4.0	1.9	2.0	1.1	6.2	2.5	1.9	8.3	9.5	0.2	10.4	11.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	9.2	11.9	2.0	8.5	13.2	6.0	11.3	11.5	9.2	19.2	17.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.4	66.4	43.3	58.5	69.0	29.0	65.5	82.3	83.6	45.6	67.3	68.4
LnGrp LOS	E	E	D	E	E	C	E	F	F	D	E	E
Approach Vol, veh/h		979			946			761			1334	
Approach Delay, s/veh		58.9			48.0			76.3			59.1	
Approach LOS		E			D			E			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		41.8	67.1	32.9		33.3	40.0	60.0				
Change Period (Y+Rc), s		4.9	4.9	4.9		4.9	4.9	4.9				
Max Green Setting (Gmax), s		39.1	49.1	41.1		31.1	35.1	55.1				
Max Q Clear Time (g_c+I1), s		31.8	23.1	25.6		21.0	15.2	41.1				
Green Ext Time (p_c), s		4.7	1.3	1.9		6.7	0.8	4.0				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	59.7
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	778	6	9	743	95	0	0	0	78	3	98
Future Volume (veh/h)	89	778	6	9	743	95	0	0	0	78	3	98
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	97	846	7	10	808	103				85	3	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	124	1638	14	18	1400	593				653	23	595
Arrive On Green	0.07	0.45	0.45	0.02	0.79	0.79				0.38	0.38	0.38
Sat Flow, veh/h	1781	3611	30	1781	3554	1505				1723	61	1571
Grp Volume(v), veh/h	97	416	437	10	808	103				88	0	107
Grp Sat Flow(s),veh/h/ln	1781	1777	1864	1781	1777	1505				1784	0	1571
Q Serve(g_s), s	4.8	15.0	15.1	0.5	8.0	1.5				2.9	0.0	4.1
Cycle Q Clear(g_c), s	4.8	15.0	15.1	0.5	8.0	1.5				2.9	0.0	4.1
Prop In Lane	1.00		0.02	1.00		1.00				0.97		1.00
Lane Grp Cap(c), veh/h	124	806	845	18	1400	593				676	0	595
V/C Ratio(X)	0.78	0.52	0.52	0.57	0.58	0.17				0.13	0.00	0.18
Avail Cap(c_a), veh/h	210	806	845	79	1400	593				676	0	595
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	0.89	0.89	0.89				1.00	0.00	1.00
Uniform Delay (d), s/veh	41.2	17.6	17.6	43.9	6.6	5.9				18.3	0.0	18.6
Incr Delay (d2), s/veh	3.3	1.9	1.8	9.3	1.5	0.6				0.4	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	6.2	6.4	0.3	2.2	0.5				1.2	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.5	19.4	19.4	53.2	8.2	6.5				18.7	0.0	19.3
LnGrp LOS	D	B	B	D	A	A				B		B
Approach Vol, veh/h		950			921						195	
Approach Delay, s/veh		22.0			8.5						19.0	
Approach LOS		C			A						B	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	5.3	45.7		39.0	10.6	40.4
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s	4.0	37.7		34.1	10.6	31.1
Max Q Clear Time (g_c+I1), s	2.5	17.1		6.1	6.8	10.0
Green Ext Time (p_c), s	0.0	6.3		0.5	0.0	6.0

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		15.7	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	191	533	218	72	630	64	158	138	96	65	40	53
Future Volume (veh/h)	191	533	218	72	630	64	158	138	96	65	40	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.93	1.00		0.93	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	208	579	237	78	685	70	172	150	104	71	43	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	1035	416	288	999	414	458	257	178	139	56	75
Arrive On Green	0.34	0.58	0.58	0.16	0.28	0.28	0.26	0.26	0.26	0.08	0.08	0.08
Sat Flow, veh/h	1781	3554	1429	1781	3554	1472	1781	997	692	1781	715	965
Grp Volume(v), veh/h	208	579	237	78	685	70	172	0	254	71	0	101
Grp Sat Flow(s),veh/h/ln	1781	1777	1429	1781	1777	1472	1781	0	1689	1781	0	1680
Q Serve(g_s), s	9.0	9.1	9.3	3.5	15.4	3.2	7.1	0.0	11.8	3.4	0.0	5.3
Cycle Q Clear(g_c), s	9.0	9.1	9.3	3.5	15.4	3.2	7.1	0.0	11.8	3.4	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		0.57
Lane Grp Cap(c), veh/h	306	1035	416	288	999	414	458	0	435	139	0	131
V/C Ratio(X)	0.68	0.56	0.57	0.27	0.69	0.17	0.38	0.00	0.58	0.51	0.00	0.77
Avail Cap(c_a), veh/h	306	1035	416	288	999	414	614	0	582	139	0	131
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	0.40	0.00	0.40	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.5	15.2	15.3	33.1	28.8	24.4	27.5	0.0	29.2	39.9	0.0	40.7
Incr Delay (d2), s/veh	4.4	1.9	4.9	0.2	3.8	0.9	0.1	0.0	0.2	1.4	0.0	22.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.0	2.8	1.5	6.8	1.2	3.0	0.0	4.7	1.5	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.8	17.1	20.1	33.3	32.6	25.3	27.5	0.0	29.4	41.3	0.0	63.2
LnGrp LOS	C	B	C	C	C	C	C		C	D		E
Approach Vol, veh/h		1024			833			426			172	
Approach Delay, s/veh		20.8			32.1			28.6			54.1	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.8	30.2		28.1	18.9	31.1		11.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	7.6	25.3		31.0	6.7	26.2		7.0				
Max Q Clear Time (g_c+I1), s	11.0	17.4		13.8	5.5	11.1		7.3				
Green Ext Time (p_c), s	0.0	3.8		1.2	0.0	4.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		28.3	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	875	4	119	725	145	7	32	200	162	27	184
Future Volume (veh/h)	352	875	4	119	725	145	7	32	200	162	27	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.89	1.00		0.89	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	383	951	4	129	788	158	8	35	217	176	29	200
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	393	1338	531	155	862	597	77	338	453	285	32	224
Arrive On Green	0.22	0.38	0.38	0.09	0.24	0.24	0.22	0.22	0.22	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1410	1781	3554	1414	345	1508	1409	1781	203	1397
Grp Volume(v), veh/h	383	951	4	129	788	158	43	0	217	176	0	229
Grp Sat Flow(s),veh/h/ln	1781	1777	1410	1781	1777	1414	1853	0	1409	1781	0	1600
Q Serve(g_s), s	26.7	28.5	0.2	8.9	27.0	9.4	2.3	0.0	15.7	11.5	0.0	17.5
Cycle Q Clear(g_c), s	26.7	28.5	0.2	8.9	27.0	9.4	2.3	0.0	15.7	11.5	0.0	17.5
Prop In Lane	1.00		1.00	1.00		1.00	0.19		1.00	1.00		0.87
Lane Grp Cap(c), veh/h	393	1338	531	155	862	597	415	0	453	285	0	256
V/C Ratio(X)	0.97	0.71	0.01	0.83	0.91	0.26	0.10	0.00	0.48	0.62	0.00	0.89
Avail Cap(c_a), veh/h	393	1338	531	265	862	597	458	0	486	329	0	296
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.3	33.2	24.4	56.2	46.1	25.1	38.5	0.0	35.1	48.9	0.0	51.5
Incr Delay (d2), s/veh	38.2	3.2	0.0	4.4	15.8	1.1	0.0	0.0	0.3	1.5	0.0	23.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.9	12.6	0.1	4.2	13.6	4.3	1.1	0.0	5.4	5.2	0.0	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.5	36.4	24.4	60.5	61.8	26.2	38.6	0.0	35.4	50.4	0.0	74.8
LnGrp LOS	F	D	C	E	E	C	D		D	D		E
Approach Vol, veh/h		1338			1075			260			405	
Approach Delay, s/veh		50.7			56.4			35.9			64.2	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	51.9		24.9	32.0	35.2		32.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	18.6	33.3		23.1	27.6	24.3		30.9				
Max Q Clear Time (g_c+I1), s	10.9	30.5		19.5	28.7	29.0		17.7				
Green Ext Time (p_c), s	0.1	1.8		0.5	0.0	0.0		0.5				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		53.2	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1244	23	188	1082	0	134
Future Vol, veh/h	1244	23	188	1082	0	134
Conflicting Peds, #/hr	0	26	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	0	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1352	25	204	1176	0	146

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1403	0	-	702
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	483	-	0	381
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	471	-	-	372
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.7	20.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	372	-	-	471	-
HCM Lane V/C Ratio	0.392	-	-	0.434	-
HCM Control Delay (s/veh)	20.8	-	-	18.4	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q (veh)	1.8	-	-	2.2	-

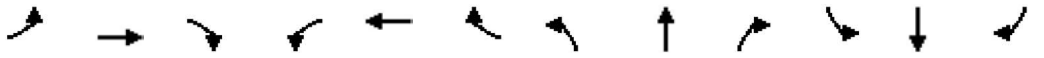
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1219	43	201	1148	59	212
Future Volume (veh/h)	1219	43	201	1148	59	212
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.95	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1325	47	218	1248	64	230
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1918	809	239	2570	299	266
Arrive On Green	0.54	0.54	0.13	0.72	0.17	0.17
Sat Flow, veh/h	3647	1499	1781	3647	1781	1585
Grp Volume(v), veh/h	1325	47	218	1248	64	230
Grp Sat Flow(s),veh/h/ln	1777	1499	1781	1777	1781	1585
Q Serve(g_s), s	24.6	1.3	10.9	13.5	2.8	12.7
Cycle Q Clear(g_c), s	24.6	1.3	10.9	13.5	2.8	12.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1918	809	239	2570	299	266
V/C Ratio(X)	0.69	0.06	0.91	0.49	0.21	0.86
Avail Cap(c_a), veh/h	1918	809	239	2570	554	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.93	0.93
Uniform Delay (d), s/veh	15.2	9.8	38.4	5.3	32.3	36.4
Incr Delay (d2), s/veh	2.1	0.1	5.1	0.1	0.1	3.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.4	4.9	3.7	1.2	5.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	17.3	10.0	43.5	5.4	32.4	39.5
LnGrp LOS	B	A	D	A	C	D
Approach Vol, veh/h	1372			1466	294	
Approach Delay, s/veh	17.0			11.0	38.0	
Approach LOS	B			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	16.5	53.5				70.0	20.0
Change Period (Y+Rc), s	4.4	4.9				4.9	4.9
Max Green Setting (Gmax), s	12.1	35.7				52.2	28.0
Max Q Clear Time (g_c+I1), s	12.9	26.6				15.5	14.7
Green Ext Time (p_c), s	0.0	7.4				16.1	0.4

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		16.2
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	566	105	167	483	77	107	137	200	51	125	85
Future Volume (veh/h)	115	566	105	167	483	77	107	137	200	51	125	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.94	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	615	114	182	525	84	116	149	217	55	136	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	585	1771	773	196	676	108	291	305	346	218	229	189
Arrive On Green	0.33	0.50	0.50	0.06	0.22	0.22	0.16	0.16	0.16	0.12	0.12	0.12
Sat Flow, veh/h	1781	3554	1551	3456	3040	484	1781	1870	1568	1781	1870	1542
Grp Volume(v), veh/h	125	615	114	182	306	303	116	149	217	55	136	92
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1728	1777	1746	1781	1870	1568	1781	1870	1542
Q Serve(g_s), s	6.1	12.6	4.8	6.3	19.4	19.6	7.0	8.7	15.0	3.4	8.3	6.7
Cycle Q Clear(g_c), s	6.1	12.6	4.8	6.3	19.4	19.6	7.0	8.7	15.0	3.4	8.3	6.7
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	585	1771	773	196	395	389	291	305	346	218	229	189
V/C Ratio(X)	0.21	0.35	0.15	0.93	0.77	0.78	0.40	0.49	0.63	0.25	0.59	0.49
Avail Cap(c_a), veh/h	585	1771	773	196	395	389	505	530	534	490	514	424
HCM 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
Upstream Filter(I)	0.73	0.73	0.73	0.42	0.42	0.42	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	29.1	18.3	16.3	56.4	43.8	43.9	44.9	45.6	42.4	47.7	49.8	49.1
Incr Delay (d2), s/veh	0.0	0.4	0.3	24.8	6.2	6.5	0.3	0.4	0.7	0.2	0.8	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.2	1.8	3.4	9.2	9.2	3.1	4.1	5.9	1.5	3.9	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.2	18.7	16.6	81.2	50.0	50.4	45.3	46.1	43.1	47.9	50.7	49.8
LnGrp LOS	C	B	B	F	D	D	D	D	D	D	D	D
Approach Vol, veh/h		854			791			482			283	
Approach Delay, s/veh		19.9			57.3			44.5			49.8	
Approach LOS		B			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	64.7		19.6	44.3	31.6		24.5				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	6.8	27.1		33.0	7.2	* 27		34.0				
Max Q Clear Time (g_c+I1), s	8.3	14.6		10.3	8.1	21.6		17.0				
Green Ext Time (p_c), s	0.0	4.9		0.7	0.0	2.3		1.0				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			40.6									
HCM 6th LOS			D									

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	876	25	27	829	295	8	8	8	156	6	81
Future Volume (veh/h)	99	876	25	27	829	295	8	8	8	156	6	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	0.96		1.00	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	952	27	29	901	321	9	9	9	170	7	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	1522	43	283	1013	359	213	211	175	374	32	156
Arrive On Green	0.06	0.43	0.43	0.03	0.40	0.40	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3525	100	1781	2531	897	429	649	539	873	97	482
Grp Volume(v), veh/h	108	480	499	29	631	591	27	0	0	265	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1848	1781	1777	1650	1618	0	0	1452	0	0
Q Serve(g_s), s	2.3	13.7	13.7	0.6	21.5	21.7	0.0	0.0	0.0	8.5	0.0	0.0
Cycle Q Clear(g_c), s	2.3	13.7	13.7	0.6	21.5	21.7	0.7	0.0	0.0	9.7	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.54	0.33		0.33	0.64		0.33
Lane Grp Cap(c), veh/h	242	767	798	283	712	661	599	0	0	562	0	0
V/C Ratio(X)	0.45	0.63	0.63	0.10	0.89	0.89	0.05	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	256	767	798	348	712	661	599	0	0	562	0	0
HCM 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
Upstream Filter(I)	0.94	0.94	0.94	0.56	0.56	0.56	1.00	0.00	0.00	0.76	0.00	0.00
Uniform Delay (d), s/veh	14.8	14.4	14.4	12.0	18.1	18.2	15.1	0.0	0.0	18.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	3.6	3.5	0.0	9.4	10.5	0.0	0.0	0.0	2.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.6	5.8	0.2	9.6	9.2	0.3	0.0	0.0	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.3	18.0	17.8	12.0	27.5	28.7	15.1	0.0	0.0	20.2	0.0	0.0
LnGrp LOS	B	B	B	B	C	C	B			C		
Approach Vol, veh/h		1087			1251			27			265	
Approach Delay, s/veh		17.6			27.7			15.1			20.2	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	33.0		26.0	8.1	30.9		26.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	4.0	25.7		21.1	4.2	25.5		21.1				
Max Q Clear Time (g_c+I1), s	2.6	15.7		11.7	4.3	23.7		2.7				
Green Ext Time (p_c), s	0.0	4.7		0.7	0.0	1.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		22.7	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.

LANE SUMMARY

Site: 1 [2050 CPA Non-Event Day PM_Kurtz Street at Hancock Street: Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Kurtz Street															
Lane 1[d]	172	2.0	172	2.0	1355	0.127	100	3.3	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	172	2.0	172	2.0		0.127		3.3	LOS A	0.0	0.0				
East: Hancock Street															
Lane 1[d]	360	2.0	360	2.0	1129	0.319	100	6.2	LOS A	1.7	44.1	Full	1600	0.0	0.0
Approach	360	2.0	360	2.0		0.319		6.2	LOS A	1.7	44.1				
West: Hancock Street															
Lane 1[d]	145	2.0	145	2.0	1137	0.127	100	4.2	LOS A	0.6	14.5	Full	1600	0.0	0.0
Approach	145	2.0	145	2.0		0.127		4.2	LOS A	0.6	14.5				
All Vehicles	676	2.0	676	2.0		0.319		5.0	LOS A	1.7	44.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Kurtz Street

Mov. From S To Exit:	L2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.
Lane 1	172	172	2.0	1355	0.127	100	NA	NA
Approach	172	172	2.0		0.127			

East: Hancock Street

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.
Lane 1	165	195	360	2.0	1129	0.319	100	NA	NA
Approach	165	195	360	2.0		0.319			

West: Hancock Street

Mov. From W To Exit:	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.

Lane 1	145	145	2.0		1137	0.127	100	NA	NA
Approach	145	145	2.0			0.127			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	676	2.0	0.319

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Kurtz Street				
Lane 1	0.0	0.0	0.0	0.0
East: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0
West: Hancock Street				
Lane 1	0.0	0.0	0.0	0.0



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	133	152	179	158	0
Future Volume (veh/h)	0	133	152	179	158	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	145	165	195	172	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0
Cap, veh/h	0	0	713	748	0	0
Arrive On Green	0.00	0.00	0.40	0.40	0.40	0.00
Sat Flow, veh/h	0		1781	1870	0	0
Grp Volume(v), veh/h	0.0		165	195	0	0
Grp Sat Flow(s),veh/h/ln			1781	1870	0	0
Q Serve(g_s), s			2.8	3.1	0.0	0.0
Cycle Q Clear(g_c), s			2.8	3.1	0.0	0.0
Prop In Lane			1.00		0.00	0.00
Lane Grp Cap(c), veh/h			713	748	0	0
V/C Ratio(X)			0.23	0.26	0.00	0.00
Avail Cap(c_a), veh/h			713	748	0	0
HCM Platoon Ratio			1.00	1.00	1.00	1.00
Upstream Filter(I)			1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh			8.9	9.0	0.0	0.0
Incr Delay (d2), s/veh			0.8	0.8	0.0	0.0
Initial Q Delay(d3), s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			1.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh			9.7	9.9	0.0	0.0
LnGrp LOS			A	A		
Approach Vol, veh/h				360	0	
Approach Delay, s/veh				9.8	0.0	
Approach LOS				A		

Timer - Assigned Phs						6	8
Phs Duration (G+Y+Rc), s						22.5	22.5
Change Period (Y+Rc), s						4.5	4.5
Max Green Setting (Gmax), s						18.0	18.0
Max Q Clear Time (g_c+I1), s						5.1	0.0
Green Ext Time (p_c), s						1.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	9.8
HCM 6th LOS	A

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	239	0	0	0	0	0	0	0	156	0	0
Future Vol, veh/h	63	239	0	0	0	0	0	0	0	156	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	260	0	0	0	0	0	0	0	170	0	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	10.4	0	9.4
HCM LOS	B	-	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	21%	100%
Vol Thru, %	100%	79%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	302	156
LT Vol	0	63	156
Through Vol	0	239	0
RT Vol	0	0	0
Lane Flow Rate	0	328	170
Geometry Grp	1	1	1
Degree of Util (X)	0	0.402	0.231
Departure Headway (Hd)	4.925	4.412	4.902
Convergence, Y/N	Yes	Yes	Yes
Cap	0	817	733
Service Time	2.959	2.43	2.926
HCM Lane V/C Ratio	0	0.401	0.232
HCM Control Delay, s/veh	8	10.4	9.4
HCM Lane LOS	N	B	A
HCM 95th-tile Q	0	2	0.9

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	707	0	0	75	0
Future Vol, veh/h	10	707	0	0	75	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	768	0	0	82	0
Number of Lanes	0	2	0	0	1	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	1	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	2
HCM Control Delay, s/veh	14.7	9.5
HCM LOS	B	A

Lane	EBLn1	EBLn2	SBLn1
Vol Left, %	4%	0%	100%
Vol Thru, %	96%	100%	0%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	246	471	75
LT Vol	10	0	75
Through Vol	236	471	0
RT Vol	0	0	0
Lane Flow Rate	267	512	82
Geometry Grp	5	5	2
Degree of Util (X)	0.357	0.681	0.128
Departure Headway (Hd)	4.807	4.787	5.653
Convergence, Y/N	Yes	Yes	Yes
Cap	753	758	635
Service Time	2.507	2.487	3.679
HCM Lane V/C Ratio	0.355	0.675	0.129
HCM Control Delay, s/veh	10.2	17.1	9.5
HCM Lane LOS	B	C	A
HCM 95th-tile Q	1.6	5.4	0.4

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	76	360	28	64	11	0	0	76	16
Future Vol, veh/h	0	0	0	76	360	28	64	11	0	0	76	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	83	391	30	70	12	0	0	83	17
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	10.6	9.1	8.9
HCM LOS	B	A	A

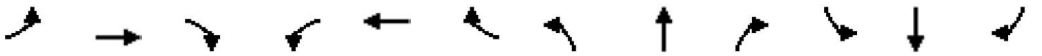
Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	85%	30%	0%	0%
Vol Thru, %	15%	70%	87%	83%
Vol Right, %	0%	0%	13%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	256	208	92
LT Vol	64	76	0	0
Through Vol	11	180	180	76
RT Vol	0	0	28	16
Lane Flow Rate	82	278	226	100
Geometry Grp	2	5	5	2
Degree of Util (X)	0.121	0.398	0.308	0.141
Departure Headway (Hd)	5.357	5.15	4.906	5.06
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	668	698	733	708
Service Time	3.398	2.886	2.642	3.098
HCM Lane V/C Ratio	0.123	0.398	0.308	0.141
HCM Control Delay, s/veh	9.1	11.3	9.8	8.9
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.4	1.9	1.3	0.5

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	17	272	21	9	4	0	0	24	46
Future Vol, veh/h	0	0	0	17	272	21	9	4	0	0	24	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	18	296	23	10	4	0	0	26	50
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.7	8	7.7
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	69%	11%	0%	0%
Vol Thru, %	31%	89%	87%	34%
Vol Right, %	0%	0%	13%	66%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	153	157	70
LT Vol	9	17	0	0
Through Vol	4	136	136	24
RT Vol	0	0	21	46
Lane Flow Rate	14	166	171	76
Geometry Grp	2	5	5	2
Degree of Util (X)	0.019	0.219	0.218	0.091
Departure Headway (Hd)	4.919	4.748	4.599	4.314
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	731	752	776	835
Service Time	2.924	2.504	2.355	2.315
HCM Lane V/C Ratio	0.019	0.221	0.22	0.091
HCM Control Delay, s/veh	8	8.8	8.6	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.8	0.8	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	52	131	271	52	2767	23	0	2540	165
Future Volume (veh/h)	0	0	0	52	131	271	52	2767	23	0	2540	165
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h				57	142	295	57	3008	25	0	2761	179
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	2	2	2	2	2	0	2	2
Cap, veh/h				112	279	334	298	3750	31	0	2633	795
Arrive On Green				0.21	0.21	0.21	0.33	1.00	1.00	0.00	0.52	0.52
Sat Flow, veh/h				528	1316	1576	1781	5223	43	0	5274	1542
Grp Volume(v), veh/h				199	0	295	57	1957	1076	0	2761	179
Grp Sat Flow(s),veh/h/ln				1844	0	1576	1781	1702	1862	0	1702	1542
Q Serve(g_s), s				13.3	0.0	25.4	3.2	0.0	0.0	0.0	72.2	8.9
Cycle Q Clear(g_c), s				13.3	0.0	25.4	3.2	0.0	0.0	0.0	72.2	8.9
Prop In Lane				0.29		1.00	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h				391	0	334	298	2444	1337	0	2633	795
V/C Ratio(X)				0.51	0.00	0.88	0.19	0.80	0.80	0.00	1.05	0.23
Avail Cap(c_a), veh/h				580	0	495	298	2444	1337	0	2633	795
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.09	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.7	0.0	53.5	39.9	0.0	0.0	0.0	33.9	18.6
Incr Delay (d2), s/veh				0.4	0.0	8.8	0.0	0.3	0.5	0.0	31.9	0.7
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	10.9	1.4	0.1	0.2	0.0	35.8	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				49.1	0.0	62.3	39.9	0.3	0.5	0.0	65.8	19.2
LnGrp LOS				D		E	D	A	A		F	B
Approach Vol, veh/h					494			3090			2940	
Approach Delay, s/veh					57.0			1.1			63.0	
Approach LOS					E			A			E	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	105.4	34.6	28.3	77.1
Change Period (Y+Rc), s	4.9	4.9	4.9	* 4.9
Max Green Setting (Gmax), s	86.2	44.0	9.6	* 72
Max Q Clear Time (g_c+I1), s	2.0	27.4	5.2	74.2
Green Ext Time (p_c), s	16.7	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	33.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	768	365	160	0	0	0	0	2155	34	200	2226	0
Future Volume (veh/h)	768	365	160	0	0	0	0	2155	34	200	2226	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	835	397	174				0	2342	37	217	2420	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	676	465	204				0	2297	36	345	4325	0
Arrive On Green	0.38	0.38	0.38				0.00	0.44	0.44	0.39	1.00	0.00
Sat Flow, veh/h	1781	1226	537				0	5346	82	1781	6696	0
Grp Volume(v), veh/h	835	0	571				0	1538	841	217	2420	0
Grp Sat Flow(s),veh/h/ln	1781	0	1764				0	1702	1856	1781	1609	0
Q Serve(g_s), s	53.1	0.0	41.6				0.0	62.1	62.1	13.8	0.0	0.0
Cycle Q Clear(g_c), s	53.1	0.0	41.6				0.0	62.1	62.1	13.8	0.0	0.0
Prop In Lane	1.00		0.30				0.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	676	0	669				0	1510	823	345	4325	0
V/C Ratio(X)	1.24	0.00	0.85				0.00	1.02	1.02	0.63	0.56	0.00
Avail Cap(c_a), veh/h	676	0	669				0	1510	823	345	4325	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.09	0.09	0.47	0.47	0.00
Uniform Delay (d), s/veh	43.5	0.0	39.9				0.0	38.9	39.0	38.8	0.0	0.0
Incr Delay (d2), s/veh	118.6	0.0	10.0				0.0	12.3	15.6	1.3	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	45.4	0.0	19.8				0.0	27.4	30.6	5.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	162.1	0.0	49.8				0.0	51.3	54.5	40.1	0.2	0.0
LnGrp LOS	F		D					F	F	D	A	
Approach Vol, veh/h		1406						2379			2637	
Approach Delay, s/veh		116.5						52.4			3.5	
Approach LOS		F						D			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	32.5	67.0		58.0		99.5
Change Period (Y+Rc), s	4.9	* 4.9		4.9		4.9
Max Green Setting (Gmax), s	10.6	* 62		53.1		77.1
Max Q Clear Time (g_c+I1), s	15.8	64.1		55.1		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		10.7

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		46.4
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	604	578	375	392	199	305	11	467	1700	340	1507	725
Future Volume (vph)	604	578	375	392	199	305	11	467	1700	340	1507	725
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	14	12	12	12	12
Total Lost time (s)	5.9	5.9	5.9	5.9	5.9	5.9		5.4	5.9		5.9	5.9
Lane Util. Factor	0.95	0.95	1.00	1.00	0.91	0.91		0.97	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	0.99		1.00	0.99		1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	0.85	1.00	0.99		1.00	0.97		1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (prot)	1681	1761	1583	1559	1610	3344		3662	4945		5085	1519
Flt Permitted	0.95	0.99	1.00	1.00	0.95	0.99		0.95	1.00		1.00	1.00
Satd. Flow (perm)	1681	1761	1583	1559	1610	3344		3662	4945		5085	1519
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	657	628	408	426	216	332	12	508	1848	370	1638	788
RTOR Reduction (vph)	0	0	0	184	0	2	0	0	0	0	0	400
Lane Group Flow (vph)	591	694	408	242	181	377	0	508	2218	0	1638	388
Confl. Peds. (#/hr)				1			45			3		21
Confl. Bikes (#/hr)				3			7					
Turn Type	Split	NA	Perm	Perm	Split	NA		Prot	NA		NA	Perm
Protected Phases	4	4			8	8		5	2		6	
Permitted Phases			4	4								6
Actuated Green, G (s)	40.4	40.4	40.4	40.4	14.5	14.5		15.2	57.4		36.8	36.8
Effective Green, g (s)	40.4	40.4	40.4	40.4	14.5	14.5		15.2	57.4		36.8	36.8
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.11	0.11		0.12	0.44		0.28	0.28
Clearance Time (s)	5.9	5.9	5.9	5.9	5.9	5.9		5.4	5.9		5.9	5.9
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0
Lane Grp Cap (vph)	522	547	491	484	179	372		428	2183		1439	429
v/s Ratio Prot	0.35	c0.39			0.11	c0.11		0.14	c0.45		c0.32	
v/s Ratio Perm			0.26	0.16								0.26
v/c Ratio	1.13	1.26	0.83	0.49	1.01	1.01		1.18	1.01		1.13	0.90
Uniform Delay, d1	44.8	44.8	41.6	36.5	57.7	57.7		57.4	36.3		46.6	44.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	81.1	134.8	10.9	0.2	70.2	50.2		105.4	23.3		71.2	25.0
Delay (s)	125.9	179.6	52.5	36.8	127.9	108.0		162.8	59.6		117.8	69.9
Level of Service	F	F	D	D	F	F		F	E		F	E
Approach Delay (s/veh)		111.4				114.4			78.8		102.2	
Approach LOS		F				F			E		F	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	96.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	23.1
Intersection Capacity Utilization	103.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NWR2
Lane Configurations	
Traffic Volume (vph)	91
Future Volume (vph)	91
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	5.9
Lane Util. Factor	1.00
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.86
Flt Protected	1.00
Satd. Flow (prot)	1611
Flt Permitted	1.00
Satd. Flow (perm)	1611
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	99
RTOR Reduction (vph)	88
Lane Group Flow (vph)	11
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	14.5
Effective Green, g (s)	14.5
Actuated g/C Ratio	0.11
Clearance Time (s)	5.9
Vehicle Extension (s)	1.0
Lane Grp Cap (vph)	179
v/s Ratio Prot	
v/s Ratio Perm	0.01
v/c Ratio	0.06
Uniform Delay, d1	51.6
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	51.7
Level of Service	D
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	599	190	196	685	522	189	1737	82	543	1484	195
Future Volume (veh/h)	219	599	190	196	685	522	189	1737	82	543	1484	195
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	238	651	207	213	745	567	205	1888	89	590	1613	212
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	750	320	267	1003	429	253	2457	116	607	2711	355
Arrive On Green	0.08	0.21	0.21	0.15	0.28	0.28	0.07	0.49	0.49	0.18	0.60	0.60
Sat Flow, veh/h	3456	3554	1514	1781	3554	1520	3456	4987	235	3456	4556	597
Grp Volume(v), veh/h	238	651	207	213	745	567	205	1287	690	590	1204	621
Grp Sat Flow(s),veh/h/ln	1728	1777	1514	1781	1777	1520	1728	1702	1817	1728	1702	1749
Q Serve(g_s), s	9.5	24.8	18.2	16.2	26.7	39.5	8.2	43.2	43.4	23.8	31.0	31.2
Cycle Q Clear(g_c), s	9.5	24.8	18.2	16.2	26.7	39.5	8.2	43.2	43.4	23.8	31.0	31.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.34
Lane Grp Cap(c), veh/h	284	750	320	267	1003	429	253	1677	895	607	2025	1041
V/C Ratio(X)	0.84	0.87	0.65	0.80	0.74	1.32	0.81	0.77	0.77	0.97	0.59	0.60
Avail Cap(c_a), veh/h	286	871	371	267	1003	429	449	1677	895	607	2025	1041
HCM 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
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	63.3	53.3	54.6	57.5	45.6	50.3	63.9	29.0	29.0	57.4	17.8	17.8
Incr Delay (d2), s/veh	14.7	6.0	1.5	14.6	2.7	160.4	2.3	3.4	6.4	5.9	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	11.7	7.0	8.3	12.1	33.9	3.6	17.8	19.8	10.7	11.6	12.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.0	59.3	56.1	72.1	48.3	210.7	66.2	32.4	35.4	63.3	17.8	17.9
LnGrp LOS	E	E	E	E	D	F	E	C	D	E	B	B
Approach Vol, veh/h		1096			1525			2182			2415	
Approach Delay, s/veh		62.8			112.0			36.5			28.9	
Approach LOS		E			F			D			C	

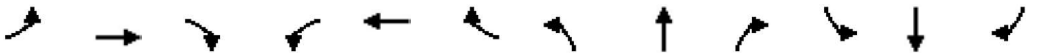
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	75.4	25.9	34.5	14.7	89.7	15.9	44.4
Change Period (Y+Rc), s	4.4	* 5.7	4.9	* 4.9	4.4	5.7	4.4	4.9
Max Green Setting (Gmax), s	24.6	* 46	16.8	* 34	18.2	51.3	11.6	39.5
Max Q Clear Time (g_c+I1), s	25.8	45.4	18.2	26.8	10.2	33.2	11.5	41.5
Green Ext Time (p_c), s	0.0	0.2	0.0	1.4	0.1	4.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	53.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frpb, ped/bikes												
Flpb, ped/bikes												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Confl. Peds. (#/hr)			2						12			6
Confl. Bikes (#/hr)									6			2
Turn Type							Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s/veh)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	4	0	0	4	0	4	4524	0	4	4524	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	0	-91648	0	0	-91648	0	1781	5274	0	1781	5274	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	0	1870	0	1781	1702	0	1781	1702	0
Q Serve(g_s), 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
Cycle Q Clear(g_c), 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
Prop In Lane	0.00		0.00	0.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	4	0	0	4	0	4	4524	0	4	4524	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	191	0	0	191	0	178	4524	0	178	4524	0
HCM 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
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	50.0		0.0	0.0	50.0		0.0				
Change Period (Y+Rc), s	4.4	* 5.7		4.9	4.4	5.7		4.9				
Max Green Setting (Gmax), s	5.0	* 25		5.1	5.0	24.9		5.1				
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0	0.0		0.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	0.0
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1	0	2	1	1	1	4912	1525	2	3419	1525
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3510	1900	0	3456	1870	1585	1781	5106	1585	3456	3554	1585
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1755	1900	0	1728	1870	1585	1781	1702	1585	1728	1777	1585
Q Serve(g_s), 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
Cycle Q Clear(g_c), 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
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1	0	2	1	1	1	4912	1525	2	3419	1525
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	414	418	0	659	547	464	59	4912	1525	184	3419	1525
HCM 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
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	150.0	0.0	0.0	0.0	150.0	0.0	0.0
Change Period (Y+Rc), s	4.4	* 5.7	4.4	4.9	4.4	5.7	4.4	4.9
Max Green Setting (Gmax), s	8.0	* 61	28.6	33.0	5.0	64.0	17.7	43.9
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	0.0
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	470	14	252	0	276	0	519	362	105	288	0
Future Volume (vph)	87	470	14	252	0	276	0	519	362	105	288	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9	4.9		4.4		4.5		4.9	4.9	4.4	4.9	
Lane Util. Factor	1.00	1.00		0.97		1.00		1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00		0.92		1.00	0.66	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1854		3433		1461		1863	1054	1770	1863	
Flt Permitted	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1854		3433		1461		1863	1054	1770	1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	95	511	15	274	0	300	0	564	393	114	313	0
RTOR Reduction (vph)	0	1	0	0	0	221	0	0	142	0	0	0
Lane Group Flow (vph)	95	525	0	274	0	80	0	564	251	114	313	0
Confl. Peds. (#/hr)			3			15			94			11
Confl. Bikes (#/hr)									12			9
Turn Type	Prot	NA		Prot		Perm		NA	Perm	Prot	NA	
Protected Phases	7	4		3				2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	11.0	37.2		11.0		37.1		59.6	59.6	13.6	77.6	
Effective Green, g (s)	11.0	37.2		11.0		37.1		59.6	59.6	13.6	77.6	
Actuated g/C Ratio	0.08	0.27		0.08		0.27		0.43	0.43	0.10	0.55	
Clearance Time (s)	4.9	4.9		4.4		4.5		4.9	4.9	4.4	4.9	
Vehicle Extension (s)	1.0	1.0		1.0		3.0		1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)	139	492		269		387		793	448	171	1032	
v/s Ratio Prot	0.05	c0.28		c0.08				c0.30		c0.06	0.17	
v/s Ratio Perm						0.05			0.24			
v/c Ratio	0.68	1.06		1.01		0.20		0.71	0.56	0.66	0.30	
Uniform Delay, d1	62.8	51.4		64.5		39.9		33.1	30.3	61.0	16.7	
Progression Factor	1.04	0.59		1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	34.9		59.7		0.2		5.3	4.9	7.3	0.7	
Delay (s)	66.5	65.5		124.2		40.2		38.4	35.3	68.3	17.4	
Level of Service	E	E		F		D		D	D	E	B	
Approach Delay (s/veh)		65.6			80.3			37.1			31.0	
Approach LOS		E			F			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	52.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.2
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

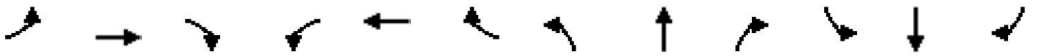
Intersection	
Int Delay, s/veh	2.4

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	339	732	403	154	0	0
Future Vol, veh/h	339	732	403	154	0	0
Conflicting Peds, #/hr	0	0	0	23	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	368	796	438	167	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	628	0	-	0	1993	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	1532	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	954	-	-	-	66	600
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	197	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	933	-	-	-	38	587
Mov Cap-2 Maneuver	-	-	-	-	132	-
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	193	-

Approach	NB	SB	SE
HCM Control Delay, s/v	3.6	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	933	-	-	-	-
HCM Lane V/C Ratio	0.395	-	-	-	-
HCM Control Delay (s/veh)	11.4	-	0	-	-
HCM Lane LOS	B	-	A	-	-
HCM 95th %tile Q (veh)	1.9	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	524	151	272	269	84	142	154	704	116	282	86
Future Volume (veh/h)	49	524	151	272	269	84	142	154	704	116	282	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.91	1.00		0.94	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	570	164	296	292	91	154	167	765	126	307	93
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	1108	600	926	1020	788	143	602	1192	179	502	209
Arrive On Green	0.04	0.31	0.31	0.27	0.55	0.55	0.08	0.17	0.17	0.05	0.14	0.14
Sat Flow, veh/h	1781	3554	1519	3456	1870	1444	1781	3554	2628	3456	3554	1478
Grp Volume(v), veh/h	53	570	164	296	292	91	154	167	765	126	307	93
Grp Sat Flow(s),veh/h/ln	1781	1777	1519	1728	1870	1444	1781	1777	1314	1728	1777	1478
Q Serve(g_s), s	3.5	15.8	2.9	8.2	10.1	3.7	9.6	4.9	4.8	4.3	9.7	6.9
Cycle Q Clear(g_c), s	3.5	15.8	2.9	8.2	10.1	3.7	9.6	4.9	4.8	4.3	9.7	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	1108	600	926	1020	788	143	602	1192	179	502	209
V/C Ratio(X)	0.78	0.51	0.27	0.32	0.29	0.12	1.08	0.28	0.64	0.70	0.61	0.45
Avail Cap(c_a), veh/h	140	1108	600	926	1020	788	143	1196	1632	207	1125	468
HCM 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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	33.9	9.3	35.2	14.7	13.2	55.2	43.4	11.6	56.0	48.4	47.2
Incr Delay (d2), s/veh	6.8	1.7	1.1	0.1	0.7	0.3	98.6	0.2	0.6	6.3	0.5	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	7.1	1.5	3.5	4.4	1.2	8.1	2.1	4.6	2.0	4.2	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.0	35.6	10.5	35.2	15.4	13.5	153.8	43.7	12.1	62.3	48.9	47.8
LnGrp LOS	E	D	B	D	B	B	F	D	B	E	D	D
Approach Vol, veh/h		787			679			1086			526	
Approach Delay, s/veh		32.3			23.8			37.1			51.9	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.1	43.3	15.0	23.6	10.0	71.4	11.6	27.0
Change Period (Y+Rc), s	5.9	* 5.9	5.4	6.7	5.4	5.9	5.4	6.7
Max Green Setting (Gmax), s	11.6	* 37	9.6	38.0	9.4	39.6	7.2	40.4
Max Q Clear Time (g_c+I1), s	10.2	17.8	11.6	11.7	5.5	12.1	6.3	6.9
Green Ext Time (p_c), s	0.1	5.2	0.0	1.3	0.0	1.4	0.0	4.8

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	35.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Appendix L

Horizon Year (2050) Plus Full Project Buildout (CPA) Event Day Scenario 95th Percentile Queue Worksheets

Intersection: 1: Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	L	R	R	T	T	T	T	T	T	T
Maximum Queue (ft)	223	224	246	444	457	206	167	63	181	178	155	83
Average Queue (ft)	146	147	111	203	206	134	81	7	121	106	59	14
95th Queue (ft)	202	210	202	367	374	194	158	33	168	168	123	50
Link Distance (ft)	2516	2516	2516	2516	2516				1715	1715	1715	1715
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						400						
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	T	R	L	T	T	R	L	L	T	TR
Maximum Queue (ft)	156	181	156	42	42	87	93	436	118	241	384	409
Average Queue (ft)	60	84	34	3	6	34	33	205	40	82	188	211
95th Queue (ft)	136	162	108	24	25	76	82	376	98	186	321	340
Link Distance (ft)		1924	1924	1924		620	620	620			1514	1514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360				150				230	230		
Storage Blk Time (%)											10	
Queuing Penalty (veh)											15	

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	SB	SB	SB	SB
Directions Served	L	L	T	TR
Maximum Queue (ft)	246	278	310	304
Average Queue (ft)	107	147	165	172
95th Queue (ft)	207	248	273	293
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)	1	4		
Queuing Penalty (veh)	1	6		

Intersection: 3: Commercial Dwy 1/Hancock St & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R
Maximum Queue (ft)	110	120	158	32	84	165	57	70	56
Average Queue (ft)	38	26	39	5	23	72	16	32	27
95th Queue (ft)	80	81	107	19	59	140	43	62	53
Link Distance (ft)		620	620		955	955			
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	350			100			350		
Storage Blk Time (%)					0				
Queuing Penalty (veh)					0				

Intersection: 4: Kemper St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	122	139	160	121	118	143	155	55	173	217	54	233
Average Queue (ft)	52	57	68	40	50	50	77	16	105	66	18	111
95th Queue (ft)	105	123	139	88	102	108	140	44	162	156	49	199
Link Distance (ft)		955	955							702		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	440			350	175				100		150	
Storage Blk Time (%)						0			17	2		4
Queuing Penalty (veh)						0			19	3		1

Intersection: 5: West Dr/Frontier Dr & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	144	177	158	24	132	143	128	32	48	87	184	188
Average Queue (ft)	65	117	56	1	88	86	37	5	13	37	101	64
95th Queue (ft)	116	187	130	10	145	147	101	20	40	65	162	137
Link Distance (ft)									437			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	330				175					50	150	
Storage Blk Time (%)						0			2	1	2	1
Queuing Penalty (veh)						0			2	0	4	1

Intersection: 6: Target Dwy & Sports Arena Blvd

Movement	EB	EB	WB
Directions Served	T	T	L
Maximum Queue (ft)	18	39	81
Average Queue (ft)	1	2	27
95th Queue (ft)	10	19	61
Link Distance (ft)			
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			125
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: East Dr & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	88	142	30	123	104	109	60	72
Average Queue (ft)	29	55	6	64	19	30	21	31
95th Queue (ft)	70	112	25	110	70	83	52	59
Link Distance (ft)	370	370	370		1083	1083	920	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)				125				100
Storage Blk Time (%)				0	0			0
Queuing Penalty (veh)				1	0			0

Intersection: 8: Kemper St & Midway Dr

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	L	T	TR	L	LT	R	L
Maximum Queue (ft)	158	238	240	186	111	73	199	213	162	236	62	111
Average Queue (ft)	76	99	106	29	51	15	91	99	66	118	27	33
95th Queue (ft)	133	207	213	106	95	50	173	186	143	202	53	78
Link Distance (ft)		1514	1514				1839	1839		355	355	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	320			150	250	250			90			100
Storage Blk Time (%)			6						3	28		0
Queuing Penalty (veh)			5						4	16		0

Intersection: 8: Kemper St & Midway Dr

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	143	69
Average Queue (ft)	57	29
95th Queue (ft)	114	61
Link Distance (ft)	702	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		115
Storage Blk Time (%)	3	
Queuing Penalty (veh)	3	

Intersection: 9: Commercial Dwy 2/East Dr & Midway Dr

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	52	207	211	112	347	360	31	95
Average Queue (ft)	13	59	71	8	141	164	6	38
95th Queue (ft)	34	153	165	51	302	326	21	80
Link Distance (ft)		1839	1839		964	964	270	920
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	90			100				
Storage Blk Time (%)		2			10			
Queuing Penalty (veh)		1			2			

Intersection: 11: Kurtz St & Hancock St

Movement	EB	WB	WB	NB
Directions Served	R	L	T	L
Maximum Queue (ft)	123	102	104	81
Average Queue (ft)	57	43	51	66
95th Queue (ft)	102	84	94	73
Link Distance (ft)		631	631	
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Hancock St & Channel Way

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 11: Kurtz St & Hancock St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 12: H1 Dwy 2/Sherman St & Kurtz St

Movement	EB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	94	46
Average Queue (ft)	51	28
95th Queue (ft)	76	41
Link Distance (ft)		296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 13: Kurtz St & Greenwood St

Movement	EB	EB	SB
Directions Served	LT	T	L
Maximum Queue (ft)	94	90	56
Average Queue (ft)	49	40	32
95th Queue (ft)	77	66	50
Link Distance (ft)	461	461	321
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Sherman St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	73	74	38	53
Average Queue (ft)	37	41	28	27
95th Queue (ft)	57	63	43	48
Link Distance (ft)	468	468	296	513
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Greenwood St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	100	112	31	76
Average Queue (ft)	49	52	12	38
95th Queue (ft)	79	87	37	60
Link Distance (ft)	249	249	321	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Camino Del Rio W & Moore St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 17: Camino Del Rio W & Hancock St

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	TR	L	T	T	TR	T	T	T	R
Maximum Queue (ft)	178	281	68	233	197	224	162	158	159	122
Average Queue (ft)	86	128	17	94	102	105	142	125	128	18
95th Queue (ft)	159	240	52	185	176	185	161	171	187	75
Link Distance (ft)	526	526		289	289	289				
Upstream Blk Time (%)				0	0	0				
Queuing Penalty (veh)				0	0	0				
Storage Bay Dist (ft)			100							130
Storage Blk Time (%)				8					29	0
Queuing Penalty (veh)				3					28	3

Intersection: 18: Camino Del Rio W & Kurtz St

Movement	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	TR	T	T	TR	L	T	T	T	T
Maximum Queue (ft)	441	451	372	376	387	175	335	335	286	210
Average Queue (ft)	257	213	315	322	317	160	257	200	109	74
95th Queue (ft)	406	386	411	416	418	199	393	349	239	160
Link Distance (ft)	535	535	345	345	345		289	289	289	289
Upstream Blk Time (%)	0	0	10	10	9		20	1	0	0
Queuing Penalty (veh)	0	0	58	57	51		123	8	2	1
Storage Bay Dist (ft)						100				
Storage Blk Time (%)						63	19			
Queuing Penalty (veh)						342	46			

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	LT	R	>	L	LT	TR	L	L	T	T	TR
Maximum Queue (ft)	319	420	220	189	234	266	253	227	277	448	480	501
Average Queue (ft)	179	251	131	101	103	161	157	129	164	214	240	261
95th Queue (ft)	281	373	210	177	182	230	227	216	302	466	488	493
Link Distance (ft)	1083	1083	1083			305	305			630	630	630
Upstream Blk Time (%)						0	0			0	0	0
Queuing Penalty (veh)						1	0			1	1	3
Storage Bay Dist (ft)				300	180			260	260			
Storage Blk Time (%)					0	6		0	1	14		
Queuing Penalty (veh)					1	6		2	5	44		

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	SB	SB	SB	SB	NW
Directions Served	T	T	T	R	>
Maximum Queue (ft)	396	410	419	303	1
Average Queue (ft)	270	290	281	138	0
95th Queue (ft)	434	448	440	264	0
Link Distance (ft)	345	345	345	345	255
Upstream Blk Time (%)	7	8	8	0	
Queuing Penalty (veh)	42	45	43	2	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 20: Rosecrans St & Midway Dr

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T
Maximum Queue (ft)	137	174	244	254	170	320	447	469	255	200	354	587
Average Queue (ft)	52	85	124	134	56	174	239	234	171	90	178	335
95th Queue (ft)	108	160	219	222	131	290	371	377	295	169	352	518
Link Distance (ft)			964	964								
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100	100			240	250			180	280	280	
Storage Blk Time (%)	1	5	19	1		2	8	19	6		0	14
Queuing Penalty (veh)	2	7	29	1		6	15	56	17		0	36

Intersection: 20: Rosecrans St & Midway Dr

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	T	TR
Maximum Queue (ft)	503	472	258	395	608	617	619
Average Queue (ft)	273	253	123	195	356	378	402
95th Queue (ft)	431	407	218	383	566	583	606
Link Distance (ft)					630	630	630
Upstream Blk Time (%)					1	0	1
Queuing Penalty (veh)					5	1	7
Storage Bay Dist (ft)			320	320			
Storage Blk Time (%)			0	0	22		
Queuing Penalty (veh)			0	0	63		

Intersection: 21: Rosecrans St & N Evergreen St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: Rosecrans St & Lytton St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 23: Rosecrans St & Kurtz St

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	L	R	T	R	L	T
Maximum Queue (ft)	102	302	107	144	458	211	144	137	210
Average Queue (ft)	28	239	87	107	175	98	63	37	71
95th Queue (ft)	69	316	127	170	409	175	117	89	155
Link Distance (ft)	257	257				305	305		261
Upstream Blk Time (%)		8							0
Queuing Penalty (veh)		18							0
Storage Bay Dist (ft)			70	70				100	
Storage Blk Time (%)			37	34	14			1	4
Queuing Penalty (veh)			109	101	34			1	3

Intersection: 24: Rosecrans St & Hancock St

Movement	NB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	104	4	24
Average Queue (ft)	45	0	1
95th Queue (ft)	85	3	10
Link Distance (ft)		640	640
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	R	L	T	T	R
Maximum Queue (ft)	56	114	142	66	108	107	109	70	168	145	88	150
Average Queue (ft)	13	38	64	23	95	90	61	12	79	42	19	61
95th Queue (ft)	40	85	112	53	112	128	123	37	141	97	60	125
Link Distance (ft)			248									
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	120	120		100	150	150			150			
Storage Blk Time (%)		0	2						1	0		
Queuing Penalty (veh)		0	5						1	0		

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	R
Maximum Queue (ft)	112	37	94	68	46	26
Average Queue (ft)	26	7	28	28	8	4
95th Queue (ft)	87	25	68	62	30	16
Link Distance (ft)				1531	1531	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	320	230	230			65
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 26: Kurtz St & Pacific Hwy

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 1: Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	L	R	R	T	T	T	T	T	T	T
Maximum Queue (ft)	316	333	330	479	486	384	307	192	290	276	235	185
Average Queue (ft)	206	209	181	264	269	241	186	60	200	191	149	63
95th Queue (ft)	280	288	275	419	426	333	273	150	261	253	225	155
Link Distance (ft)	2516	2516	2516	2516	2516				1715	1715	1715	1715
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						400						
Storage Blk Time (%)						0						
Queuing Penalty (veh)						0						

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	T	R	L	T	T	R	L	L	T	TR
Maximum Queue (ft)	238	267	239	135	164	264	279	373	157	305	949	911
Average Queue (ft)	127	161	111	18	25	112	121	132	50	162	459	462
95th Queue (ft)	207	246	215	79	99	215	227	292	130	362	973	945
Link Distance (ft)		1924	1924	1924		620	620	620			1514	1514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360				150				230	230		
Storage Blk Time (%)						10			0	0	39	
Queuing Penalty (veh)						4			1	1	120	

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	SB	SB	SB	SB
Directions Served	L	L	T	TR
Maximum Queue (ft)	270	315	325	322
Average Queue (ft)	131	183	260	286
95th Queue (ft)	251	299	358	381
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)	1	9		
Queuing Penalty (veh)	2	25		

Intersection: 3: Commercial Dwy 1/Hancock St & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R
Maximum Queue (ft)	179	291	307	20	251	341	75	78	74
Average Queue (ft)	79	147	161	3	99	188	32	37	31
95th Queue (ft)	150	260	280	13	203	310	63	73	64
Link Distance (ft)		620	620		955	955			
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	350			100			350		
Storage Blk Time (%)		0			8	0			
Queuing Penalty (veh)		0			0	0			

Intersection: 4: Kemper St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	511	840	827	90	146	171	187	69	173	251	112	135
Average Queue (ft)	376	427	408	43	55	125	150	29	75	95	46	48
95th Queue (ft)	632	941	917	78	113	177	188	58	144	184	91	107
Link Distance (ft)		955	955							702		
Upstream Blk Time (%)		2	1									
Queuing Penalty (veh)		9	7									
Storage Bay Dist (ft)	440			350	175				100		150	
Storage Blk Time (%)	46	5	1		0	0			5	7	0	1
Queuing Penalty (veh)	133	11	1		0	0			9	12	0	0

Intersection: 5: West Dr/Frontier Dr & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	188	176	183	49	158	144	141	122	290	125	225	518
Average Queue (ft)	168	144	138	5	129	118	116	20	85	74	199	461
95th Queue (ft)	183	229	231	26	146	182	184	77	204	131	285	595
Link Distance (ft)									437			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	330				175					50	150	
Storage Blk Time (%)					1	0			40	7	59	55
Queuing Penalty (veh)					3	0			75	4	125	89

Intersection: 6: Target Dwy & Sports Arena Blvd

Movement	EB	EB	EB	WB	NB
Directions Served	T	T	R	L	R
Maximum Queue (ft)	116	140	6	89	39
Average Queue (ft)	31	54	0	38	3
95th Queue (ft)	108	146	6	75	40
Link Distance (ft)					468
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				125	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 7: East Dr & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	381	406	415	183	227	198	261	147
Average Queue (ft)	242	316	116	104	91	96	61	59
95th Queue (ft)	414	453	366	167	191	170	167	112
Link Distance (ft)	370	370	370		1083	1083	920	
Upstream Blk Time (%)	4	20	6					
Queuing Penalty (veh)	15	80	25					
Storage Bay Dist (ft)				125				100
Storage Blk Time (%)				7	2		3	2
Queuing Penalty (veh)				46	3		5	2

Intersection: 8: Kemper St & Midway Dr

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	L	T	TR	L	LT	R	L
Maximum Queue (ft)	201	292	332	225	164	282	307	282	164	288	103	174
Average Queue (ft)	84	128	141	49	91	43	110	106	85	144	41	41
95th Queue (ft)	160	254	274	164	147	144	229	217	173	235	79	106
Link Distance (ft)		1514	1514				1839	1839		355	355	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	320			150	250	250			90			100
Storage Blk Time (%)		0	10			0	1		6	34		0
Queuing Penalty (veh)		0	10			0	2		14	24		1

Intersection: 8: Kemper St & Midway Dr

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	245	147
Average Queue (ft)	102	42
95th Queue (ft)	191	108
Link Distance (ft)	702	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		115
Storage Blk Time (%)	13	
Queuing Penalty (veh)	17	

Intersection: 9: Commercial Dwy 2/East Dr & Midway Dr

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	164	286	302	174	413	425	36	192
Average Queue (ft)	43	137	150	15	217	239	9	89
95th Queue (ft)	123	252	264	81	368	392	30	173
Link Distance (ft)		1839	1839		964	964	270	920
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	90			100				
Storage Blk Time (%)	0	10			20			
Queuing Penalty (veh)	1	8			2			

Intersection: 11: Kurtz St & Hancock St

Movement	EB	WB	WB	NB
Directions Served	R	L	T	L
Maximum Queue (ft)	156	168	175	76
Average Queue (ft)	69	63	80	55
95th Queue (ft)	129	119	137	79
Link Distance (ft)		631	631	
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Hancock St & Channel Way

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 11: Kurtz St & Hancock St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 12: H1 Dwy 2/Sherman St & Kurtz St

Movement	EB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	112	62
Average Queue (ft)	59	34
95th Queue (ft)	93	51
Link Distance (ft)		296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 13: Kurtz St & Greenwood St

Movement	EB	EB	SB
Directions Served	LT	T	L
Maximum Queue (ft)	271	292	96
Average Queue (ft)	119	120	39
95th Queue (ft)	239	250	77
Link Distance (ft)	461	461	321
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Sherman St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	79	90	58	76
Average Queue (ft)	41	46	30	35
95th Queue (ft)	65	73	47	60
Link Distance (ft)	468	468	296	513
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Greenwood St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	89	91	36	77
Average Queue (ft)	44	50	17	36
95th Queue (ft)	70	76	42	61
Link Distance (ft)	249	249	321	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Camino Del Rio W & Moore St

Movement										
Directions Served										
Maximum Queue (ft)										
Average Queue (ft)										
95th Queue (ft)										
Link Distance (ft)										
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 17: Camino Del Rio W & Hancock St

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	TR	L	T	T	TR	T	T	T	R
Maximum Queue (ft)	304	339	97	123	125	123	147	154	174	150
Average Queue (ft)	155	165	21	53	60	56	100	108	133	47
95th Queue (ft)	265	286	63	116	124	122	178	181	199	139
Link Distance (ft)	526	526		289	289	289				
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			100							130
Storage Blk Time (%)			0	1					55	2
Queuing Penalty (veh)			3	0					75	13

Intersection: 18: Camino Del Rio W & Kurtz St

Movement	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	TR	T	T	TR	L	T	T	T	T
Maximum Queue (ft)	546	548	299	294	230	174	345	300	173	358
Average Queue (ft)	431	498	150	164	119	128	182	94	32	267
95th Queue (ft)	617	604	268	275	203	209	391	274	108	462
Link Distance (ft)	535	535	345	345	345		289	289	289	289
Upstream Blk Time (%)	9	19	0	0			19	1	0	20
Queuing Penalty (veh)	37	81	0	0			108	3	0	118
Storage Bay Dist (ft)						100				
Storage Blk Time (%)						58	4			
Queuing Penalty (veh)						291	3			

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	LT	R	>	L	LT	TR	L	L	T	T	TR
Maximum Queue (ft)	1094	1093	1108	375	255	336	320	297	335	661	651	647
Average Queue (ft)	771	844	782	260	196	265	244	278	312	531	447	409
95th Queue (ft)	1132	1152	1241	490	310	370	341	353	404	760	712	627
Link Distance (ft)	1083	1083	1083			305	305			630	630	630
Upstream Blk Time (%)	3	3	7			17	6			14	1	3
Queuing Penalty (veh)	12	13	26			42	15			101	9	22
Storage Bay Dist (ft)				300	180			260	260			
Storage Blk Time (%)			28	3	16	50		42	63	4		
Queuing Penalty (veh)			110	8	40	47		184	275	22		

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	SB	SB	SB	SB	NW
Directions Served	T	T	T	R	>
Maximum Queue (ft)	373	361	362	429	48
Average Queue (ft)	181	172	175	370	3
95th Queue (ft)	346	339	348	561	23
Link Distance (ft)	345	345	345	345	255
Upstream Blk Time (%)	1	1	1	48	
Queuing Penalty (veh)	5	4	3	266	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 20: Rosecrans St & Midway Dr

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T
Maximum Queue (ft)	137	175	554	576	315	324	1160	1186	255	218	355	658
Average Queue (ft)	84	132	289	293	123	195	675	715	239	105	290	571
95th Queue (ft)	145	209	471	481	318	346	1371	1428	306	182	457	759
Link Distance (ft)			964	964								
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100	100			240	250			180	280	280	
Storage Blk Time (%)	11	23	40	17		4	14	25	59		0	55
Queuing Penalty (veh)	38	75	69	33		16	28	102	220		0	133

Intersection: 20: Rosecrans St & Midway Dr

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	T	TR
Maximum Queue (ft)	651	644	210	214	176	217	236
Average Queue (ft)	538	532	102	117	86	115	129
95th Queue (ft)	750	766	181	194	154	193	214
Link Distance (ft)					630	630	630
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			320	320			
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 21: Rosecrans St & N Evergreen St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: Rosecrans St & Lytton St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 23: Rosecrans St & Kurtz St

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	L	R	T	R	L	T
Maximum Queue (ft)	162	276	107	145	640	363	397	175	357
Average Queue (ft)	74	251	74	110	221	301	142	103	168
95th Queue (ft)	145	306	119	181	500	395	313	191	339
Link Distance (ft)	257	257				305	305		261
Upstream Blk Time (%)		25				15	3		10
Queuing Penalty (veh)		63				81	18		41
Storage Bay Dist (ft)			70	70				100	
Storage Blk Time (%)			28	20	40			14	29
Queuing Penalty (veh)			80	56	75			41	35

Intersection: 24: Rosecrans St & Hancock St

Movement	NB	NB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	194	269	263	12
Average Queue (ft)	77	40	25	1
95th Queue (ft)	158	186	153	9
Link Distance (ft)		261	640	640
Upstream Blk Time (%)		6		
Queuing Penalty (veh)		61		
Storage Bay Dist (ft)	120			
Storage Blk Time (%)	9	4		
Queuing Penalty (veh)	67	12		

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	B73	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	T	L	L	T	R	L	T	T
Maximum Queue (ft)	140	195	328	175	201	121	119	112	76	225	613	575
Average Queue (ft)	47	134	188	79	20	101	100	87	18	212	380	293
95th Queue (ft)	121	228	333	185	119	110	114	129	52	264	681	643
Link Distance (ft)			248		640							
Upstream Blk Time (%)			6									
Queuing Penalty (veh)			43									
Storage Bay Dist (ft)	120	120		100		150	150			150		
Storage Blk Time (%)	1	12	25	0		0	0			80	1	
Queuing Penalty (veh)	4	54	133	1		0	0			66	2	

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	R	R	L	L	T	T	R
Maximum Queue (ft)	403	332	98	117	205	188	137
Average Queue (ft)	188	148	17	51	116	89	23
95th Queue (ft)	307	257	55	101	187	178	91
Link Distance (ft)					1531	1531	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		320	230	230			65
Storage Blk Time (%)	1	0			0	17	0
Queuing Penalty (veh)	2	0			0	14	0

Intersection: 26: Kurtz St & Pacific Hwy

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Appendix M

Horizon Year (2050) Plus Full Project Buildout (CPA) Non-Event Day Scenario 95th Percentile Queue Worksheets

Intersection: 1: Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	L	R	R	T	T	T	T	T	T	T
Maximum Queue (ft)	160	161	226	495	550	250	202	63	181	172	145	57
Average Queue (ft)	102	93	39	230	245	148	97	9	122	106	55	12
95th Queue (ft)	149	147	127	401	455	219	183	35	165	158	121	41
Link Distance (ft)	2516	2516	2516	2516	2516				1715	1715	1715	1715
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						400						
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	T	R	L	T	T	R	L	L	T	TR
Maximum Queue (ft)	152	172	132	45	31	105	104	370	96	175	316	328
Average Queue (ft)	57	79	26	2	2	34	35	160	26	59	176	197
95th Queue (ft)	126	151	91	21	17	84	83	298	70	144	290	302
Link Distance (ft)		1924	1924	1924		620	620	620			1514	1514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360				150				230	230		
Storage Blk Time (%)						0					6	
Queuing Penalty (veh)						0					8	

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	SB	SB	SB	SB
Directions Served	L	L	T	TR
Maximum Queue (ft)	208	254	315	300
Average Queue (ft)	101	147	170	157
95th Queue (ft)	187	230	291	271
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)	0	3		
Queuing Penalty (veh)	0	4		

Intersection: 3: Commercial Dwy 1/Hancock St & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R
Maximum Queue (ft)	80	108	127	24	90	150	52	61	70
Average Queue (ft)	33	24	33	3	24	59	13	29	28
95th Queue (ft)	69	74	91	14	65	117	38	56	58
Link Distance (ft)		620	620		955	955			
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	350			100			350		
Storage Blk Time (%)					0				
Queuing Penalty (veh)					0				

Intersection: 4: Kemper St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	139	135	140	121	112	136	152	59	170	237	54	277
Average Queue (ft)	56	42	53	39	45	49	72	17	91	71	17	109
95th Queue (ft)	116	104	118	92	92	102	136	46	162	171	44	217
Link Distance (ft)		955	955							702		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	440			350	175				100		150	
Storage Blk Time (%)						0			14	4		5
Queuing Penalty (veh)						0			19	6		1

Intersection: 5: West Dr/Frontier Dr & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	151	179	161	34	144	138	128	32	74	91	172	188
Average Queue (ft)	68	117	57	3	96	83	36	5	19	38	99	64
95th Queue (ft)	128	186	139	17	150	148	100	21	53	67	159	137
Link Distance (ft)									437			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	330				175					50	150	
Storage Blk Time (%)					0	0			3	2	2	1
Queuing Penalty (veh)					0	0			4	0	4	2

Intersection: 6: Target Dwy & Sports Arena Blvd

Movement	EB	EB	EB	WB
Directions Served	T	T	R	L
Maximum Queue (ft)	23	18	4	62
Average Queue (ft)	1	1	0	23
95th Queue (ft)	8	10	3	51
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				125
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: East Dr & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	74	144	32	154	88	90	67	77
Average Queue (ft)	24	57	3	65	15	26	23	33
95th Queue (ft)	61	118	18	116	55	73	56	58
Link Distance (ft)	370	370	370		1083	1083	920	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)				125				100
Storage Blk Time (%)				1				0
Queuing Penalty (veh)				3				0

Intersection: 8: Kemper St & Midway Dr

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	L	T	TR	L	LT	R	L
Maximum Queue (ft)	200	192	208	82	152	170	224	243	147	226	90	111
Average Queue (ft)	79	75	81	15	72	34	90	104	51	105	36	36
95th Queue (ft)	155	169	175	52	126	110	187	208	124	186	67	83
Link Distance (ft)		1514	1514				1839	1839		355	355	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	320			150	250	250			90			100
Storage Blk Time (%)			3				0		1	20		1
Queuing Penalty (veh)			2				0		1	9		1

Intersection: 8: Kemper St & Midway Dr

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	169	124
Average Queue (ft)	57	38
95th Queue (ft)	127	81
Link Distance (ft)	702	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		115
Storage Blk Time (%)	3	0
Queuing Penalty (veh)	5	0

Intersection: 9: Commercial Dwy 2/East Dr & Midway Dr

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	71	191	190	81	440	427	32	140
Average Queue (ft)	15	51	61	11	165	180	6	50
95th Queue (ft)	45	131	145	53	343	355	23	105
Link Distance (ft)		1839	1839		964	964	270	920
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	90			100				
Storage Blk Time (%)		2			10			
Queuing Penalty (veh)		1			2			

Intersection: 11: Kurtz St & Hancock St

Movement	EB	WB	WB	NB
Directions Served	R	L	T	L
Maximum Queue (ft)	108	116	129	93
Average Queue (ft)	50	47	58	67
95th Queue (ft)	88	91	105	78
Link Distance (ft)		631	631	
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Hancock St & Channel Way

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 11: Kurtz St & Hancock St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 12: H1 Dwy 2/Sherman St & Kurtz St

Movement	EB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	100	65
Average Queue (ft)	52	29
95th Queue (ft)	83	46
Link Distance (ft)		296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 13: Kurtz St & Greenwood St

Movement	EB	EB	SB
Directions Served	LT	T	L
Maximum Queue (ft)	201	196	86
Average Queue (ft)	69	67	31
95th Queue (ft)	194	192	63
Link Distance (ft)	461	461	321
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Sherman St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	74	81	52	64
Average Queue (ft)	39	44	29	27
95th Queue (ft)	63	68	44	51
Link Distance (ft)	468	468	296	513
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Greenwood St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	96	102	31	78
Average Queue (ft)	49	52	6	28
95th Queue (ft)	77	84	27	55
Link Distance (ft)	249	249	321	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Camino Del Rio W & Moore St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 17: Camino Del Rio W & Hancock St

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	TR	L	T	T	TR	T	T	T	R
Maximum Queue (ft)	246	324	92	170	182	203	172	155	164	142
Average Queue (ft)	108	142	28	79	85	88	144	127	114	19
95th Queue (ft)	203	263	74	157	159	165	158	172	192	78
Link Distance (ft)	526	526		289	289	289				
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			100							130
Storage Blk Time (%)			0	6					21	1
Queuing Penalty (veh)			3	3					25	8

Intersection: 18: Camino Del Rio W & Kurtz St

Movement	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	TR	T	T	TR	L	T	T	T	T
Maximum Queue (ft)	506	534	370	376	381	175	340	333	328	142
Average Queue (ft)	276	352	304	307	298	170	312	248	126	42
95th Queue (ft)	482	595	415	417	418	191	379	387	289	103
Link Distance (ft)	535	535	345	345	345		289	289	289	289
Upstream Blk Time (%)	5	9	10	10	8		44	5	2	
Queuing Penalty (veh)	12	21	53	52	44		291	33	15	
Storage Bay Dist (ft)						100				
Storage Blk Time (%)						75	22			
Queuing Penalty (veh)						423	59			

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	LT	R	>	L	LT	TR	L	L	T	T	TR
Maximum Queue (ft)	367	429	474	369	244	271	259	182	334	631	639	642
Average Queue (ft)	185	244	166	216	107	156	146	90	139	200	224	247
95th Queue (ft)	334	393	391	355	194	231	224	163	303	529	553	574
Link Distance (ft)	1083	1083	1083			305	305			630	630	630
Upstream Blk Time (%)						0	0			0	0	3
Queuing Penalty (veh)						0	0			3	3	19
Storage Bay Dist (ft)				300	180			260	260			
Storage Blk Time (%)			0	7	1	5				17		
Queuing Penalty (veh)			2	12	1	5				38		

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	SB	SB	SB	SB	NW
Directions Served	T	T	T	R	>
Maximum Queue (ft)	402	413	425	289	4
Average Queue (ft)	281	308	311	98	0
95th Queue (ft)	469	488	497	213	3
Link Distance (ft)	345	345	345	345	255
Upstream Blk Time (%)	12	16	16	0	
Queuing Penalty (veh)	68	91	94	1	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 20: Rosecrans St & Midway Dr

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T
Maximum Queue (ft)	137	174	309	270	148	313	448	478	255	163	354	591
Average Queue (ft)	68	102	123	125	53	144	245	242	154	78	168	338
95th Queue (ft)	135	174	234	212	110	262	363	385	288	152	341	526
Link Distance (ft)			964	964								
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100	100			240	250			180	280	280	
Storage Blk Time (%)	3	15	16	1		1	8	19	9		0	15
Queuing Penalty (veh)	5	22	28	1		2	12	55	28		0	34

Intersection: 20: Rosecrans St & Midway Dr

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	T	TR
Maximum Queue (ft)	483	445	217	394	597	636	638
Average Queue (ft)	280	242	108	155	330	372	395
95th Queue (ft)	462	417	188	301	519	570	591
Link Distance (ft)					630	630	630
Upstream Blk Time (%)					0	0	1
Queuing Penalty (veh)					0	1	7
Storage Bay Dist (ft)			320	320			
Storage Blk Time (%)				0	15		
Queuing Penalty (veh)				0	46		

Intersection: 21: Rosecrans St & N Evergreen St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: Rosecrans St & Lytton St

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23: Rosecrans St & Kurtz St

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	L	R	T	R	L	T
Maximum Queue (ft)	114	312	107	145	494	272	172	76	158
Average Queue (ft)	45	250	89	112	197	133	70	30	61
95th Queue (ft)	100	313	120	173	434	237	141	64	133
Link Distance (ft)	257	257				305	305		261
Upstream Blk Time (%)		16				0			
Queuing Penalty (veh)		37				0			
Storage Bay Dist (ft)			70	70				100	
Storage Blk Time (%)			48	34	15			0	3
Queuing Penalty (veh)			129	92	33			0	2

Intersection: 24: Rosecrans St & Hancock St

Movement	NB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	122	4	11
Average Queue (ft)	46	0	0
95th Queue (ft)	89	3	8
Link Distance (ft)		640	640
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	R	L	T	T	R
Maximum Queue (ft)	102	118	146	100	114	108	113	68	152	129	109	144
Average Queue (ft)	20	46	76	21	93	84	66	16	68	57	30	58
95th Queue (ft)	59	102	131	58	112	127	125	45	126	112	86	118
Link Distance (ft)			248									
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	120	120		100	150	150			150			
Storage Blk Time (%)	0	0	4		0	0			1	0		
Queuing Penalty (veh)	1	0	9		0	0			1	0		

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	R
Maximum Queue (ft)	101	54	93	101	46	40
Average Queue (ft)	26	8	29	30	8	6
95th Queue (ft)	81	31	73	74	29	24
Link Distance (ft)				1531	1531	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	320	230	230			65
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 26: Kurtz St & Pacific Hwy

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 1: Sports Arena Blvd/W Mission Bay Dr & I-8 WB Off Ramp

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	L	R	R	T	T	T	T	T	T	T
Maximum Queue (ft)	238	252	251	416	422	341	272	167	275	269	227	177
Average Queue (ft)	142	138	93	205	210	215	161	47	189	178	132	43
95th Queue (ft)	209	210	205	337	348	311	257	131	253	251	217	115
Link Distance (ft)	2516	2516	2516	2516	2516				1715	1715	1715	1715
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						400						
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	T	R	L	T	T	R	L	L	T	TR
Maximum Queue (ft)	260	292	269	146	202	293	306	273	127	280	430	444
Average Queue (ft)	136	173	139	21	40	158	168	74	48	91	194	221
95th Queue (ft)	229	262	237	85	151	290	302	214	107	215	373	382
Link Distance (ft)		1924	1924	1924		620	620	620			1514	1514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360				150				230	230		
Storage Blk Time (%)						22					11	
Queuing Penalty (veh)						11					28	

Intersection: 2: Midway Dr & W Point Loma Blvd & Sports Arena Blvd

Movement	SB	SB	SB	SB
Directions Served	L	L	T	TR
Maximum Queue (ft)	257	295	319	337
Average Queue (ft)	94	136	240	278
95th Queue (ft)	206	256	344	373
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)	0	3		
Queuing Penalty (veh)	0	9		

Intersection: 3: Commercial Dwy 1/Hancock St & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R
Maximum Queue (ft)	261	402	387	83	250	337	76	99	83
Average Queue (ft)	70	109	127	8	123	188	33	47	35
95th Queue (ft)	184	312	318	44	219	294	64	91	67
Link Distance (ft)		620	620		955	955			
Upstream Blk Time (%)		0	0						
Queuing Penalty (veh)		0	0						
Storage Bay Dist (ft)	350			100			350		
Storage Blk Time (%)		4			14	0			
Queuing Penalty (veh)		3			1	0			

Intersection: 4: Kemper St & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	515	909	895	360	142	170	178	86	167	238	104	140
Average Queue (ft)	414	480	445	75	61	115	139	28	79	108	39	50
95th Queue (ft)	623	1062	1022	242	114	176	196	64	153	200	84	107
Link Distance (ft)		955	955							702		
Upstream Blk Time (%)		9	3									
Queuing Penalty (veh)		37	11									
Storage Bay Dist (ft)	440			350	175				100		150	
Storage Blk Time (%)	52	13	4		0	1			4	11	0	0
Queuing Penalty (veh)	136	24	10		0	0			10	17	0	0

Intersection: 5: West Dr/Frontier Dr & Sports Arena Blvd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	184	189	187	18	138	156	160	132	115	122	225	527
Average Queue (ft)	167	78	66	1	119	95	96	24	41	60	201	479
95th Queue (ft)	183	211	196	8	150	192	190	83	95	104	271	545
Link Distance (ft)									437			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	330				175					50	150	
Storage Blk Time (%)						0			20	9	63	58
Queuing Penalty (veh)						0			39	4	132	95

Intersection: 6: Target Dwy & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	NB
Directions Served	T	T	R	L	T	R
Maximum Queue (ft)	127	138	4	119	58	277
Average Queue (ft)	71	96	0	52	3	60
95th Queue (ft)	152	163	3	104	39	266
Link Distance (ft)					370	468
Upstream Blk Time (%)						5
Queuing Penalty (veh)						0
Storage Bay Dist (ft)				125		
Storage Blk Time (%)				1	0	
Queuing Penalty (veh)				4	0	

Intersection: 7: East Dr & Sports Arena Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	404	398	451	190	230	206	395	165
Average Queue (ft)	328	359	241	92	86	92	95	88
95th Queue (ft)	451	458	552	159	183	182	353	160
Link Distance (ft)	370	370	370		1083	1083	920	
Upstream Blk Time (%)	17	39	29				1	
Queuing Penalty (veh)	77	179	129				3	
Storage Bay Dist (ft)				125				100
Storage Blk Time (%)				5	2		1	16
Queuing Penalty (veh)				30	4		3	9

Intersection: 8: Kemper St & Midway Dr

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	L	T	TR	L	LT	R	L
Maximum Queue (ft)	285	330	371	225	160	185	242	260	158	217	106	123
Average Queue (ft)	152	149	158	62	83	33	97	98	58	118	52	35
95th Queue (ft)	269	296	310	194	138	112	201	207	137	196	98	82
Link Distance (ft)		1514	1514				1839	1839		355	355	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	320			150	250	250			90			100
Storage Blk Time (%)	0	0	13			0	0		1	25		0
Queuing Penalty (veh)	1	0	14			0	0		3	13		0

Intersection: 8: Kemper St & Midway Dr

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	193	138
Average Queue (ft)	86	32
95th Queue (ft)	151	68
Link Distance (ft)	702	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		115
Storage Blk Time (%)	9	0
Queuing Penalty (veh)	12	0

Intersection: 9: Commercial Dwy 2/East Dr & Midway Dr

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	165	616	642	174	409	413	36	177
Average Queue (ft)	61	198	205	18	173	188	9	77
95th Queue (ft)	154	568	572	85	342	354	27	155
Link Distance (ft)		1839	1839		964	964	270	920
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	90			100				
Storage Blk Time (%)	1	21		0	15			
Queuing Penalty (veh)	3	21		0	4			

Intersection: 11: Kurtz St & Hancock St

Movement	EB	WB	WB	NB
Directions Served	R	L	T	L
Maximum Queue (ft)	152	98	171	77
Average Queue (ft)	72	51	67	53
95th Queue (ft)	131	89	129	80
Link Distance (ft)		631	631	
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Hancock St & Channel Way

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 11: Kurtz St & Hancock St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 12: H1 Dwy 2/Sherman St & Kurtz St

Movement	EB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	124	51
Average Queue (ft)	64	31
95th Queue (ft)	102	42
Link Distance (ft)		296
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 13: Kurtz St & Greenwood St

Movement	EB	EB	SB
Directions Served	LT	T	L
Maximum Queue (ft)	241	159	64
Average Queue (ft)	93	63	33
95th Queue (ft)	180	113	56
Link Distance (ft)	461	461	321
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Sherman St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	85	98	48	59
Average Queue (ft)	44	42	29	33
95th Queue (ft)	70	67	44	52
Link Distance (ft)	468	468	296	513
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Greenwood St & Hancock St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	62	71	31	60
Average Queue (ft)	36	39	9	30
95th Queue (ft)	59	63	31	49
Link Distance (ft)	249	249	321	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Camino Del Rio W & Moore St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 17: Camino Del Rio W & Hancock St

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	TR	L	T	T	TR	T	T	T	R
Maximum Queue (ft)	233	290	74	136	160	163	165	144	150	124
Average Queue (ft)	82	141	21	66	77	77	142	104	80	16
95th Queue (ft)	168	250	59	136	158	166	158	184	179	72
Link Distance (ft)	526	526		289	289	289				
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			100							130
Storage Blk Time (%)			0	3					13	0
Queuing Penalty (veh)			0	1					22	0

Intersection: 18: Camino Del Rio W & Kurtz St

Movement	EB	EB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	TR	T	T	TR	L	T	T	T	T
Maximum Queue (ft)	548	538	365	378	395	175	344	318	237	271
Average Queue (ft)	498	340	308	310	298	171	323	149	47	62
95th Queue (ft)	591	527	435	438	445	181	350	357	159	200
Link Distance (ft)	535	535	345	345	345		289	289	289	289
Upstream Blk Time (%)	7	1	12	11	10		56	1	0	1
Queuing Penalty (veh)	27	4	92	88	82		363	7	0	5
Storage Bay Dist (ft)						100				
Storage Blk Time (%)						96	12			
Queuing Penalty (veh)						531	23			

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	LT	R	>	L	LT	TR	L	L	T	T	TR
Maximum Queue (ft)	1108	1123	1107	375	255	329	322	296	335	660	668	670
Average Queue (ft)	1012	1033	984	271	146	218	206	219	304	546	553	553
95th Queue (ft)	1171	1161	1310	508	273	335	323	340	417	774	772	764
Link Distance (ft)	1083	1083	1083			305	305			630	630	630
Upstream Blk Time (%)	13	11	18			6	4			11	9	14
Queuing Penalty (veh)	59	54	84			17	10			88	76	117
Storage Bay Dist (ft)				300	180			260	260			
Storage Blk Time (%)			31	3	6	31		19	29	35		
Queuing Penalty (veh)			123	13	14	31		107	162	167		

Intersection: 19: Rosecrans St & Sports Arena Blvd & Camino Del Rio W

Movement	SB	SB	SB	SB	NW
Directions Served	T	T	T	R	>
Maximum Queue (ft)	372	404	380	385	75
Average Queue (ft)	145	156	152	159	9
95th Queue (ft)	328	343	330	364	56
Link Distance (ft)	345	345	345	345	255
Upstream Blk Time (%)	2	1	1	4	
Queuing Penalty (veh)	10	8	5	22	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 20: Rosecrans St & Midway Dr

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T
Maximum Queue (ft)	137	175	995	1004	315	323	1293	1325	255	158	355	666
Average Queue (ft)	118	163	666	622	147	158	1077	1113	253	66	268	623
95th Queue (ft)	163	204	1180	1138	362	309	1624	1613	279	136	484	699
Link Distance (ft)			964	964								
Upstream Blk Time (%)			11	3								
Queuing Penalty (veh)			58	18								
Storage Bay Dist (ft)	100	100			240	250			180	280	280	
Storage Blk Time (%)	48	70	39	28	0	3	9	14	86		0	69
Queuing Penalty (veh)	145	209	85	54	0	12	17	73	295		0	131

Intersection: 20: Rosecrans St & Midway Dr

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	TR	L	L	T	T	TR
Maximum Queue (ft)	650	662	249	282	370	380	400
Average Queue (ft)	606	598	132	144	152	172	185
95th Queue (ft)	715	735	225	243	300	326	344
Link Distance (ft)					630	630	630
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			320	320			
Storage Blk Time (%)					0		
Queuing Penalty (veh)					3		

Intersection: 21: Rosecrans St & N Evergreen St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: Rosecrans St & Lytton St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 23: Rosecrans St & Kurtz St

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	L	R	T	R	L	T
Maximum Queue (ft)	169	278	107	144	708	337	360	174	318
Average Queue (ft)	57	239	88	112	260	206	114	84	130
95th Queue (ft)	132	318	133	178	630	345	273	166	278
Link Distance (ft)	257	257				305	305		261
Upstream Blk Time (%)	1	11				6	1		5
Queuing Penalty (veh)	2	34				30	7		21
Storage Bay Dist (ft)			70	70				100	
Storage Blk Time (%)			43	37	28			11	16
Queuing Penalty (veh)			117	102	69			33	16

Intersection: 24: Rosecrans St & Hancock St

Movement	NB	NB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	138	103	116	89
Average Queue (ft)	67	18	22	8
95th Queue (ft)	127	123	179	77
Link Distance (ft)		261	640	640
Upstream Blk Time (%)		4		
Queuing Penalty (veh)		37		
Storage Bay Dist (ft)	120			
Storage Blk Time (%)	6	0		
Queuing Penalty (veh)	40	1		

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	B73	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	T	L	L	T	R	L	T	T
Maximum Queue (ft)	138	194	250	175	85	106	109	110	70	217	397	330
Average Queue (ft)	24	87	110	47	4	92	80	82	13	160	199	150
95th Queue (ft)	78	173	209	129	67	112	126	128	43	257	560	490
Link Distance (ft)			248		640							
Upstream Blk Time (%)			1									
Queuing Penalty (veh)			4									
Storage Bay Dist (ft)	120	120		100		150	150			150		
Storage Blk Time (%)	0	4	12	0				0		44	0	
Queuing Penalty (veh)	1	18	57	0				0		33	0	

Intersection: 25: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	R	R	L	L	T	T	R
Maximum Queue (ft)	457	354	106	127	162	152	117
Average Queue (ft)	216	167	22	58	89	60	18
95th Queue (ft)	373	308	66	109	149	129	64
Link Distance (ft)					1531	1531	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		320	230	230			65
Storage Blk Time (%)	2	1				6	0
Queuing Penalty (veh)	7	2				5	0

Intersection: 26: Kurtz St & Pacific Hwy

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)