

# Appendix K

## Transportation Impact Study



TRANSPORTATION IMPACT STUDY  
**MORNINGSIDE HIGH SCHOOL SITE UPGRADE  
AND WOODWORTH ELEMENTARY SCHOOL  
DEMOLITION PROJECT**  
City of Inglewood, California  
November 15, 2022

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LLG Ref. 1-21-4437-1



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TRANSPORTATION IMPACT STUDY  
**MORNINGSIDE HIGH SCHOOL SITE UPGRADE AND  
WOODWORTH ELEMENTARY SCHOOL DEMOLITION PROJECT**

City of Inglewood, California  
November 15, 2022

## 1.0 INTRODUCTION

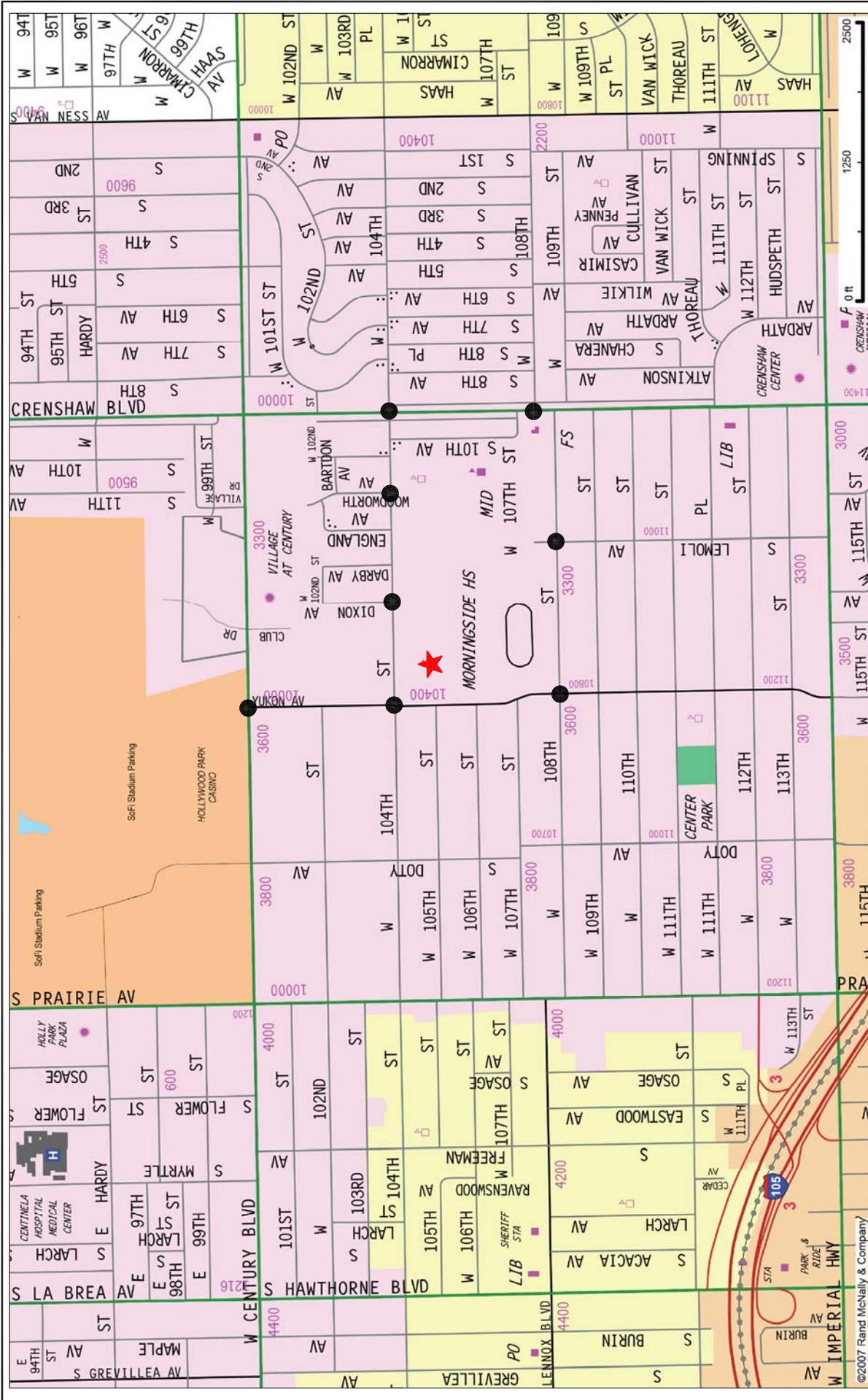
### 1.1 Transportation Study Overview

This transportation impact study has been conducted to identify and evaluate the potential transportation impacts of the proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project (“proposed project”). The project site is located at 10500 South Yukon Avenue in the City of Inglewood. The site is generally bounded by 104<sup>th</sup> Street to the north, residential uses to the south, the Woodworth-Monroe TK-8<sup>th</sup> Academy to the east, and Yukon Avenue to the west. The project site and general vicinity are shown in *Figure 1-1*.

The City of Inglewood has not established Vehicle Miles Traveled (VMT) analysis procedures at this time for purposes of analyzing transportation impacts under the California Environmental Quality Act (CEQA) Sections 15064.3 and 15064.7; therefore, the project-related VMT impact has been assessed qualitatively based on guidance from the State of California Governor’s Office of Planning and Research (OPR) Technical Advisory and review of VMT policies. In addition, the City maintains vehicle Level of Service (LOS) standards for local transportation infrastructure by utilizing the thresholds from the Los Angeles County Department of Public Works (LACPW) *Traffic Impact Analysis Report Guidelines*, January 1997, although the County has issued more recent guidelines. Therefore, the analysis contained herein identify both CEQA based analysis requirements and non-CEQA based analysis requirements for analyzing the potential transportation impacts of proposed development projects.

This study evaluates potential project-related VMT impacts pursuant to the screening criteria, analysis tools, and thresholds approved for use by the City of Inglewood. The study also evaluates potential project-related effects on LOS at eight (8) key intersections in the vicinity of the project site. The study intersections were determined in consultation with City of Inglewood Department of Public Works staff. The Intersection Capacity Utilization (ICU) methodology was used to determine LOS for the five (5) signalized study intersections and the Highway Capacity Manual (HCM) methodology was used for the three (3) unsignalized study intersections.

This report (i) presents the proposed project’s existing transportation network context, (ii) presents existing traffic volumes, (iii) forecasts cumulative baseline conditions, (iv) forecasts project-generated traffic, (v) assesses the potential for project-related transportation impacts consistent with



MAP SOURCE: RAND McNALLY & COMPANY

- ★ Project Site
- Study Location



Figure 1-1  
Vicinity Map

the CEQA compliant and non-CEQA compliant metrics set forth by the City of Inglewood, and (vi) recommends transportation mitigation and/or improvement measures, where necessary.

## 1.2 Study Methodology

The CEQA and non-CEQA analysis criteria for this transportation assessment were identified in consultation with City of Inglewood staff. The analysis criteria were determined based on the City's guidelines, the proposed project description and location, and the characteristics of the surrounding transportation system. While the Inglewood Unified School District is the Lead Agency under CEQA, the City of Inglewood confirmed the appropriateness of the analysis criteria when it approved the transportation assessment Scope of Work Memorandum of Understanding (MOU) as contained in *Appendix A*.

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 created a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code section 21000 and following) in order to promote: 1) the reduction of greenhouse gas emissions, 2) the development of multimodal transportation networks, and 3) a diversity of land uses. On December 30, 2013, OPR released a preliminary evaluation of alternative methods of transportation analysis, which included analysis based on project VMT rather than impacts to intersection Level of Service. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting some new revisions to the state CEQA Guidelines. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State's Natural Resources Agency (that include a proposed new Guidelines section 15064.3 which governs how VMT-based analyses of potential traffic impacts should be conducted). On January 26, 2018, the Natural Resources Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. On December 28, 2018, the California Office of Administrative Law adopted the proposed amendments, formally implementing the use of VMT as the metric for transportation analysis under CEQA and providing a grace period allowing local agencies to opt-in to the new metrics. State-wide implementation of the new metric was required by July 1, 2020.

It is noted that SB 743 does not prevent agencies from continuing to analyze delay or LOS outside of CEQA review for other transportation planning or analysis purposes (i.e., general plans, impact fee programs, corridor studies, congestion reduction, or ongoing network monitoring). The City has LOS standards which local transportation infrastructure should strive to maintain. The LOS standards apply to discretionary approvals of new land use development projects. Therefore, the City also include requirements for non-CEQA analyses pursuant to the Los Angeles County Department of Public Works' previous guidelines on the utilization of the ICU and HCM methodologies to evaluate LOS at the study intersections.

The proposed project's CEQA transportation impacts have been evaluated based on guidance from the OPR's Technical Advisory and review of VMT screening criteria, methodology, and thresholds.

In order to evaluate the proposed project’s effect on local transportation infrastructure, a non-CEQA analysis of eight (8) study intersections has been conducted for the weekday PM peak hour.

### **1.3 Los Angeles County Congestion Management Program Status**

The Los Angeles County Congestion Management Program (CMP) was previously a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990 that primarily utilized an LOS performance metric. Pursuant to California Government Code §65088.3, local jurisdictions may opt out of the CMP requirement without penalty if a majority of the local jurisdictions representing a majority of the County’s population formally adopt resolutions requesting to opt out of the program. As stated in a letter from the Los Angeles County Metropolitan Transportation Authority (Metro)<sup>1</sup>, by August 28, 2019 fifty-seven local jurisdictions, which in total represent 8.5 million in population, had adopted resolutions electing to be exempt from the CMP. With the Los Angeles County region having reached the statutorily required threshold, the provisions of the CMP are no longer applicable to any of the 89 local jurisdictions within Los Angeles County, regardless of whether or not a jurisdiction adopted an opt-out resolution. Therefore, CMP traffic impact analysis is no longer required.

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<sup>1</sup> Kalieh Honish, Los Angeles County Metropolitan Transportation Authority, to Seleta Reynolds, City of Los Angeles Department of Transportation, “Re: Dissolution of the Congestion Management Program in Los Angeles County”, August 28, 2019.

## 2.0 PROJECT DESCRIPTION

### 2.1 Existing Project Site

The project site is located at 10500 South Yukon Avenue in the southeastern portion of the City of Inglewood, California. The site is generally bounded by 104<sup>th</sup> Street to the north, residential uses to the south, the Woodworth-Monroe TK-8<sup>th</sup> Academy to the east, and Yukon Avenue to the west. The proposed project site and general vicinity are shown in *Figure 1-1*.

The site is currently occupied by the Morningside High School which offers grades 9 through 12 as of part the Inglewood Unified School District since it opened its doors in 1951. The School currently has a reported student enrollment of 583 for the 2021-2022 school year. The bell schedule for the School generally encompass 8:00 AM to 3:00 PM, Monday through Friday. Athletic events typically occur on campus from 3:00 PM to 9:00 PM on weekdays; however, all nighttime events currently occur inside the gym for basketball and volleyball games.

The existing Woodworth Elementary School campus currently includes 14 buildings comprised of classrooms and administrative buildings, as well as recreational courts and fields, and parking. The existing vacant buildings and hardscape on the Woodworth Elementary School campus would be demolished and improvements are proposed within the approximately 6-acre campus, which is proposed to be leased by the District. An aerial photograph of the existing project site is presented in *Figure 2-1*.

### 2.2 Proposed Project Description

The proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project consists of improvements to the Morningside High School campus and demolition of the existing vacant Woodworth Elementary School campus (collectively referred to as the existing Project Site or existing campuses), including demolition of 14 buildings and hardscape on the Woodworth Elementary School campus and demolition of 13 buildings and hardscape on the Morningside High School campus. The Woodworth Elementary School campus is currently vacant after operations were merged with Monroe Middle School in 2019, creating the Woodworth-Monroe TK-8 Academy. The updates to the Morningside High School components include: 1) demolition of ten buildings and hardscape (including 12 tennis courts and 6 basketball courts); 2) reconstruction of the football stadium and track and team locker rooms; 3) reconstruction and relocation of the baseball field, softball field, six tennis courts, and basketball courts; 4) increase in the on-site parking supply by 169 spaces; 5) reduction of on-site bus parking by 20 spaces; and 6) corresponding landscape and hardscape updates. Additional seating is planned for the athletic fields with stadium seating increasing from 600 seats to 1,515 seats, baseball seating decreasing from 300 seats to 246 seats, and softball seating is planned to include 186 new seats.

No improvements are proposed within the approximately 17-acre eastern portion of the existing Morningside High School campus (which currently includes the tennis courts and basketball courts)



-  Existing Project Site
-  Existing Driveway

MAP SOURCE: GOOGLE EARTH

Figure 2-1  
Aerial Photograph of Existing Project Site

and the approximately 6-acre Woodworth Elementary School campus. The total 23 acres of the remaining eastern portion of the project site are proposed to be leased by the District.

The added open space on campus would reduce the total number of classrooms from 66 to 35; however, due to annually decreasing enrollment at the school, the reduction of classroom capacity would be able to accommodate the anticipated future student enrollment. Student enrollment and staffing/faculty populations are not expected to increase as part of the proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project.

Vehicular access to the project site is planned to continue to be provided via Yukon Avenue and 104<sup>th</sup> Street. The conceptual project site plan is shown in **Figure 2-2**. Construction is expected to commence in year 2023 with completion in 24 months by the year 2025.

## 2.3 Project Site Access

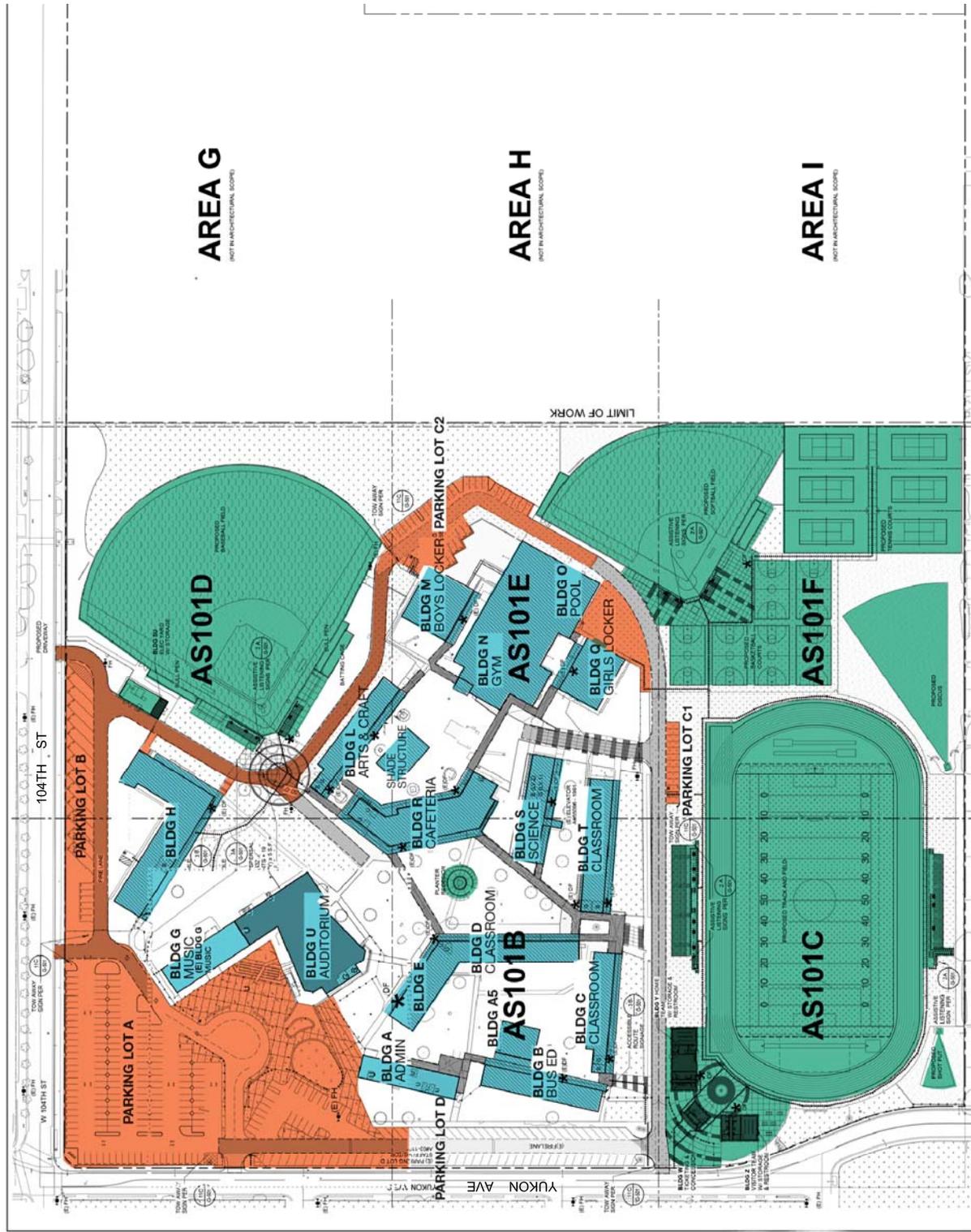
### 2.3.1 Vehicular Site Access

Direct vehicular access to the project site is planned to be accommodated by two (2) existing driveways on Yukon Avenue and three (3) existing driveways on 104<sup>th</sup> Street as shown in *Figure 2-1*. As part of the proposed project, the easternmost driveway on 104<sup>th</sup> Street would be eliminated. Descriptions of the project site access points are provided in further detail below:

- Yukon Avenue  
Two existing driveways along the east side of Yukon Avenue will continue to provide access to the on-site parking area/s. The southerly Yukon Avenue driveway will accommodate inbound movements only (i.e., left-turn and right-turn ingress movements only) from Yukon Avenue to Parking Lot D. The northerly Yukon Avenue driveway will accommodate full access (i.e., right-turn and left-turn ingress and egress movements) to both Parking Lots A and D.
- 104<sup>th</sup> Street  
Two driveways along the south side of 104<sup>th</sup> Street are planned to provide access primarily to Parking Lots A and B, with a connection also to Parking Lots C1 and C2. Both driveways are planned to accommodate full access (i.e., left-turn and right-turn ingress and egress movements).

Within the project site, vehicle circulation is accommodated by the drive aisles within the individual parking lots as well as a gated emergency access road that extends from Parking Lot D and the southernmost Yukon Avenue driveway into the center of the Project Site, northeast of the campus gym building.

Additional internal vehicular circulation would be limited to emergency vehicles and would be provided via an extension of the existing southern fire lane, which would continue to be accessed from Yukon Avenue. The southern fire lane extension would continue from the existing terminus and would then meander to the north to connect to the northern fire lane. Specifically, the extension



**AREA G**  
(NOT IN ARCHITECTURAL SCOPE)

**AREA H**  
(NOT IN ARCHITECTURAL SCOPE)

**AREA I**  
(NOT IN ARCHITECTURAL SCOPE)

MAP SOURCE: LIONAKIS, 2022



**Figure 2-2**  
**Site Plan**

would be constructed primarily within the eastern portion of the campus between the Buildings L, M, N, O and Q and past the proposed recreational components. The connection of the northern and southern fire lanes would occur within the proposed Lot C2 parking lot with a continuous access to each of the parking lots on campus. The proposed fire lane improvements would maintain a 20-foot-wide, barrier-free emergency access route to internal campus with minimum of 50-foot turning radii. The proposed fire lane improvements are not anticipated to affect emergency vehicle access and emergency response times. If required, drivers of emergency vehicles are trained to utilize or travel in opposing through lanes to pass through and traverse crowded or tight areas. Thus, the respect entitled to emergency vehicles and driver training allow emergency vehicles to negotiate typical as well as atypical roadway conditions.

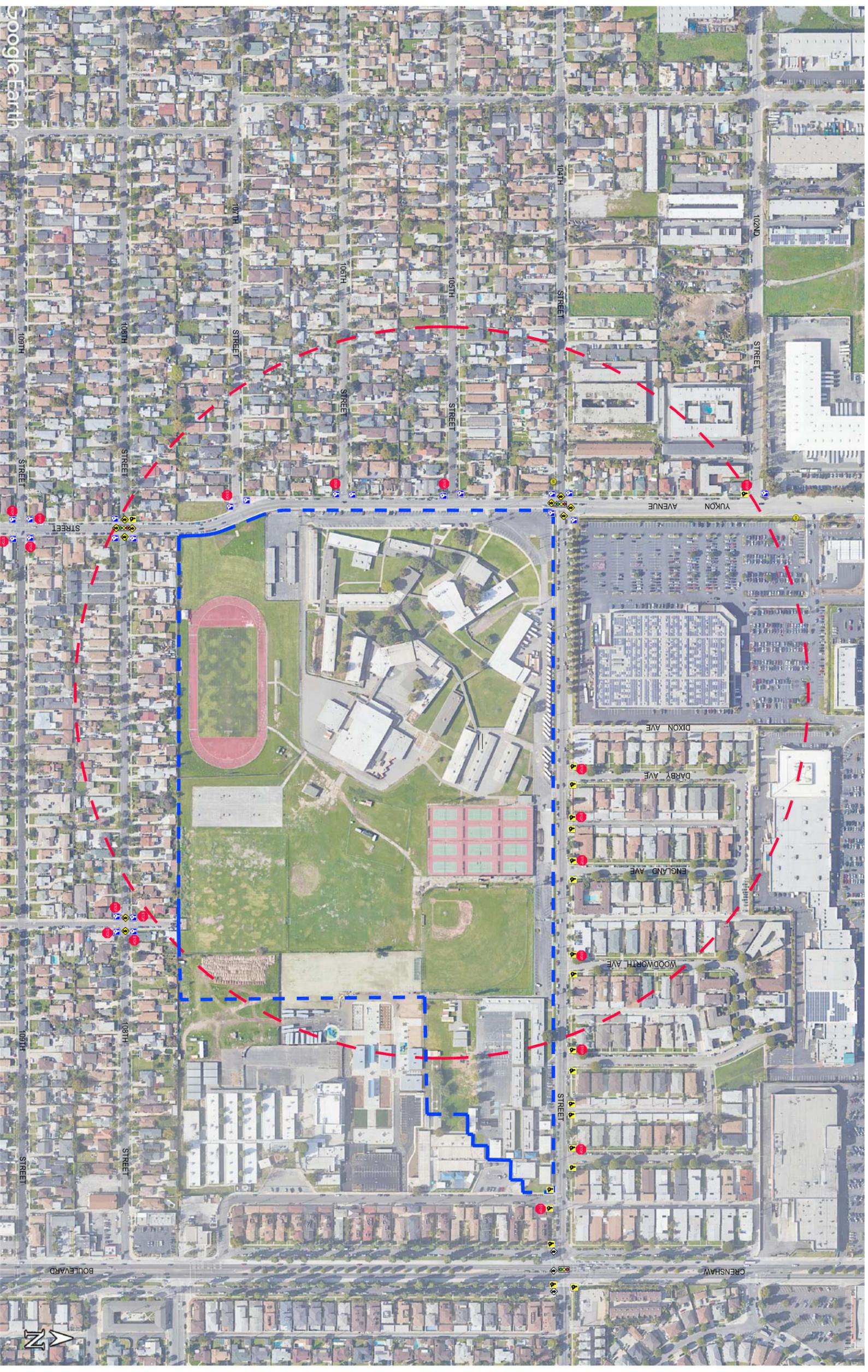
### **2.3.2 Non-Vehicular Site Access**

The project site is planned to continue to accommodate non-vehicular access to the Morningside High School campus. Pedestrian access within the project site will be accommodated by Americans with Disabilities Act (ADA) compliant walkways. New walkways will be provided to/from Yukon Avenue and 104<sup>th</sup> Street which will interconnect with the buildings on campus. These walkways will also provide exclusive pedestrian and bicycle access to/from the existing public sidewalk along the campus frontage. The walkways thus minimize the extent of pedestrian and bicycle interaction with vehicles at the site and provide a comfortable, convenient, and safe environment for pedestrians and bicyclists accessing the building from outside the project site. The existing pedestrian amenities and transit facilities in the project study area is presented in *Figure 2-3*.

As part of the project, pedestrian walkways would be reconstructed and expanded which consists of the replacement of pavements and covered walkway canopies as needed throughout campus. In addition, the project would construct a Safe Dispersal Area consisting of 2,255 square feet of paved area, which would provide enough space for 432 students and 19 faculty members to evacuate to in the event of an emergency at the Site. The Safe Dispersal Area will allow those on campus to gather, while maintaining a safe distance from structures without leaving the campus and traveling to the public right-of-way. Additionally, emergency circulation for pedestrians would be improved through the addition of accessible route signage and improved circulation of internal walkways. Security improvements would include the addition of secured pedestrian and vehicular gates with lockable knox boxes for emergency service providers.

## **2.4 Existing Overall Site and Total Parking Supply**

Parking for the Morningside High School campus is currently provided in three (3) existing surface parking lots (i.e., Lots A, B, and D) that wrap around campus. Lot A is located at the northwest corner, Lot B along the northern site boundary, and Lot D is situated along the western boundary. The proposed project includes improvements to the three existing surface parking lots (Lots A, B and D) as well as the creation of two new surface parking lots (i.e., Lots C1 and C2). Lot C1 is proposed near the proposed track and football field and Lot C2 is proposed near the proposed baseball stadium.



Google Earth



-  EXISTING PROJECT SITE
-  0.25 MILE RADIUS FROM PROJECT SITE
-  SIGNAL
-  ADA
-  ADA YELLOW TRUNCATED DOME
-  CROSSWALK
-  CROSSWALK YELLOW
-  BIKE RACK
-  BUS STOP
-  BUS STOP WITH BENCH
-  BUS STOP WITH BENCH & SHELTER
-  BIKE ROUTE
-  MAIL BOX
-  TRASH

Figure 2-3 Existing Nearby Pedestrian & Transit Facilities

Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project



## 2.6 Comparison of Industry Standard Parking Ratios

### 2.6.1 ITE Parking Demand Ratios

In addition to reviewing Code parking requirements, the average peak parking demand for various land uses are often estimated using parking ratios contained in other industry standard parking publications. LLG reviewed parking ratios contained in the Institute of Transportation Engineers' (ITE) *Parking Generation Manual*<sup>2</sup> publication. The *Parking Generation Manual* presents the state-of-the-practice understanding of the relationship between parking demand and various characteristics associated with individual land use developments, based on parking studies conducted at locations throughout North America. Specifically, the ITE Land Use 530 (High School) average peak parking demand ratios were reviewed so that it could be compared with that expected through application of the Code parking requirements. When utilizing the ITE publication, the parking demand can be calculated through application of the average peak parking demand ratios based on the total student population figure. The average weekday parking demand ratio for the applicable land use type is summarized below:

- ITE Land Use Code 530 (High School) average weekday peak period parking demand ratio: 0.26 spaces per student (14 study sites, average number of students: 1,096 students)

Application of the ITE published parking demand ratio above to the proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project (which is not expected to increase student enrollment) would yield an average weekday peak parking demand of 152 spaces (i.e., 583 students x 0.26 spaces/student = 152 parking spaces). The Code parking requirement for the proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project of 245 spaces is 93 spaces more than the parking demand forecast utilizing the ITE parking demand ratios for a high school. Also, as part of the Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project, the campus is planned to provide a total of 308 parking spaces which exceeds the ITE forecast peak parking demand of 152 spaces.

## 2.7 Parking Management Strategies

It should be noted that site-specific programming details including the frequency and attendance figures for the proposed athletic events/games were provided and reviewed for the Morningside High School. It was determined that recurring special events/athletic games would continue to be provided as part of the typical site operations. During times when the parking demand is high at the site due to concurrent events or when less frequent special events/big athletic games are held, various parking management strategies are effective at managing those peak parking demands. Below are parking management strategies for implementation, specifically when special events/athletic events are held concurrently.

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<sup>2</sup> *Parking Generation Manual*, 5<sup>th</sup> Edition, Institute of Transportation Engineers, Washington D.C., January 2019.

- A requirement to maintain an events calendar that is accessible and shared with the adjacent school (i.e., Woodworth-Monroe TK-8<sup>th</sup> Academy), which would include the date, time and duration of the event, including the expected attendance figure for each event. Special events/games where 100 attendees or more are expected would require further coordination with the adjacent school to ensure that any overlap of activities is minimized to the extent possible.
- Implementation of managed parking for some spaces within the on-site parking facility (i.e., both valet parking spaces and tandem parking spaces) which would increase the effective parking supply as valet-attended parking could occur within drive aisles located throughout the on-site parking areas.
- A provision in the Rules and Regulations which would prohibit visitors/vendor employees from parking on surrounding streets that are not immediately adjacent to the site frontages.
- To the extent feasible, special events held at the Morningside High School shall not be scheduled to begin or end such that it overlaps with the morning drop-off and afternoon pick-up peak time periods at the adjacent school (i.e., Woodworth-Monroe TK-8<sup>th</sup> Academy).
- A requirement to conduct a parking utilization monitoring study one year from issuance of the Project's Certificate of Occupancy. The parking utilization monitoring study must demonstrate that on-site parking is adequate to meet project demand during both weekday and weekend conditions. If the study shows that project parking demand exceeds the supply of parking within the project, the Applicant shall propose measures to reduce spillover parking impacts, subject to review and approval by the Director of Community Development. The parking reduction strategies may include, but are not limited to: 1) provision of transit passes and/or ride-share subsidies for employees, and/or 2) subsidized off-site parking options in order to minimize on-site employee parking demand or where concurrent special events/athletic games warrant additional parking, if necessary.

## **2.8 Project Trip Generation and Distribution**

### **2.8.1 Project Trip Generation**

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. As mentioned previously in Section 2.2, Project Description, the student enrollment and faculty/staffing population are not expected to increase due to the proposed project. As such, the trip generation of the proposed project was estimated using empirical trip rates derived from the proposed increase in seating capacity for stadium seating (i.e., the proposed 915-seat increase) and softball field seating (i.e., 186 new seats). Site-specific programming details including the frequency of the athletic events/games and estimated attendance figures for each of the proposed events/games was provided and reviewed. Thus, traffic volumes expected to be generated by the proposed project were estimated for the weekday commuter PM peak hour as well as over a 24-hour daily period based on the site-specific programming

information. The proposed project is not expected to generate new trips during the weekday commuter AM peak hour since the athletic games/events are expected to be scheduled in the late afternoon/early evening time periods.

Since an average vehicle occupancy (AVO) of only 1.5 persons per vehicle has been assumed for spectators, fifty percent (50%) of this increase is assumed to overlap with the weekday commuter PM peak hour. Typically, for larger-scale sporting events, a much higher AVO could be expected (i.e., in the range of between 2.0 and 2.75 AVO). Further, the trip generation forecast is conservative as it assumes full occupancy of the net increase in the seating capacity. The trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in **Table 2-1**. The project trip generation forecast was reviewed and approved by City staff as part of the Memorandum of Understanding scoping process (see *Appendix A*).

### **2.8.2 Weekday Site-Specific Project Trip Generation Summary**

It was determined that recurring athletic events/games would continue to be provided as part of the typical site operations. Based on the site-specific programming data and person trips forecast for the project, the number of vehicles has been estimated using an average vehicle occupancy (AVO) of 1.5 persons per vehicle. As summarized in *Table 2-1*, using the site-specific data for a typical weekday with scheduled athletic home events/games, the proposed project is expected to generate 367 new vehicle trips (198 inbound trips and 169 outbound trips) during the weekday PM peak hour. Over a 24-hour period, the proposed project is forecast to generate approximately 1,468 new daily trip ends (734 inbound trips and 734 outbound trips) during a typical weekday. As previously mentioned, the proposed project is not expected to generate new trips during the weekday AM peak hour since the athletic games/events are expected to be scheduled in the late afternoon/early evening time periods and would not overlap with the commuter AM peak time period.

### **2.8.3 Project Trip Distribution and Assignment**

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Century Boulevard, 104<sup>th</sup> Street, Imperial Highway, Prairie Avenue, Crenshaw Boulevard, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- Input from City of Inglewood Public Works Department staff.

**Table 2-1  
PROJECT TRIP GENERATION FORECAST**

<b>TRIP GENERATION RATES</b>									
LAND USE CATEGORY	LAND USE CODE	VARIABLE	WEEKDAY DAILY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
				IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
Athletic Events/Games	[1]	Per Seat	1.333	--	--	--	54%	46%	0.333

<b>PROJECT TRIP GENERATION FORECAST</b>									
LAND USE	LAND USE CODE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
				IN	OUT	TOTAL	IN	OUT	TOTAL
<i><b>Proposed Project</b></i>									
Stadium Seating (addition)	[1]	915 Seats	1,220	--	--	--	165	140	305
Softball Field Seating (new)	[1]	186 Seats	248	--	--	--	33	29	62
<b>TOTAL PROJECT TRIPS</b>			<b>1,468</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>198</b>	<b>169</b>	<b>367</b>

[1] Trip generation rates are based on rates derived from the increase in seating capacity for the athletic fields as part of the proposed project when compared to the existing Morningside High School campus. An average vehicle ridership of 1.5 persons/vehicle was assumed to estimate the number of person trips to the number of vehicle trips. The athletic games are expected to occur in the late afternoon/early evening and it is assumed that 50% of the trips associated with the games/events would occur during the commuter PM peak hour.

[2] Trips are one-way traffic movements, entering or leaving.

The general, directional traffic distribution patterns for the proposed project are presented in *Figure 2-4*. The forecast new weekday PM peak hour project traffic volumes at the study intersections associated with the proposed project is presented in *Figure 2-5*. The traffic volume assignments presented in *Figure 2-5* reflect the traffic distribution characteristics shown in *Figure 2-4* and the project trip generation forecasts presented in *Table 2-1*.

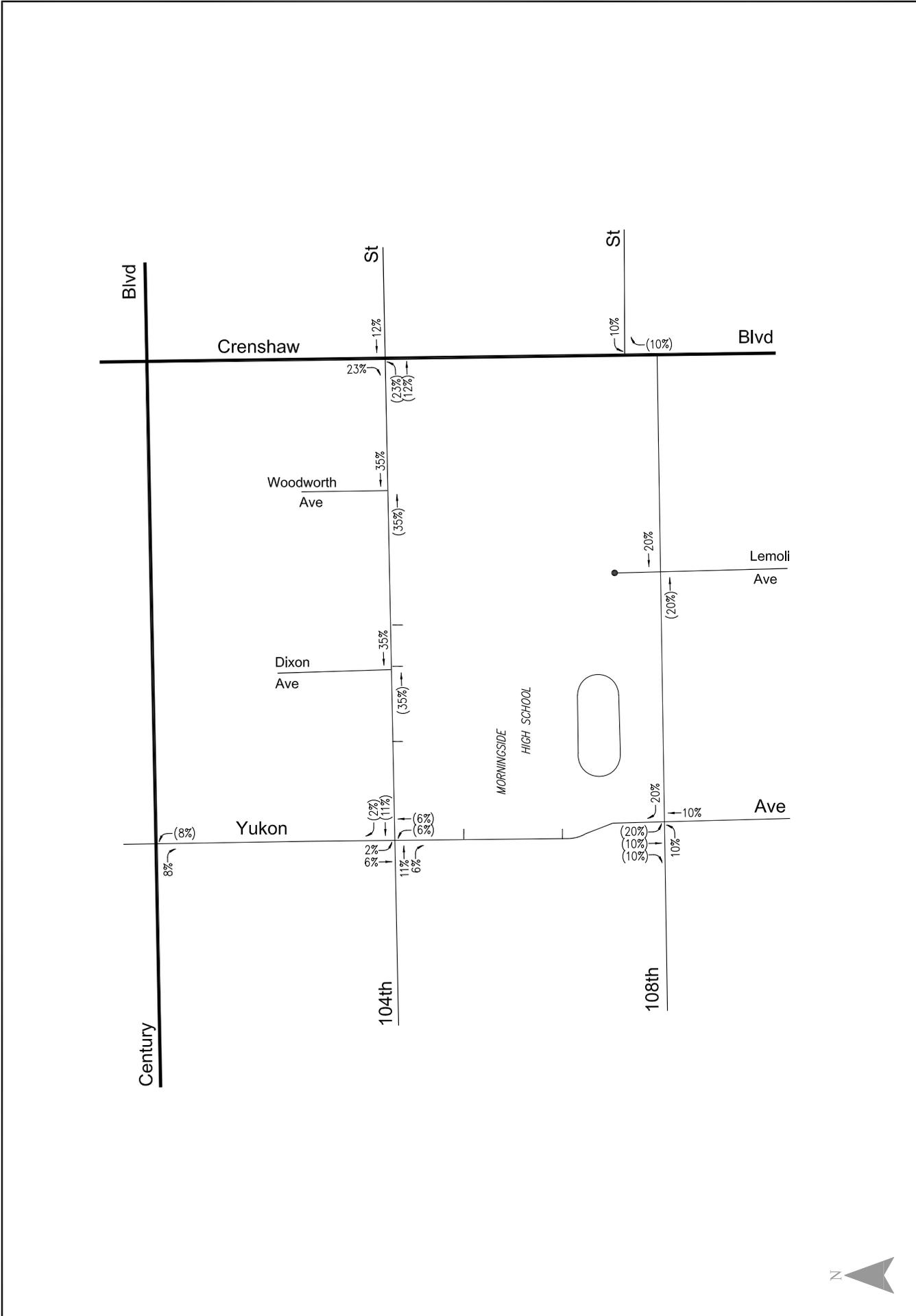
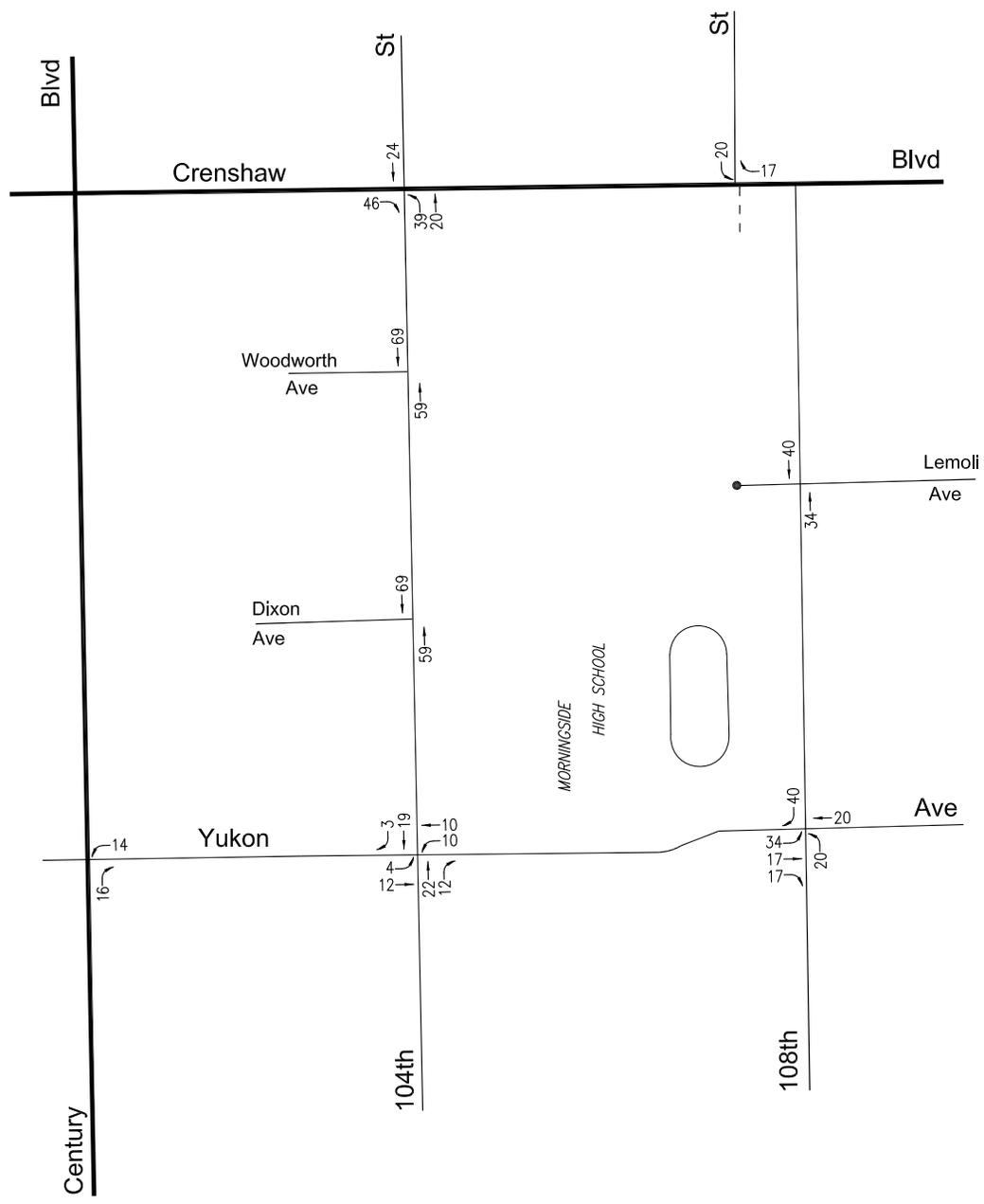


Figure 2-4  
Project Trip Distribution

XX = Inbound Percentage  
 (XX) = Outbound Percentage





**Figure 2-5**  
**Project Traffic Volumes**  
 Weekday PM Peak Hour  
 Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project

## 3.0 PROJECT SITE CONTEXT

The project site is located within a well-established multi-modal transportation network maintained by the City of Inglewood and surrounding jurisdictions. The following sections provide an overview of the transportation infrastructure in the vicinity of the proposed project, including infrastructure which supports both motorized and non-motorized transportation modes.

### 3.1 Non-Vehicle Network

Non-vehicular transportation generally encompasses walking, biking, and other active transportation modes. Distinct facilities are often provided for these non-vehicular modes. Most prominently, paved sidewalks are typically provided to facilitate pedestrian travel outside of the roadway. In some cases, bicycle facilities such as painted bike lanes or separated bike paths are provided within the roadway in order to separate bike traffic from vehicular traffic. Roadways which are designed to prioritize non-vehicular transportation modes utilize complimentary non-vehicular infrastructure in order to promote comfortable, safe travel for both pedestrians and bicyclists. A review of the pedestrian and bicycle infrastructure provided in the vicinity of the project site is provided below.

#### 3.1.1 Pedestrian System

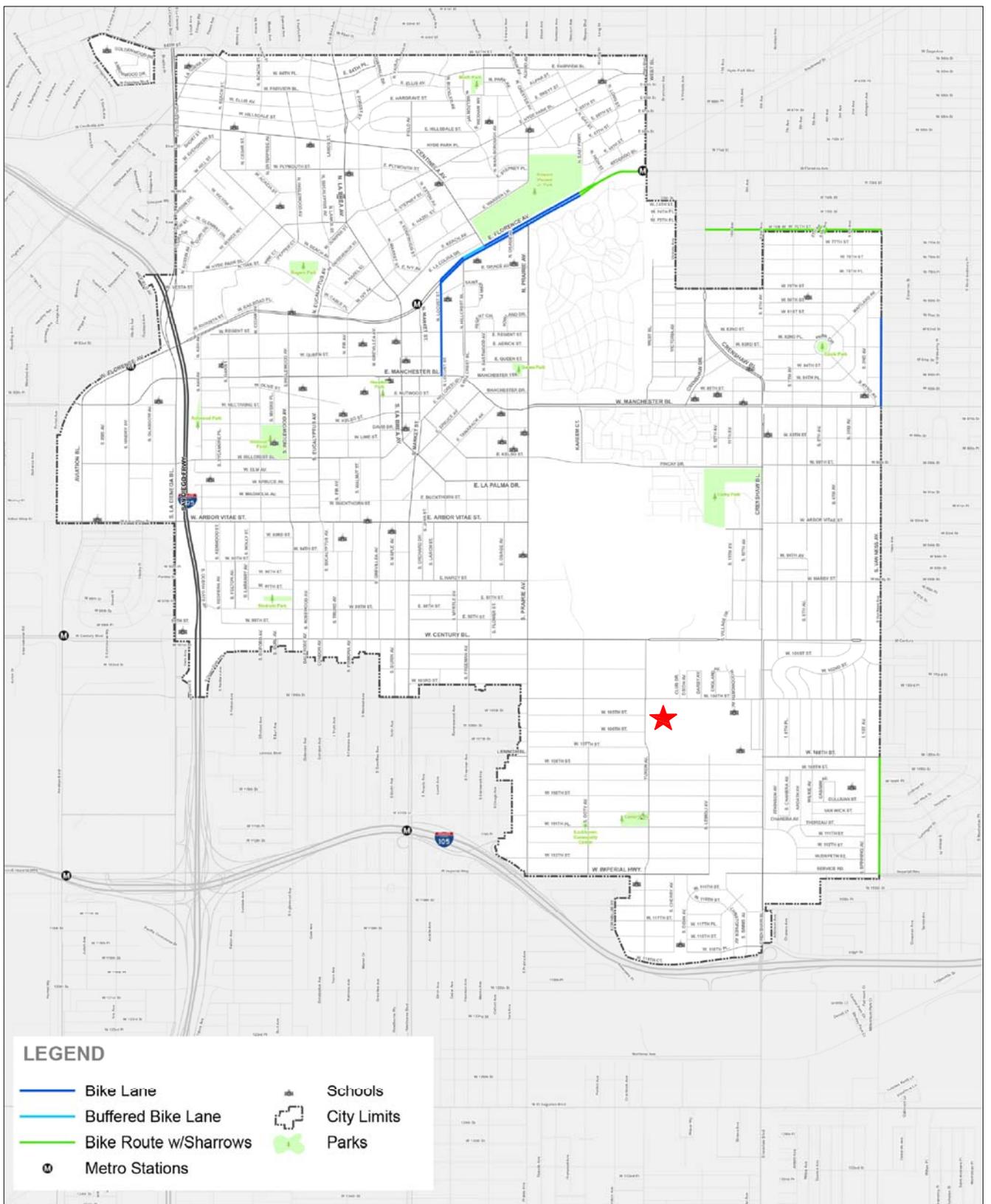
Pedestrian infrastructure consists of facilities such as sidewalks, crosswalks, pedestrian signals, curb access ramps, Americans with Disabilities Act (ADA) compliant tactile warning strips, and curb extensions, among other things. These facilities are widely provided within the study area. Sidewalks are currently provided along Century Boulevard and along other corridors adjacent to the site, including 104<sup>th</sup> Street and Yukon Avenue. Marked crosswalks, pedestrian signals, and curb ramps are provided at the study intersections.

#### 3.1.2 Bicycle System

Bicycle infrastructure consists of both facilities within the roadway as well as public bicycle parking spaces. The Federal and State transportation systems recognize three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths (Class I) are exclusive car free facilities that are typically not located within a roadway area. Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped lane separating vehicle lanes from bicycle lanes. Bicycle Routes (Class III) are preferably located on collector and lower volume arterial streets.

The City of Inglewood currently only has 3.2 total miles of bikeways, with 1.5 miles as Class II bike lanes and 1.7 miles as Class III bike routes. The nearest bicycle facility to the Morningside High School campus is approximately 0.8 miles east of the project site, which is a north-south Class III bike route located on Van Ness Avenue between 108<sup>th</sup> Street and Imperial Highway. The existing and proposed bicycle infrastructures in the project vicinity is illustrated in **Figures 3-1(a)** and **3-1(b)**, respectively. As presented in *Figure 3-1(b)*, there are plans for a north-south Class II bike lane on Yukon Avenue between Century Boulevard and 104<sup>th</sup> Street and a Class II buffered bike lane on Yukon Avenue south of 104<sup>th</sup> Street to just north of Imperial Highway. In addition, along the project

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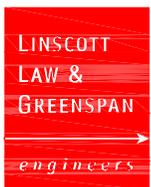


**LEGEND**

- Bike Lane
- Buffered Bike Lane
- Bike Route w/Sharrows
- M Metro Stations
- Schools
- City Limits
- Parks



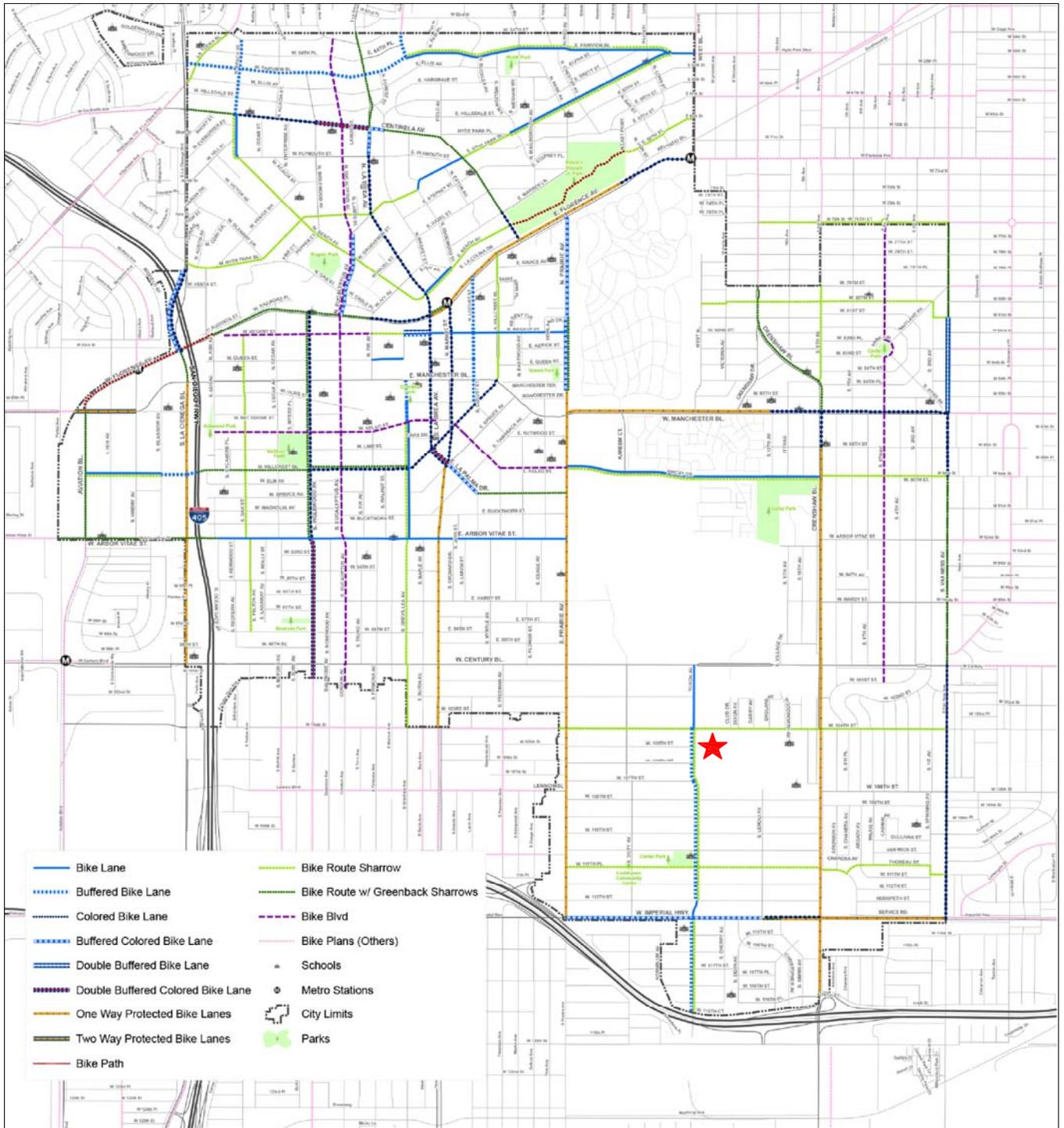
SOURCE: INGLEWOOD ACTIVE TRANSPORTATION & SAFE ROUTES TO SCHOOL PLAN, MAY 17, 2022



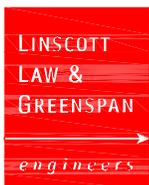
★ Project Site

Figure 3-1A  
Existing Bicycle Facilities

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SOURCE: INGLEWOOD ACTIVE TRANSPORTATION & SAFE ROUTES TO SCHOOL PLAN, MAY 17, 2022



★ Project Site

Figure 3-1B  
Proposed Bicycle Facilities

frontage, there are plans for an east-west Class I bike route with sharrows on 104<sup>th</sup> Street between Prairie Avenue and Van Ness Avenue.

## 3.2 Transit Network

Public bus transit services are provided within the project study area by the Los Angeles County Metropolitan Transportation Authority (Metro) lines, the County of Los Angeles shuttle system, and the City of Torrance (Torrance Transit). The existing public transit routes in the vicinity of the project site are illustrated in **Figure 3-2**. A summary of the existing transit service in the vicinity of the project site is presented in **Table 3-1**.

As shown in **Figure 3-2**, public transit access to the project site is accommodated by Metro which runs one line along Century Boulevard at a frequency of approximately 20 minutes during weekday and 30 minutes during Saturday peak service. The nearest bus stop for Metro Line 117 provides amenities including a bus shelter, bench and trash receptacle and is located approximately one-third mile northwest of the project site (i.e., along the north side of Century Boulevard west of Yukon Avenue). The Link-Lennox shuttle which is operated by the County of Los Angeles runs at a frequency of approximately 30 minutes. Only pole mounted signage is provided at the Link Lennox Line shuttle stop location, which is located along the south side of 104<sup>th</sup> Street just west of Yukon Avenue.

## 3.3 Vehicle Network

### 3.3.1 Roadway Classifications

The City of Inglewood, as stated in its General Plan Circulation Element<sup>3</sup>, utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.
- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commuter traffic.

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<sup>3</sup> The Circulation Element of the Inglewood General Plan, adopted December 15, 1992.



MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY WEBSITE, SEPTEMBER 2021



★ Project Site



Figure 3-2  
Existing Transit Routes

Table 3-1  
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro 117	LAX to Downey via Inglewood, Los Angeles, Watts and South Gate	Yukon Avenue, Crenshaw Boulevard, Century Boulevard	EB WB	3 3	3 3
Metro 120	El Segundo to Whittier via Inglewood, Los Angeles, Willowbrook, Lynwood, Downey, Norwalk and Santa Fe Springs	Yukon Avenue, Crenshaw Boulevard, Imperial Highway	EB WB	1 1	1 1
Metro 210	Redondo Beach to Hollywood via Torrance, Hawthorne, Inglewood, Jefferson Park and Koreatown	Crenshaw Boulevard, Century Boulevard, 104th Street	NB SB	7 6	7 6
Metro 211	Redondo Beach to Inglewood	Prairie Avenue, Century Boulevard	NB SB	0 1	0 1
Metro 212	Hawthorne to Hollywood via Inglewood, Baldwin Hills and Miracle Mile	Prairie Avenue, Century Boulevard	NB SB	4 4	4 4
Metro 215	Redondo Beach to Inglewood	Prairie Avenue, Century Boulevard	NB SB	0 1	0 1
Metro Green Line	Redondo Beach to Norwalk via El Segundo, Hawthorne, Los Angeles, Willowbrook, Lynwood and Downey	Crenshaw Boulevard	EB WB	6 6	6 6
The Link - Lennox	Lennox to Inglewood	Prairie Avenue, Century Boulevard, 104th Street	Clockwise C/Clockwise	0 2	0 2
Torrance Transit 5	Torrance to Inglewood via Hawthorne	Crenshaw Boulevard, Imperial Highway	NB SB	1 1	1 1
<b>TOTAL</b>				<b>47</b>	<b>47</b>

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro), County of Los Angeles (The Link), and City of Torrance Transit website, 2021.

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.
- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses. Generally, travel lanes are not striped, and parking may be accommodated on one or both sides of the roadway.

### 3.3.2 Regional Highway System

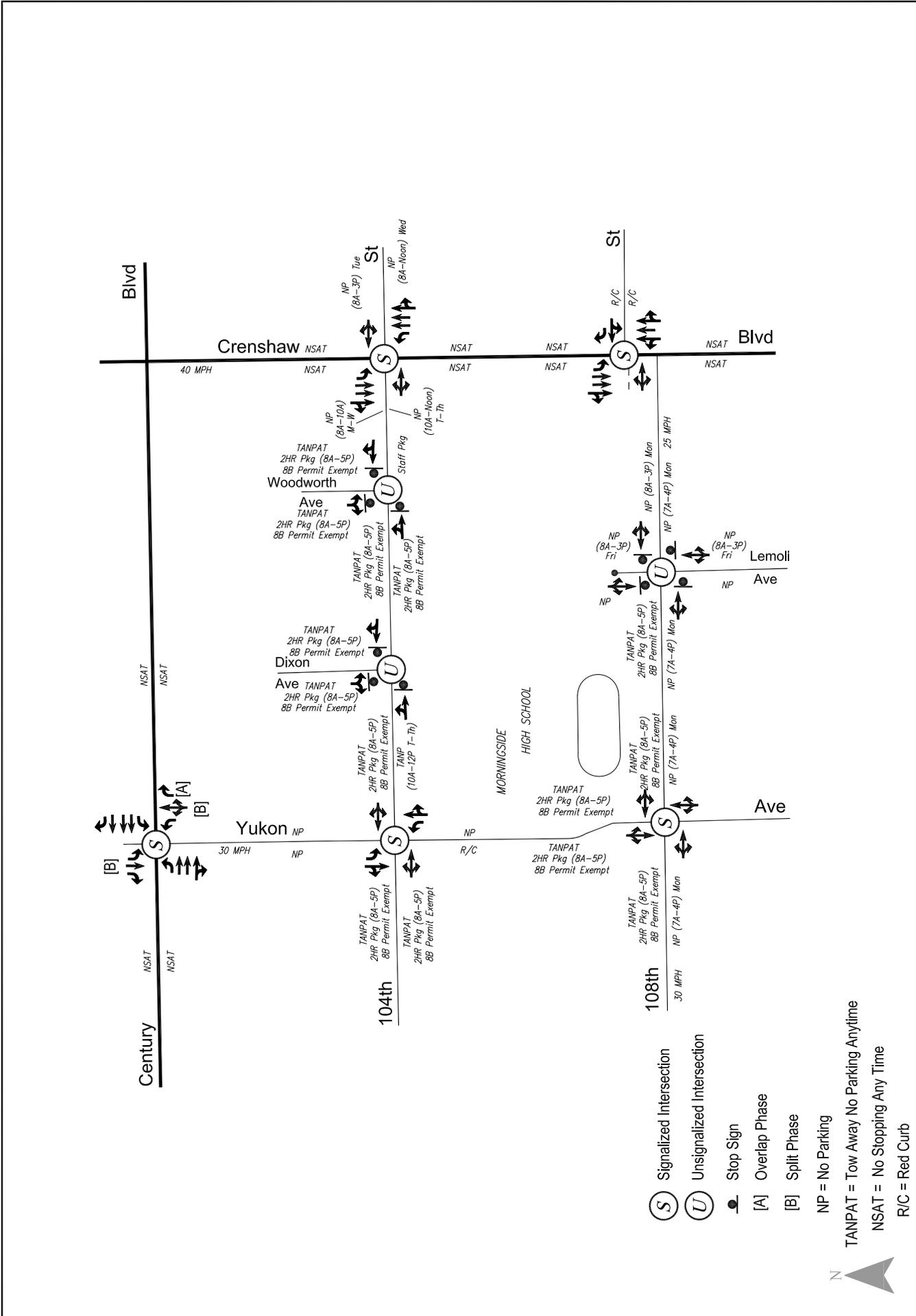
Primary regional access is provided by the *I-105 Freeway (Glenn Anderson Freeway)* approximately one mile south of the project site. The Glenn Anderson Freeway (I-105) is a major east-west oriented freeway connecting the I-405 (San Diego Freeway) less than two miles west of the site and the I-110 (Harbor Freeway) approximately three miles east of the site. The I-105 Freeway generally contains three to four mainline freeway lanes and one high occupancy vehicle lane in each direction near the study area. Eastbound and westbound on/off ramps are provided to and from the I-105 Freeway at Crenshaw Boulevard.

The *San Diego Freeway (I-405) Freeway* is a major north-south freeway located approximately two miles west of the project site. In the project vicinity, six mixed-flow freeway lanes and one high occupancy vehicle lane are provided in each direction on the I-405 Freeway with auxiliary merge/weave lanes provided between some interchanges. Northbound and southbound on/off ramps are provided to and from the I-405 Freeway in the project area via Century Boulevard and La Cienega Boulevard.

The *Harbor Freeway (I-110) Freeway* is a major north-south freeway located approximately three miles east of the project site. In the project vicinity, five mixed-flow freeway lanes and two high occupancy vehicle lanes are provided in each direction on the I-110 Freeway with auxiliary merge/weave lanes provided between some interchanges. Northbound on- and southbound off-ramps are provided to and from the I-110 Freeway in the project area via Century Boulevard, with full on-/off-ramps provided via Manchester Boulevard further north of the project study area.

### 3.3.3 Roadway Descriptions

The current lane configurations and traffic control measures at each study intersection is presented in **Figure 3-3**. Descriptions of the roadways which comprise the study area are provided in **Table 3-2**, including the roadway classification, number of lanes, median types, and speed limits designated by the City of Inglewood.



**Figure 3-3**  
Existing Lane Configurations



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Table 3-2  
EXISTING ROADWAY DESCRIPTIONS

ROADWAY	CLASSIFICATION [1]	TRAVEL LANES		MEDIAN TYPES [4]	SPEED LIMIT
		DIRECTION [2]	NO. LANES [3]		
Yukon Avenue	Collector	NB-SB	4 to 2	2WLT	30
Dixon Avenue	Local Street	NB-SB	2	N/A	25
Woodworth Avenue	Local Street	NB-SB	2	N/A	25
Lemoli Avenue	Collector	NB-SB	2	N/A	25
Crenshaw Boulevard	Major Arterial	NB-SB	6	RMI	40
Century Boulevard	Major Arterial	EB-WB	6	RMI	40
104th Street	Collector	EB-WB	2	N/A	25
108th Street	Collector	EB-WB	2	N/A	30

Notes:

- [1] Roadway classifications obtained from the *City of Inglewood Circulation Element of the General Plan*, adopted December 15, 1992.
- [2] Direction of roadways in the project area: NB-SB = northbound and southbound; and EB-WB = eastbound and westbound.
- [3] Number of lanes in both directions on the roadway.
- [4] Median type of the road: RMI = Raised Median Island; 2WLT = 2-Way Left-Turn Lane; and N/A = Not Applicable.

### 3.4 Traffic Count Data

Manual counts of vehicular turning movements were researched for the following eight (8) intersections identified for review in consultation with City staff:

1. Yukon Avenue/Century Boulevard (signalized)
2. Yukon Avenue/104<sup>th</sup> Street (signalized)
3. Yukon Avenue/108<sup>th</sup> Street (signalized)
4. Dixon Avenue/104<sup>th</sup> Street (unsignalized)
5. Lemoli Avenue/108<sup>th</sup> Street (unsignalized)
6. Woodworth Avenue/104<sup>th</sup> Street (unsignalized)
7. Crenshaw Boulevard/104<sup>th</sup> Street (signalized)
8. Crenshaw Boulevard/108<sup>th</sup> Street (northerly intersection) (signalized)

The traffic counts were conducted in March 2022 by an independent traffic count subconsultant at the study locations when local schools in the area were in full session. The traffic counts were conducted from 7:00 to 9:00 AM to determine the weekday AM peak commute hour, and from 4:00 to 6:00 PM to determine the weekday PM peak commute hour. Traffic volumes at the study intersections show the weekday morning and weekday afternoon peak periods typically associated with peak commute hours in the metropolitan area.

The existing weekday AM and PM peak hour intersection traffic volumes by approach are summarized in *Table 3-3*. The existing vehicular turning movements at the study intersections during the weekday AM and weekday PM peak hours are shown in *Figures 3-4* and *3-5*, respectively. For each study intersection, the highest one-hour total traffic volumes (i.e., four consecutive 15-minute time intervals) traversing through the intersection during the 7:00 to 9:00 AM and 4:00 to 6:00 PM time periods were selected so as to determine the respective weekday AM and PM peak hour traffic volumes for each study intersection. For purposes of the traffic impact analysis, this common traffic engineering practice ensures that a more conservative (i.e., worst-case) assessment of existing operating conditions be attained for each study intersection. Therefore, the traffic volumes shown in *Figures 3-4* and *3-5* for the study intersections do not necessarily reflect the same exact one-hour time period during the morning and/or afternoon peak commuter conditions (i.e., one intersection's peak hour may have occurred between 7:30 and 8:30 AM, while another intersection's peak hour may have occurred between 7:45 and 8:45 AM). Summary data worksheets of the manual traffic counts of the study intersections are contained in *Appendix B*.

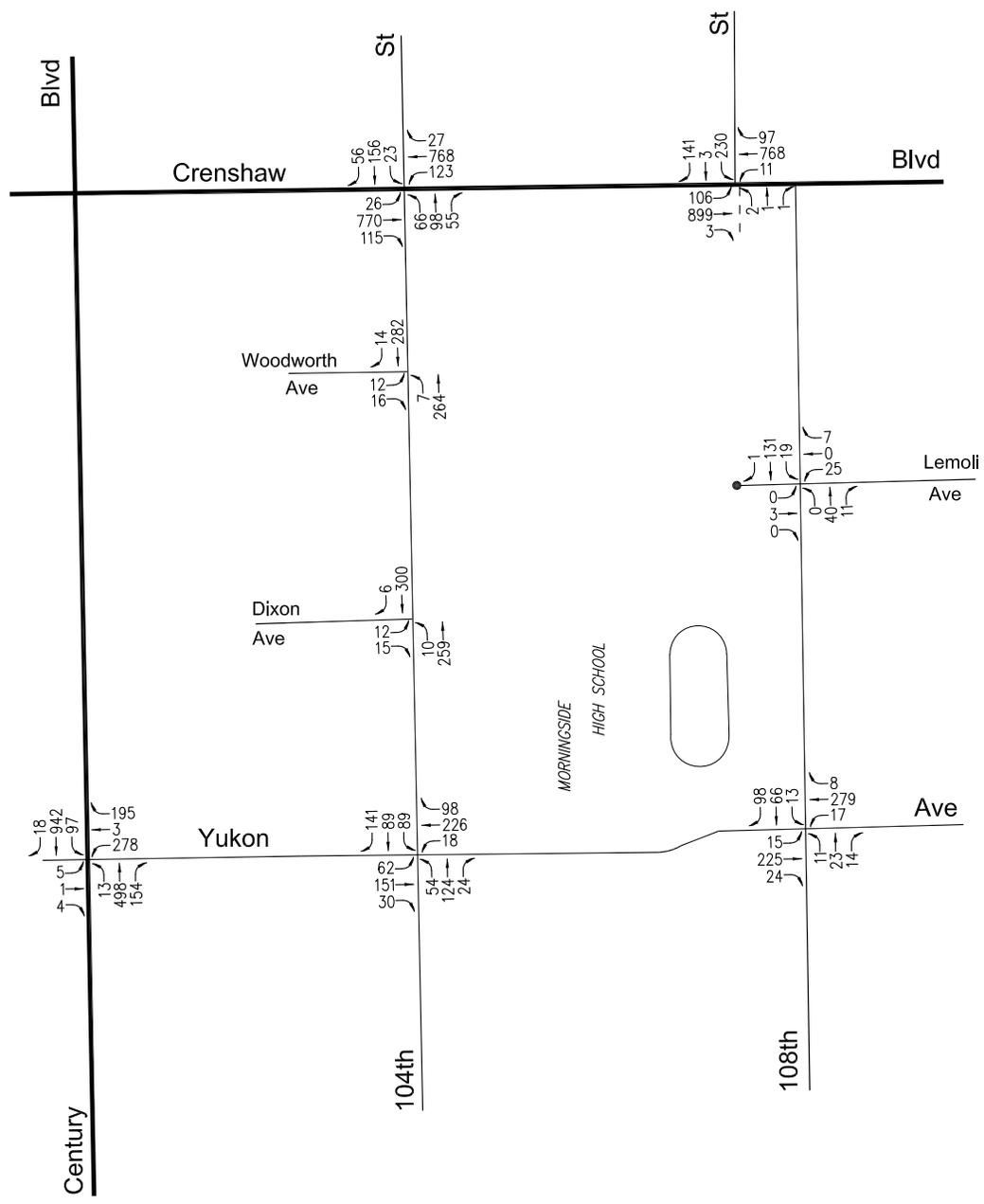
### 3.5 Cumulative Development Projects

The forecast of future pre-project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two options for developing the future traffic volume forecast:

Table 3-3  
EXISTING TRAFFIC VOLUMES [1]  
WEEKDAY AM AND PM PEAK HOURS

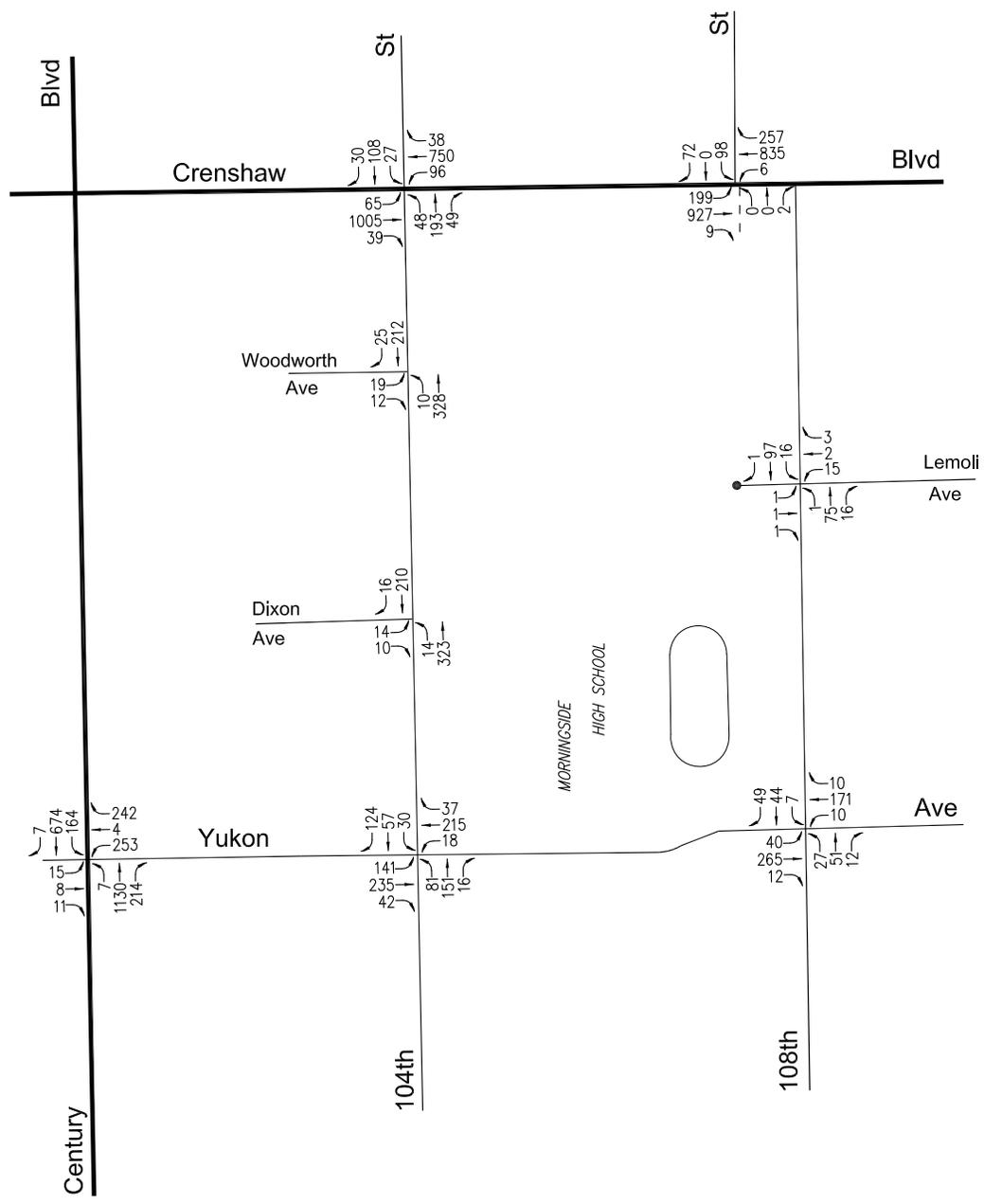
NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Yukon Avenue/ Century Boulevard	03/30/2022	NB SB EB WB	7:30 AM	476 10 665 1,057	4:15 PM	499 34 1,351 845
2	Yukon Avenue/ 104th Street	03/30/2022	NB SB EB WB	7:30 AM	342 243 202 319	4:45 PM	270 418 248 211
3	Yukon Avenue/ 108th Street	03/30/2022	NB SB EB WB	7:30 AM	304 264 48 177	5:00 PM	191 317 90 100
4	Dixon Avenue/ 104th Street	03/30/2022	NB SB EB WB	7:30 AM	0 27 269 306	5:00 PM	0 24 337 226
5	Lemoli Avenue/ 108th Street	03/30/2022	NB SB EB WB	7:30 AM	32 3 51 151	4:00 PM	20 3 92 114
6	Woodworth Avenue/ 104th Street	03/30/2022	NB SB EB WB	7:30 AM	0 28 271 296	5:00 PM	0 31 338 237
7	Crenshaw Boulevard 104th Street	03/30/2022	NB SB EB WB	7:30 AM	918 911 219 235	4:45 PM	884 1,109 290 165
8	Crenshaw Boulevard/ 108th Street	03/30/2022	NB SB EB WB	7:30 AM	876 1,008 4 374	4:45 PM	1,098 1,135 2 170

[1] Counts conducted by City Traffic Counters



**Figure 3-4**  
**Existing Traffic Volumes**  
 Weekday AM Peak Hour  
 Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project

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**Figure 3-5**  
**Existing Traffic Volumes**  
 Weekday PM Peak Hour  
 Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project

“(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.”

Although the CEQA Guidelines do not strictly apply to the local transportation assessment required by the City of Inglewood, this traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the “A” and “B” options for purposes of developing the forecast.

### **3.5.1 Related Projects**

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area (i.e., within an approximate one-mile radius from the project site). With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impacts of all ongoing development. The related projects research was based on information on file with the Cities of Inglewood and Hawthorne Departments of Economic and Community Development as well as the County of Los Angeles Department of Regional Planning. It is anticipated that any potential development for the eastern portion of the site (i.e., 23 acres) to be leased by the District would occur after the completion of the Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project and would require a separate environmental review at that time. The list of related projects in the project site area is presented in **Table 3-4**. The location of the related projects is shown in **Figure 3-6**.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers’ (ITE) *Trip Generation Manual*<sup>4</sup>, or they were obtained from other traffic studies as sourced. The related projects’ respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in **Table 3-4**. The related projects traffic volumes were distributed and assigned to the street system based on the projects’ locations in relation to the study intersections, their proximity to major traffic corridors, proposed land uses, nearby population and employment centers, etc. The

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<sup>4</sup> Institute of Transportation Engineers *Trip Generation Manual*, 10<sup>th</sup> Edition, Washington, D.C., 2017.

Table 3-4  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]		AM PEAK HOUR VOLUMES [2]		PM PEAK HOUR VOLUMES [2]	
			LAND-USE	SIZE		IN	OUT	IN	OUT	IN	OUT
City of Inglewood											
I1	Under Construction	Hollywood Park Project 1050 South Prairie Avenue	Hollywood Park Development		[3]	37,650	1,274	768	1,372	1,510	2,882
I2	Proposed	Prairie Station Project Prairie Avenue & 113th Street	Multi-family Residential	400 DU	[3], [4]	2,176	37	107	107	69	176
I3	Proposed	11111 South Prairie Avenue	Hotel	120 Rooms	[3], [5]	1,003	33	23	37	35	72
I4	Proposed	3820 West 102nd Street	Hotel	300 Rooms	[3], [5]	2,508	83	58	92	88	180
I5	Proposed	3700 West 102nd Street	Mini-Warehouse	79,415 GSF	[3], [6]	120	5	3	8	7	14
I6	Proposed	4041 West Century Boulevard	Hotel	145 Rooms	[3], [5]	1,212	40	28	68	43	87
I7	Proposed	Prairie Avenue & Century Boulevard Murphy Bowl Project	Office Restaurant/Retail Hotel	71,000 GSF 63,000 GLSF 150 Rooms	[3], [7] [3], [8] [3], [5]	692 2,378 1,254	71 37 42	11 22 29	82 59 71	69 125 44	82 240 90
I8	Proposed	819 East La Palma Drive	Multi-family Residential	5 DU	[9], [10]	27	1	1	2	1	2
I9	Proposed	316 East Hardy Street	Multi-family Residential	5 DU	[9], [10]	27	1	1	2	1	2
I10	Proposed	3900 West Century Boulevard	Hotel Renovation/Expansion	4 Rooms	[9], [5]	33	1	1	2	1	2
I11	Proposed	District Property south of West 104th Street between Yukon Avenue South and South 10th Avenue	Multi-family Residential Park & Recreational Facility Child Development Center	468 DU 1.7 Acres 10,000 GSF	[10], [11] [11], [12] [11], [13]	2,546 90 476	44 nom. 58	124 nom. 52	168 nom. 110	80 13 59	206 23 111
Los Angeles County											
LC1	Proposed	4618 West 104th Street	Multi-family Residential	4 DU	[10]	22	0	1	1	1	2
LC2	Proposed	10907 South Inglewood Avenue	Multi-family Residential	4 DU	[10]	22	0	1	1	1	2
LC3	Proposed	4932 West 104th Street	Multi-family Residential	6 DU	[10]	33	1	1	2	2	3
LC4	Proposed	10501 South Buford Avenue	Multi-family Residential	11 DU	[10]	60	1	3	4	3	5
LC5	Proposed	10507 Hawthorne Boulevard	Multi-family Residential	32 DU	[10]	174	3	9	12	9	14
LC6	Proposed	10609 South Inglewood Avenue	Multi-family Residential	12 DU	[10]	65	1	3	4	3	5
LC7	Proposed	10936 South Osage Avenue	Multi-family Residential	4 DU	[10]	22	0	1	1	1	2
LC8	Proposed	10928 South Inglewood Avenue	Multi-family Residential	10 DU	[10]	54	1	3	4	2	4
LC9	Proposed	1743 Imperial Highway	Multi-family Residential	39 DU	[10]	212	4	10	14	10	17
LC10	Proposed	12000 South Western Avenue	Hotel	55 Rooms	[5]	460	15	11	26	17	33

Table 3-4 (Continued)  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]		PM PEAK HOUR VOLUMES [2]			
			LAND-USE	SIZE			IN	OUT	IN	OUT	TOTAL	TOTAL
LC11	Proposed	11609 South Western Avenue	Multi-family Residential	57 DU	[10]	310	5	16	21	15	10	25
LC12	Proposed	1326 West Imperial Highway	Assisted Living	178 Beds	[14]	463	21	13	34	17	29	46
LC13	Proposed	11034 South Western Avenue	Laundromat	3,561 GSF	[8]	226	6	5	11	12	12	24
<b>City of Hawthorne</b>												
H1	Proposed	4500 West 116th Street	Multi-family Residential	116 DU	[9], [4]	631	11	31	42	31	20	51
H2	Proposed	Crenshaw Boulevard & Jack Northrup Avenue	Multi-family Residential High-Turnover Restaurant	230 DU 3,700 GSF	[9], [4] [9], [15]	1,251 415	22 20	61 17	83 37	62 22	39 14	101 36
H3	Proposed	11519 Aeacia Avenue	Hotel	119 Rooms	[9], [5]	995	33	23	56	36	35	71
H4	Proposed	11447 Birch Avenue	Hotel	104 Rooms	[5]	869	29	20	49	32	30	62
<b>TOTAL</b>						<b>58,476</b>	<b>1,900</b>	<b>1,457</b>	<b>3,357</b>	<b>2,303</b>	<b>2,369</b>	<b>4,672</b>

[1] Sources: City of Inglewood Economic & Community Development Department - Planning Division, City of Hawthorne Planning & Community Development Department, and the County of Los Angeles Department of Regional Planning. Trip generation for the related projects are based on ITE "Trip Generation Manual"; 10th Edition, 2017, (as referenced in the Project Data Source column), unless otherwise noted.

[2] Trips are one-way traffic movements, entering or leaving.

[3] Source: "Pairie Station Traffic Impact Study Draft Report", prepared by Iteris, March 15, 2021.

[4] ITE Land Use Code 221 (Multifamily Housing Mid-Rise) trip generation average rates.

[5] ITE Land Use Code 310 (Hotel) trip generation average rates.

[6] ITE Land Use Code 151 (Mini-Warehouse) trip generation average rates.

[7] ITE Land Use Code 710 (General Office) trip generation average rates.

[8] ITE Land Use Code 820 (Shopping Center) trip generation average rates.

[9] Source: Inglewood Basketball and Entertainment Center Project, FEIR, prepared by Fehr & Peers, June 2020.

[10] ITE Land Use Code 220 (Multifamily Housing Low-Rise) trip generation average rates.

[11] It is assumed that build-out of the leased District property would extend beyond the project build-out year of 2025 for the Morningside High School Site Upgrade and Woodworth Elementary School Demolition project.

[12] ITE Land Use Code 411 (Public Park) trip generation average rates.

[13] ITE Land Use Code 565 (Day Care Center) trip generation average rates.

[14] ITE Land Use Code 254 (Assisted Living) trip generation average rates.

[15] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.

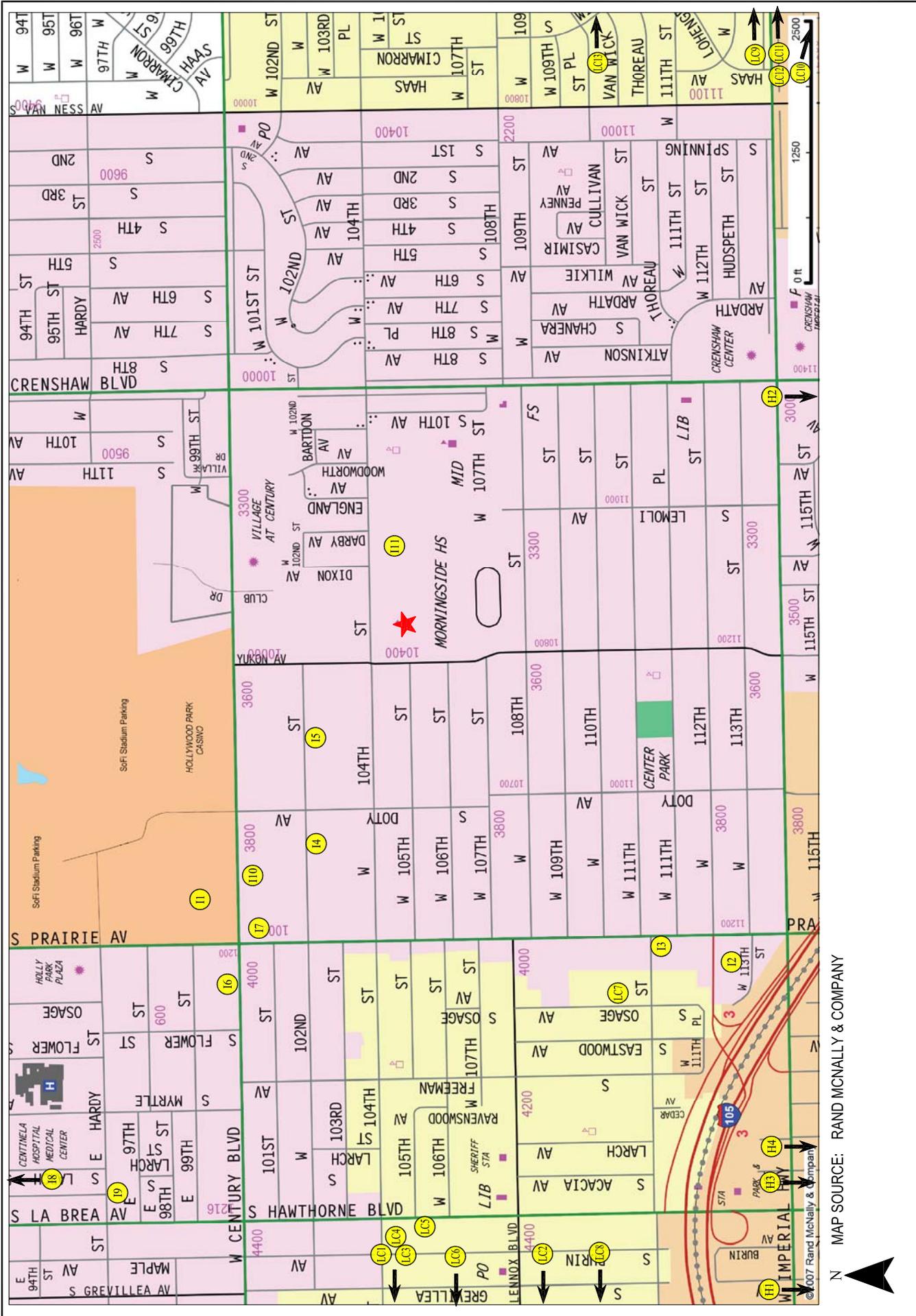


Figure 3-6  
Location of Related Projects

- ★ Project Site
- I City of Inglewood Related Project
- LC Los Angeles County Related Project
- H City of Hawthorne Related Project

MAP SOURCE: RAND MCNALLY & COMPANY

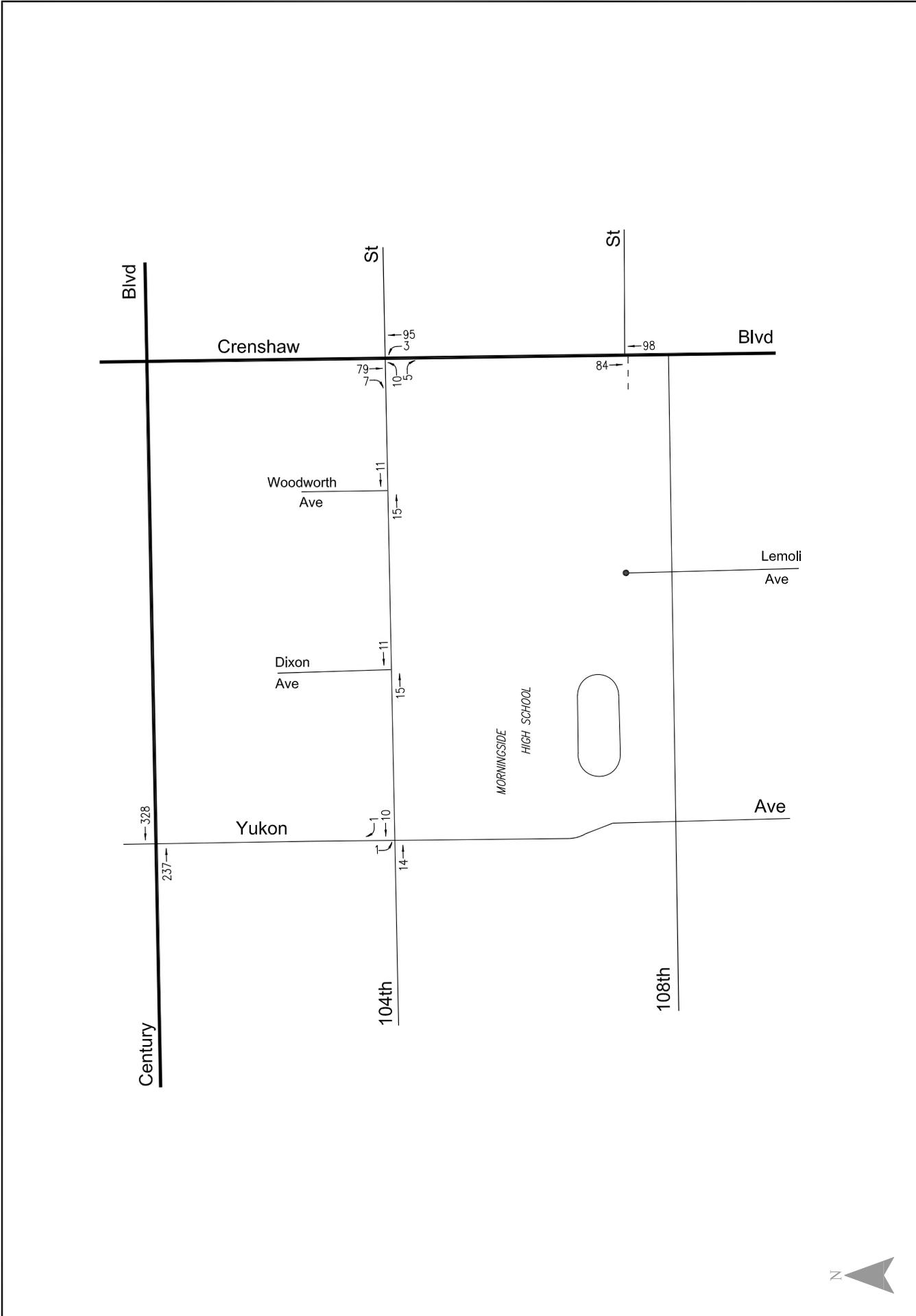


anticipated distribution of the related projects traffic volumes to the study intersections during the weekday PM peak hour are displayed in **Figure 3-7**.

### **3.5.2 Ambient Traffic Growth Factor**

Horizon year background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area as well as account for typical growth in traffic volumes due to the development of projects outside the study area. An annual growth rate of one percent (1.0%) per year was selected for this analysis in consultation with City of Inglewood staff during the scoping process.

Therefore, application of this one percent (1.0%) ambient growth factor in addition to the forecast traffic generated by the related projects allows for a very conservative forecast of future traffic volumes in the project study area as incorporation of both (i.e., an ambient traffic growth rate and a detailed list of cumulative development projects) is expected to overstate potential future traffic volumes.



**Figure 3-7**  
**Related Projects Traffic Volumes**  
 Weekday PM Peak Hour

Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project



## 4.0 CEQA TRANSPORTATION ASSESSMENT

The State of California Governor’s Office of Planning and Research (OPR) issued proposed updates to the CEQA Guidelines in November 2017 that amends the Appendix G question for transportation impacts to delete reference to vehicle delay and level of service and instead refer to Section 15064.3, subdivision (b)(1) of the CEQA Guidelines asking if the project will result in a substantial increase in vehicle miles traveled (VMT). The California Natural Resources Agency certified and adopted the revisions to the CEQA Guidelines in December of 2018, and as of July 1, 2020 the provisions of the new section are in effect statewide. Concurrently, OPR developed the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), which provides non-binding recommendations on the implementation of VMT methodology which has significantly informed the way VMT analyses are conducted in the State. Accordingly, for the purpose of environmental review under CEQA, neither the Inglewood Unified School District nor the City of Inglewood have established VMT analysis procedures at this time; therefore, the project-related VMT impact has been assessed qualitatively based on guidance from the OPR’s *Technical Advisory* and review of VMT policies.

### 4.1 Vehicle Miles Traveled (VMT) Project Screening

Traditionally, public agencies have set certain thresholds to determine whether a project requires detailed transportation analysis or if it could be assumed to have less than significant environmental impacts without additional study. As mentioned previously, the project-related VMT impact has been assessed qualitatively based on guidance from the OPR’s *Technical Advisory* and review of VMT policies. The *Technical Advisory* provides the following potential screening criteria for certain land development projects that may be presumed to result in a less than significant VMT. There are essentially three (3) screening criteria which may be applied to screen proposed projects out of detailed VMT analysis. Proposed projects are not required to satisfy all of the screening criteria in order to screen out of further VMT analysis; satisfaction of one criterion is sufficient for screening purposes. The following sections provide a detailed explanation of each screening criteria as it relates to the proposed project.

#### 4.1.1 Transit Priority Area Screening

CEQA Guidelines Section 15064.3(b)(1) states in part: “Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact.” In keeping with the statutory presumption of less than significant impacts due to nearby high-quality transit, the City of Inglewood has adopted a transit priority area<sup>5</sup> (TPA) screening criterion. Projects which are located

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<sup>5</sup> Public Resources Code Section 21099(a)(7): ““Transit priority area” means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan.”

within a TPA are presumed to have a less than significant impact, absent substantial evidence to the contrary. This presumption may not be appropriate if:

- The project has a floor area ratio (FAR) of less than 0.75.
- The project includes more parking for use by residents, customers, or employees of the project than required by the City.
- The project is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Southern California Association of Governments [SCAG]).
- The project replaces affordable residential units with a smaller number of moderate- or high-income residential units.

As described in *Section 3.2*, public transit service is provided in the vicinity of the proposed project. The Los Angeles County Metropolitan Transportation Authority (Metro) lines, the County of Los Angeles shuttle system, and the City of Torrance (Torrance Transit) which provide services in the immediate vicinity of the project site. As shown in *Figure 4-1*, the project site is located within a High Quality Transit Area (HQTA) as identified by SCAG for the Final Connect SoCal (the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)). However, as mentioned previously, the presumption that Projects which are located within a TPA/HQTA have a less than significant impact may not be appropriate if the project provides more parking for use than required by the City. At project completion, the campus is planned to provide a total of 308 parking spaces which exceeds the Code parking requirement of 245 spaces. Thus, the proposed project is not expected to screen out of VMT analysis due to the transit priority area screening criterion.

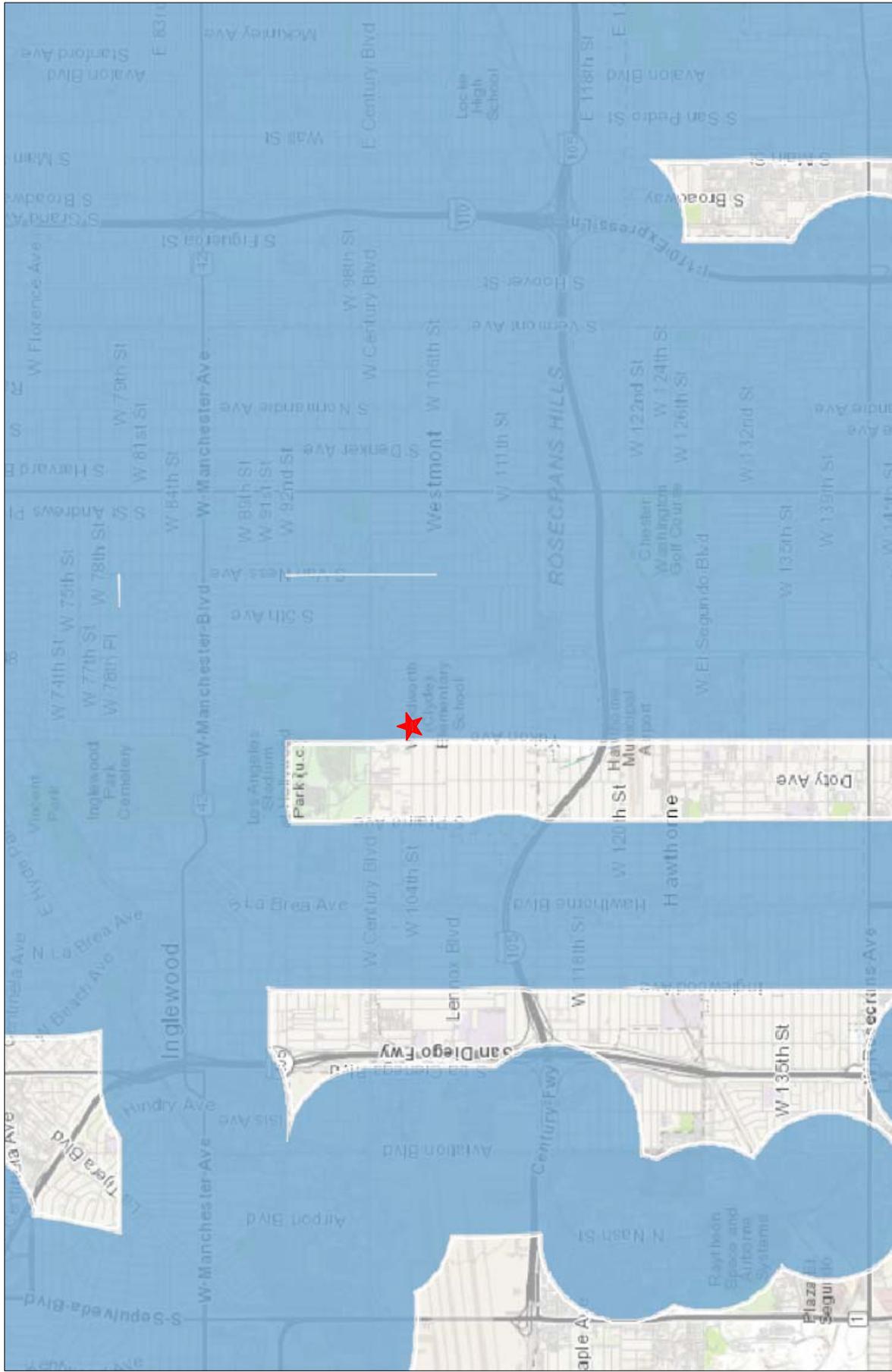
#### **4.1.2 Low VMT Area Screening**

It is assumed that projects which will be located within areas which currently exhibit low VMT, and that incorporate similar features pertaining to density, land use mix, and transit availability, will tend to exhibit similarly low VMT. In areas where the existing VMT generation already falls below the applicable thresholds, and where projects are likely to generate similar levels of VMT, projects may be screened out of preparing detailed VMT analysis. OPR notes that such screening is appropriate for residential and office projects. As the project neither falls within a residential or office land use type category, the proposed project is not expected to screen out of VMT analysis due to the low VMT area screening criterion.

#### **4.1.3 Project Type Screening**

Consistent with the OPR's *Technical Advisory*, the following potential screening criteria for certain land development projects that may be presumed to result in a less than significant VMT impact:

- Local-serving retail less than 50,000 square feet, including gas stations, banks, restaurants, shopping center.
- Local-serving K-12 schools, local parks, daycare centers, etc.
- Local-serving hotels (e.g., non-destination hotels)



MAP SOURCE: SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS (SCAG)

★ Project Site

● High Quality Transit Areas



Figure 4-1  
High Quality Transit Areas

- Local-serving assembly uses (places of worship, community organizations)
- Community institutions (public libraries, fire stations, local government)
- Affordable, supportive, or transitional housing
- Assisted living facilities, senior housing
- Projects generating less than 110 daily vehicle trips
- Public parking garages and public parking lots

As mentioned in the OPR’s *Technical Advisory*, local serving uses typically redistributes and reroutes local trips rather than create new trips. By adding local serving opportunities into the urban fabric and thereby improving destination proximity, local-serving projects tends to shorten trips and reduce VMT. It is also noted that lead agencies may presume such local-serving projects create a less than significant transportation impact. Similarly, the proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project will serve the local population and is a local-serving high school, thereby shortening travel distances and reducing VMT. Thus, the proposed project can be presumed to result in a less than significant VMT impact based on State guidance because it would reduce VMT by shortening trip lengths, similar to local-serving retail developments and other local-serving projects. Therefore, the proposed project satisfies the criteria to be considered a local serving use and is screened out from further VMT analysis as it is presumed to cause less than significant transportation impacts.

#### **4.1.4 Summary of Screening Conclusions**

The City of Inglewood has adopted three screening criteria which may be applied to screen proposed projects out of detailed VMT analysis. The project does not meet the criteria to be screened out of VMT analysis based on its location within a TPA or low VMT-generating area. The project does, however, satisfy the criteria based on the project land use type as a local serving community use. Therefore, the project is screened out of further VMT analysis.

## **4.2 VMT Impact Conclusions**

As described in *Section 4.1.4*, the project meets the criteria for a local serving project and is screened out of further VMT analysis. The screening criterion is based on the presumption that local serving projects will cause less than significant impacts. Therefore, through satisfaction of the screening criteria, the project is determined to result in a less than significant transportation impact.

## **4.3 Active Transportation and Public Transit Analysis**

A significant impact may also occur “if the project conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreases the performance or safety of such facilities”. The following section provides a brief review of the City’s adopted policies, plans, and programs pertaining to active transportation and public transit analysis.

#### 4.3.1 Adopted Policies, Plans, or Programs

The *2019 City of Inglewood Mobility Plan* provides the framework for addressing current and future infrastructure needs and establishes the vision, goals, policies, infrastructure enhancements and program requirements to improve the City’s local transportation network and access to the regional transportation system. The relevant goals and objectives are identified below as well as the corresponding strategies to achieve the goals and objectives:

- Goal No. 1: Sustainability and Environmental Considerations

Strategy 1.1 – Relieve Congestion. The City will apply Transportation Demand Management programs aimed to reduce travel of single-occupancy vehicle trips during peak commute hours. Some key components of the TDM programs may include, but are not limited to the following: a) offer employee incentives to walk, bicycle, or take transit to work, etc. b) provide bicycle-friendly facilities at employment areas, and c) facilitate carpool or vanpool programs for employees.

- Goal No. 3: Create an Efficient, Balanced, Multimodal Mobility Network

Strategy 3.1 – Complete Streets. Develop and enhance a pedestrian network that consists of elements that encourage walking to/from destinations and first/last mile options. Provide bicycle infrastructure including, but not limited to, bike paths, bicycle lanes, hubs, and secure bicycle parking at major transit locations.

- Goal No. 5: Safety – Maintain and promote safety for pedestrians, bicyclists, motorists, transit riders, trucks and delivery vehicles.

Strategy 5.1 – Promote Safer Transportation Network. Provide the most feasible, most appropriate multimodal infrastructure that is safe and accessible to every member of the community, especially vulnerable populations such as children and the elderly. Provide and maintain adequate sidewalk widths and amenities to ensure a safe experience for pedestrians citywide.

Strategy 5.2 – Provide Safety Education and Implement Safety Programs to Public Schools. Implement a Safe Route to School Plan that would determine the routes used by the students and measures to improve mobility/safety/infrastructure to school. Implement Safe Route to School Programs to all Inglewood public schools. Provide active transportation safety education to the community. Use Neighborhood Traffic Control techniques when excessive vehicle speed, excessive volume, or pedestrian/vehicle safety concerns warrant them.

The City’s *General Plan Land Use Element*, that was amended in 2009, outlines the following circulation goals and objectives that are consistent with the City’s Mobility Plan:

- Promote and support adequate public transportation within the City and the region,

- Develop modified traffic systems that will discourage through traffic from utilizing neighborhood streets,
- Develop a safe and adequate pedestrian circulation system which is barrier free for the handicapped.

The purpose of the City’s *Active Transportation and Safe Routes to School Master Plan (ATP/SRTS)*<sup>6</sup> is to create a Complete Streets update to the City of Inglewood General Plan. The ATP/SRTS Plan sets forth goals, policies and strategies pertaining to accident and traffic safety, transit and public transportation, ensuring easy and convenient access to the regional facilities, bicycle routes and pedestrian facilities, among other things. Relevant adopted policies include:

- Policy 1.2: Ensure that planning, design and implementation documents are adhered to – Ensure that new development projects go through review processes for compliance with the ATP/SRTS.
- Policy 1.3: Revise the Municipal Code on crosswalk installation, removal, and enhancement – Adopt the high-visibility continental crosswalk treatment as the standard along school routes and crossings with multi-lane streets, and where pedestrian activity demands it.
- Policy 3.1: Achieve a safe, comfortable and attractive pedestrian environment for people of all ages and abilities – Explore the use of 15 mph school zones by conducting necessary analysis.
- Policy 4.1: Facilitate the provision of quality bicycle support facilities at local and regional destinations – Provide convenient, highly visible, and secure bicycle parking at schools, parks, public buildings, private development including the Hollywood Park development site, and other destinations where demand is needed.
- Policy 5.1: Encourage and support comprehensive pedestrian and bicycle safety education awareness programs for pedestrians, bicyclists, and motorists – Work with local schools to implement and institutionalize a comprehensive pedestrian and bicycle education program that teaches all school children to follow the rules of the road. Encourage schools and school districts to implement a comprehensive pedestrian and bicycle education program for their students, faculty and staff. Encourage the inclusion of pedestrian and bicycle education for crossing guards and bus drivers in their training programs.
- Policy 5.2: Actively encourage City staff, employees, residents, visitors and students to walk and bicycle as often as possible – Encourage schools to coordinate a “Bike to School Day” event. Encourage schools to participate in “International Walk to School Day” every October.

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<sup>6</sup> *City of Inglewood Active Transportation and Safe Routes to School Master Plan*, adopted May 17, 2022.

- Policy 6.1: Provide equal pedestrian and bicycle access for all through public engagement, program delivery, and capital investment – Strengthen partnerships with the County of Public Health, community-based organizations, school district, faith-based institutions and others that can help to realize the economic, health and societal benefits of walking and bicycling to the greater public.
- Policy 6.2: Improve personal safety for students walking and bicycling to school – Ensure students feel safe while walking and bicycling to and from school by providing enhanced street lighting and maintaining overgrown shrubbery along sidewalks.

The ATP/SRTS includes specific improvements to address pedestrian and bicycle safety concerns. As part of the Plan preparation, a SRTS workshop was held in 2016 and involved collaboration between the City and stakeholders to improve the safety of students traveling to/from school with an increased focus on students and road safety. The following study intersection improvements were also identified in the ATP/SRTS to address safety and crossing concerns near the Morningside High School campus:

- Yukon Avenue/Century Boulevard – Add white continental crosswalks and advance stop lines to all legs of the intersection, add countdown signals.
- Yukon Street/104<sup>th</sup> Street – Add yellow continental crosswalk and advance stop line to all legs of the intersection, add Assembly D signs and countdown signals, add curb extensions to the north and east legs of the intersection.
- Yukon Avenue/108<sup>th</sup> Street – Add white continental crosswalks and advance stop lines to all legs of the intersection, add curb extensions to the north and south legs, and add countdown signals.
- Crenshaw Boulevard/104<sup>th</sup> Street – Add white continental crosswalks to all legs of the intersection (including the frontage roads), add advance stop lines to the north and south legs (main road only), add median nose to the west side of the north and south legs (frontage road), add curb extensions and countdown signals.

Traffic calming elements are proposed in the area including installations of speed feedback signs on Yukon Avenue between 104<sup>th</sup> Street and 107<sup>th</sup> Street, and speed cushions on 105<sup>th</sup> Street from Prairie Avenue to Yukon Avenue.

#### **4.3.2 Qualitative Impact Conclusions**

The proposed project is not expected to result in a significant impact on active transportation or public transit in the vicinity of the project site. As described in *Section 3.1* herein, the project site is planned to accommodate pedestrian and bicycle access via exclusive walkways which connect the site to the public sidewalks. The walkways minimize the extent of pedestrian and bicycle interaction with vehicles at the site and provide a comfortable, convenient, and safe environment which in turn

can encourage use of active transportation modes. The project site is further planned to provide bicycle parking facilities for use on-site by students, faculty/staff, visitors, etc. to the campus. As mentioned in the *City of Inglewood Active Transportation and Safe Routes to School Master Plan (Appendix A)*, a total of 30 bicycle parking spaces are planned to be added along with an additional 30 racks for skateboards/scooters on campus. The proposed project is therefore found to be in alignment with the City's General Plan, the City's Mobility Plan, as well as the ATP/SRTS Plan goals to promote pedestrian and bicycle safety and provide appropriate and supportive active multi-modal transportation infrastructure.

The proposed project is located adjacent to 104<sup>th</sup> Street, which is currently served by public bus transit service provided by County's shuttle system (i.e., The Link). As noted in *Section 3.2*, the project site is within walking distance from an existing bus stop located along 104<sup>th</sup> Street at Yukon Avenue. The proposed project is not expected to affect access or safety at the existing bus stops, nor is it expected to hinder public transit service along 104<sup>th</sup> Street. The proposed project is not expected to preclude the City from constructing bicycle facilities or pursuing bicycle network improvements along local roadways within the study area. Development of the proposed project will not prevent the City from completing any proposed transit, bicycle, or pedestrian facilities.

Since the proposed project is not found to result in conflicts with adopted policies, plans, or programs, nor is it expected to negatively affect the performance or safety of existing or planned pedestrian, bicycle, or transit facilities, it is determined that the proposed project will have a less than significant impact on active transportation and public transit in the vicinity of the project site.

## 5.0 NON-CEQA ANALYSIS

The City of Inglewood has established vehicle Level of Service (LOS) standards which local infrastructure including project developments proposed by IUSD will strive to maintain. The LOS standards apply to discretionary approvals of new land use projects within the City. The following section presents the operational (i.e., Level of Service) analysis prepared for the proposed project pursuant to this requirement.

### 5.1 Analysis Methodology

In order to estimate the proposed project's effect on intersection operations, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area. The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area. The proposed project's forecast trip generation, distribution, and assignment is presented in *Section 2.8* herein. With the forecasting process complete and project traffic assignments developed, the effect of the proposed project is isolated by comparing operational conditions at the selected study intersections using existing and expected future traffic volumes without and with forecast project traffic.

The intersection traffic analysis was prepared using the Los Angeles County Intersection Capacity Utilization (ICU) operational methodology to determine volume-to-capacity ( $v/c$ ) ratios and corresponding Levels of Service (LOS) at all of the signalized study intersections. The ICU method determines the volume-to-capacity ( $v/c$ ) ratios on a critical lane basis (i.e., based on the individual  $v/c$  ratios for key conflicting traffic movements). The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing. For the ICU operational methodology, the overall intersection  $v/c$  ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (congested condition). It should be noted that LOS D is typically recognized as the minimum acceptable level of service in urban areas. Descriptions of the ICU methods as well as the corresponding Levels of Service are provided in *Appendix C*.

Unsignalized intersections such as two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections are analyzed using the Highway Capacity Manual (HCM) method of analysis. The HCM methodology determines the average control delay (expressed in seconds per vehicle) at the intersection. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The average control delay includes delay due to deceleration to a stop at the back of the queue from free-flow speed, move-up time within the queue,

stopped delay at the front of the queue, and delay due to acceleration back to free-flow speed. It should be noted that the TWSC methodology estimates the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns and determines the LOS for each constrained movement. A detailed description of the HCM method and corresponding Level of Service is also provided in *Appendix C*.

## 5.2 Criteria for Non-CEQA Analysis

The relative impact of the added project traffic volumes to be generated by the proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed project. As noted previously in *Section 2.8*, the Project’s trip generation is expected to be nominal during the weekday AM peak hour since the athletic games/events are scheduled during the late afternoon/early evening time periods and are not expected to overlap with the commuter AM peak time period. Thus, the analysis contained herein for the future pre-project and with project conditions includes the weekday PM peak hour conditions only. The previously discussed capacity analysis procedures were utilized to evaluate the future v/c and delay relationships and service level characteristics at each study intersection.

Based on prior studies prepared in the City of Inglewood, the City utilizes the thresholds from the Los Angeles County Department of Public Works (LACDPW) *Traffic Impact Analysis Report Guidelines*, January 1997, although the County has issued more recent guidelines. The effect of the potential project generated traffic was identified using the traffic impact analysis guidelines set forth below as confirmed in the Scope of Work MOU (see *Appendix A*). According to the County’s previous guidelines, the impact is considered deficient if the project-related increase in the v/c ratio equals or exceeds the threshold criteria presented in *Table 5-1*.

Table 5-1 COUNTY OF LOS ANGELES INTERSECTION IMPACT THRESHOLD CRITERIA		
Pre-Project v/c	Level of Service	Project Related Increase in v/c
> 0.70 - 0.80	C	equal to or greater than 0.04
> 0.80 - 0.90	D	equal to or greater than 0.02
> 0.90	E and F	equal to or greater than 0.01

Pursuant to the County’s *Traffic Impact Analysis Report Guidelines*, the ICU calculations utilize a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and 2,880 vph for dual left-turn lanes. A clearance factor of 0.10 is also utilized in the calculations.

The effect of project-generated traffic at each study intersection was also compared to the City of Inglewood’s intersection LOS standards. The City’s Mobility Plan recognizes that LOS D is

typically the minimum acceptable LOS in urban settings. For unsignalized intersections, it is assumed that the addition of project traffic to an intersection which results in the degradation of intersection operations from LOS D or better to LOS E or F operations is considered deficient and may require improvements.

### 5.3 Analysis Scenarios

In coordination with City staff, LOS calculations have been prepared for the following scenarios:

- [a] Existing conditions.
- [b] Existing with project conditions.
- [c] Condition [a] plus one percent (1.0%) per year annual ambient traffic growth through year 2025 and with completion and occupancy of the related projects (i.e., future without project conditions).
- [d] Condition [c] with completion and occupancy of the proposed project.
- [e] Condition [d] with implementation of intersection improvement measures, if necessary.

The weekday PM peak hour LOS analysis prepared for the study intersections using the ICU and HCM methodology is summarized in **Table 5-2**. The ICU/HCM data worksheets for the analyzed intersections are provided in *Appendix C*.

### 5.4 Existing Conditions

#### 5.4.1 Existing Conditions

As indicated in column [1] of *Table 5-2*, all of the study intersections are presently operating at LOS B or better during the weekday AM and PM peak hours under existing conditions. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours was previously displayed in *Figures 3-4* and *3-5*, respectively.

#### 5.4.2 Existing With Project Conditions

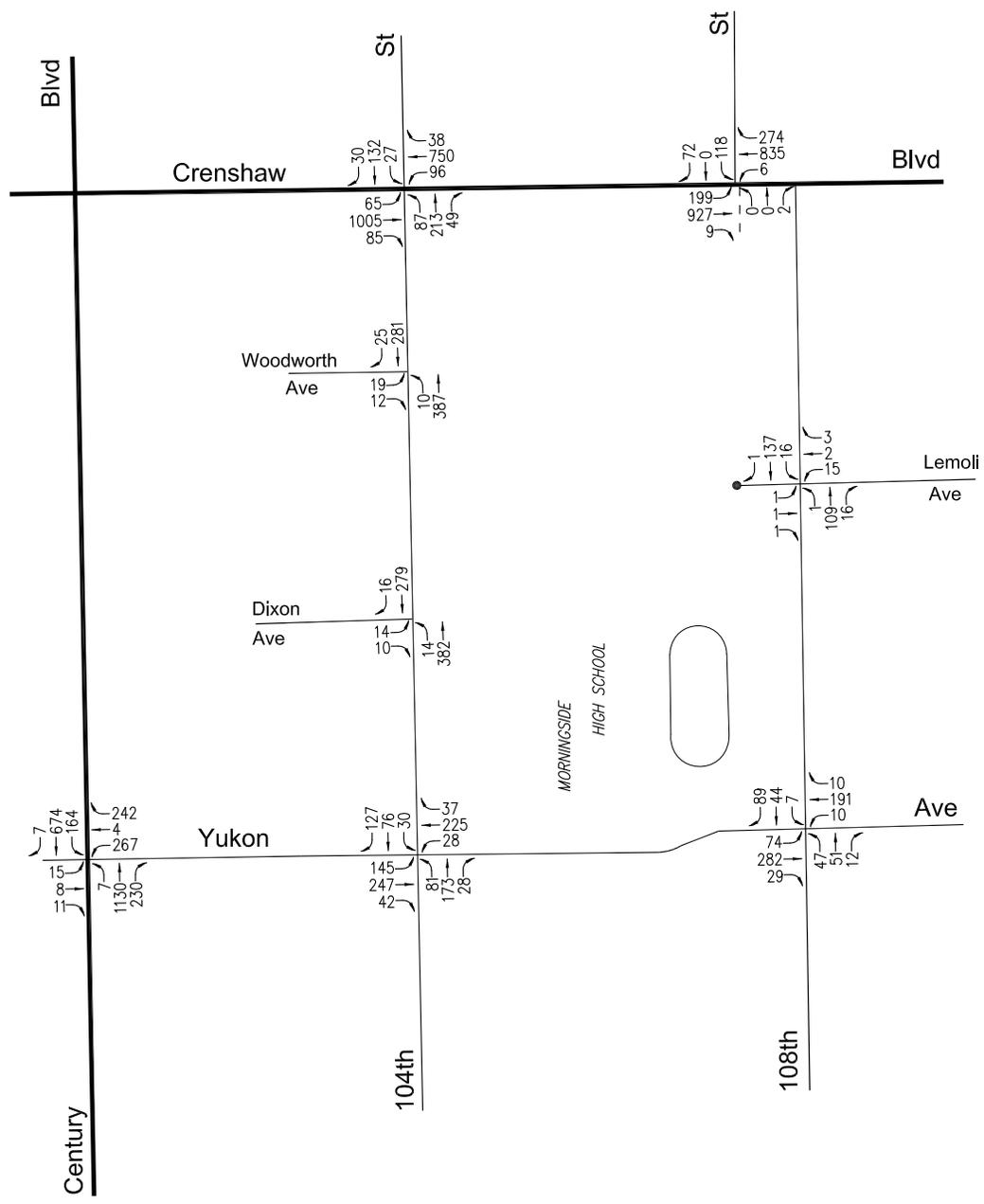
As shown in column [2] of *Table 5-2*, all of the intersections are expected to continue operating at LOS B or better during the weekday PM peak hour under the existing with project conditions. The LOS and delays at the study intersections incrementally increase with the addition of project-generated traffic. The proposed project is not expected to cause any of the study intersections to operate at a deficient LOS, therefore no project-specific intersection improvements or project-specific transportation demand management measures are proposed or required. **Figure 5-1** illustrate the existing with project traffic volumes at the study intersections during the weekday PM peak hour.

**Table 5-2  
SUMMARY OF VOLUME TO CAPACITY RATIOS/DELAY VALUES  
AND LEVELS OF SERVICE  
WEEKDAY AM AND PM PEAK HOURS**

NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	[1] YEAR 2022 EXISTING		[2] YEAR 2022 EXISTING W/ PROJECT		[3] YEAR 2025 FUTURE PRE-PROJECT		[4] YEAR 2025 FUTURE PROJECT		[(4)-(3)] CHANGE V/C or DELAY [b]
				V/C or DELAY [a]	LOS [a]	V/C or Delay [a]	LOS [a]	V/C or DELAY [a]	LOS [a]	V/C or DELAY [a]	LOS [a]	
1	Yukon Avenue/ Century Boulevard	Signalized	AM PM	0.407 0.596	A A	-- 0.602	-- A	-- 0.660	B B	-- 0.666	-- B	-- 0.006
2	Yukon Avenue/ 104th Street	Signalized	AM PM	0.574 0.528	A A	-- 0.551	-- A	-- 0.549	A A	-- 0.571	-- A	-- 0.022
3	Yukon Avenue/ 108th Street	Signalized	AM PM	0.417 0.384	A A	-- 0.464	-- A	-- 0.391	A A	-- 0.471	-- A	-- 0.080
4	Dixon Avenue/ 104th Street [c]	All-Way Stop	AM PM	10.1 sec. 10.5 sec.	B B	-- 12.0 sec.	-- B	-- 11.0 sec.	B B	-- 12.7 sec.	-- B	-- 1.7
5	Lemoli Avenue/ 108th Street [c]	All-Way Stop	AM PM	8.0 sec. 7.8 sec.	A A	-- 8.1 sec.	-- A	-- 7.8 sec.	A A	-- 8.2 sec.	-- A	-- 0.4
6	Woodworth Avenue/ 104th Street [c]	All-Way Stop	AM PM	9.9 sec. 10.6 sec.	A B	-- 12.1 sec.	-- B	-- 11.2 sec.	B B	-- 12.9 sec.	-- B	-- 1.7
7	Crenshaw Boulevard/ 104th Street	Signalized	AM PM	0.549 0.576	A A	-- 0.622	-- B	-- 0.619	B B	-- 0.665	-- B	-- 0.046
8	Crenshaw Boulevard/ 108th Street	Signalized	AM PM	0.495 0.516	A A	-- 0.532	-- A	-- 0.549	A A	-- 0.565	-- A	-- 0.016

[a] Level of Service (LOS) is based on the reported ICU value for signalized intersections and the delay value for unsignalized intersections.  
 [b] According to the County of Los Angeles Department of Public Works' *Traffic Impact Analysis Report Guidelines*, January 1, 1997, Page 6: an impact is considered significant if the project related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown below:  
 Level of Service       $\frac{\text{Project Related Increase in v/c}}{\text{Pre-Project ICU}}$   
 C                              > 0.700 - 0.800  
 D                              > 0.800 - 0.900  
 E/F                            > 0.900

[c] All-Way Stop-Controlled Intersection. Reported values represent the delays (in seconds) associated with the most constrained approach of the intersection. Since no specific threshold is established by the City for unsignalized intersections, the following criteria is assumed for consistency with the City's Mobility Plan:  
 - Addition of project trips causes the peak hour LOS of the intersection to change from LOS D or better to LOS E or F.



**Figure 5-1**  
**Existing With Project Traffic Volumes**  
 Weekday PM Peak Hour  
 Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project

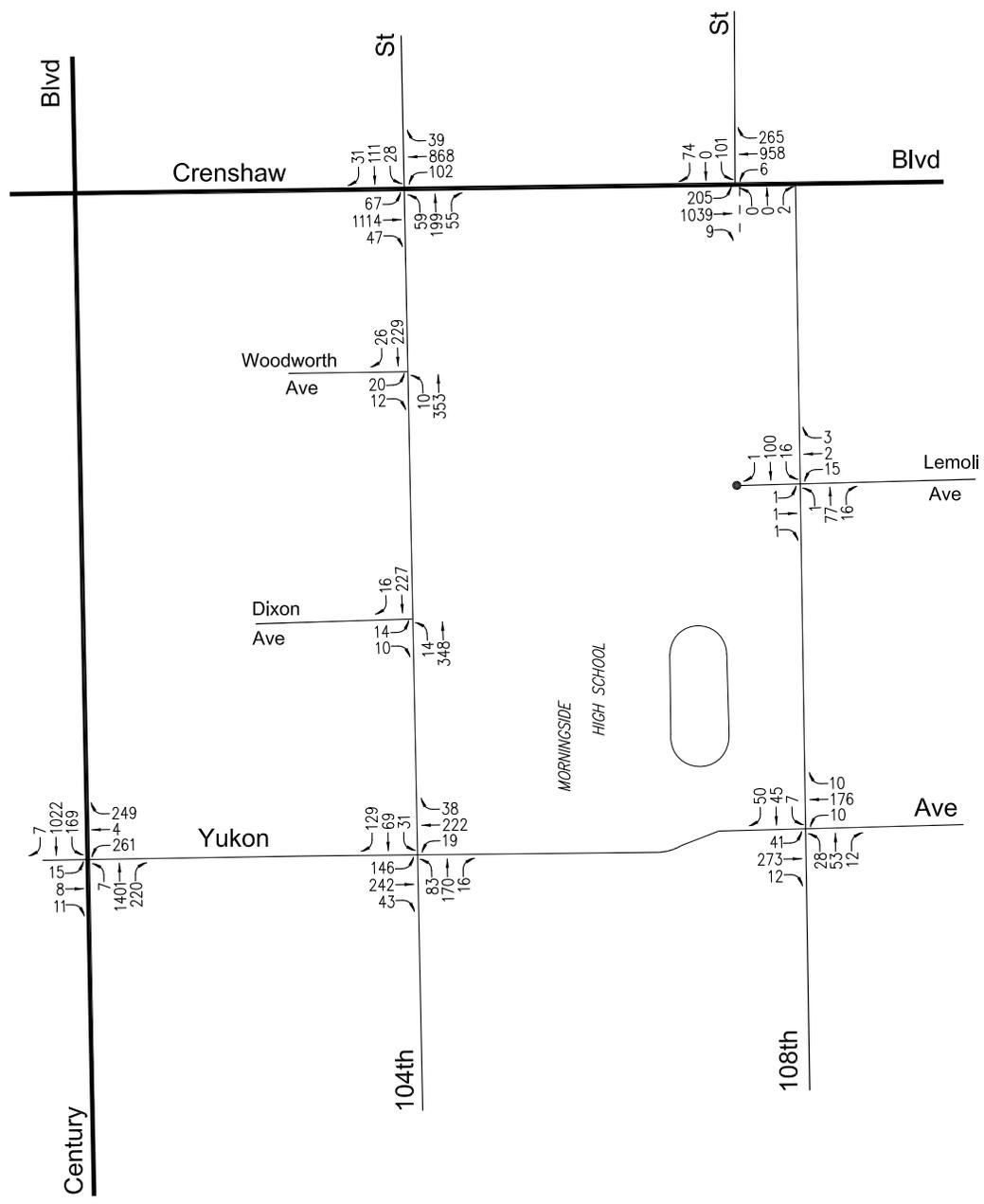
## 5.5 Future Year 2025 Cumulative Conditions

### 5.5.1 Future Year 2025 Cumulative Without Project Conditions

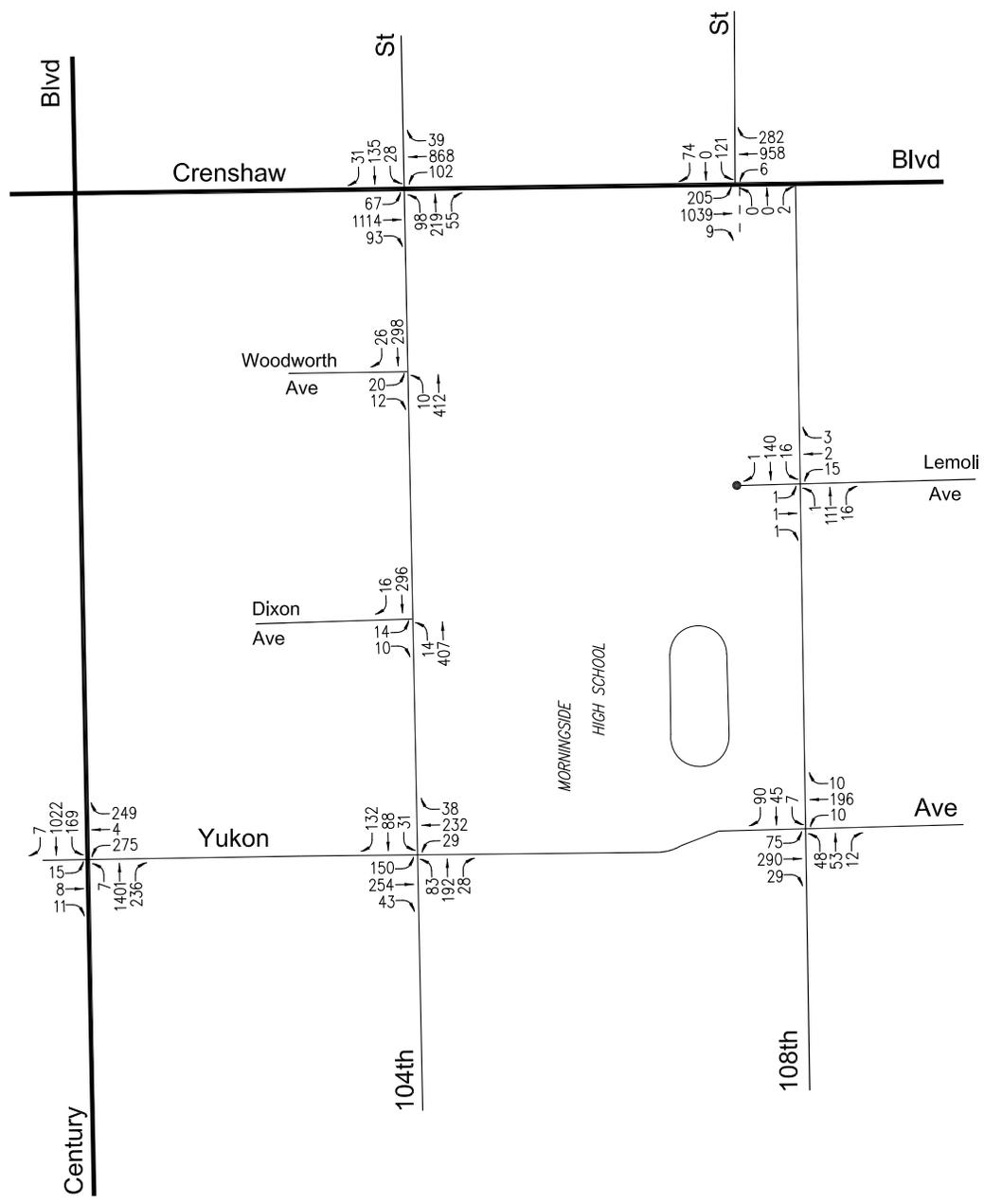
The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The LOS and delays at the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 3-4*. As presented in column [3] of *Table 5-2*, all of the study intersections are expected to operate at LOS B or better during the weekday PM peak hour with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The future without project (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday PM peak hour are presented in *Figure 5-2*.

### 5.5.2 Future Year 2025 Cumulative With Project Conditions

As shown in column [4] of *Table 5-2*, all of the study intersections are expected to continue operating at LOS B or better under the future with project condition. The LOS and delays at the study intersections incrementally increase with the addition of project-generated traffic. The proposed project is not expected to cause any of the study intersections to operate at a deficient LOS, therefore no project-specific intersection improvements or project-specific transportation demand management measures are proposed or required. The future with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday PM peak hour are presented in *Figure 5-3*.



**Figure 5-2**  
**Future Without Project Traffic Volumes**  
**Weekday PM Peak Hour**  
**Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project**



**Figure 5-3**  
**Future With Project Traffic Volumes**  
 Weekday PM Peak Hour  
 Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project

## 6.0 SUMMARY AND CONCLUSIONS

- **Project Description** – The project site is located at 10500 South Yukon Avenue in the southeastern portion of the City of Inglewood, California. The site is generally bounded by 104<sup>th</sup> Street to the north, residential uses to the south, the Woodworth-Monroe TK-8<sup>th</sup> Academy to the east, and Yukon Avenue to the west. The proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project consists of revitalizing and updating the existing campus by replacing the aging athletic school facilities, including demolishing of ten buildings, reconstructing the football stadium and track and team locker rooms, reconstructing the baseball field, softball field, six tennis courts, and basketball courts, and increasing the on-site parking supply. Additional seating is planned for the athletic fields with stadium seating increasing from 600 seats to 1,515 seats, baseball seating decreasing from 300 seats to 246 seats, and softball seating is planned to include 186 new seats. Student enrollment and staffing/faculty populations are not expected to increase as part of the proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project. The project build-out and occupancy year is anticipated by the year 2025.
- **Project Site Access** – Vehicular access to the project site is planned to be accommodated by two (2) existing driveways on Yukon Avenue and two (2) driveways on 104<sup>th</sup> Street. Pedestrian access within the project site will be accommodated via walkways which connect from the public sidewalks to the campus.
- **Project Parking** – Parking for the Morningside High School campus is currently provided in three (3) existing surface parking lots (i.e., Lots A, B, and D) that wrap around campus. The proposed project includes improvements to the three existing surface parking lots (Lots A, B and D) as well as the creation of two new surface parking lots (i.e., Lots C1 and C2). Altogether, the on-site parking supply totals 308 spaces (i.e., 294 standard spaces, 14 handicap accessible spaces) and 13 bus parking spaces.
- **Project Trip Generation** – Based on review of the site-specific data for the scheduled athletic home events/games, the proposed project is expected to generate 367 new vehicle trips (198 inbound trips and 169 outbound trips) during the weekday PM peak hour. Over a 24-hour period, the proposed project is forecast to generate approximately 1,468 new daily trip ends (734 inbound trips and 734 outbound trips) during a typical weekday. The proposed project is not expected to generate new trips during the weekday AM peak hour since the athletic games/events are expected to be scheduled in the late afternoon/early evening time periods and would not overlap with the commuter AM peak time period.
- **CEQA Vehicle Miles Traveled Assessment** – For the purpose of environmental review under CEQA, the City of Inglewood has not established VMT analysis procedures at this time; therefore, the project-related VMT impact has been assessed qualitatively based on guidance from the OPR’s *Technical Advisory* and review of VMT policies. Consistent with the requirements of CEQA Guidelines Section 15064.3, the Technical Advisory provides three

criteria for screening projects out of detailed VMT analysis. The proposed Morningside High School Site Upgrade and Woodworth Elementary School Demolition Project meets the criteria to be screened out of VMT analysis as it will serve the local population and is a local-serving high school, thereby shortening travel distances and reducing VMT. This screening criterion is based on the presumption that by adding opportunities into the urban fabric and improving destination proximity, local serving projects/developments tend to shorten trips and reduce VMT. Therefore, through satisfaction of the land use type screening criteria, the proposed project is determined to have a less than significant transportation impact.

- ***CEQA Active Transportation and Public Transit Assessment*** – The proposed project is found to be in alignment with the City’s Mobility Plan, the City’s Circulation Element, and the adopted City of Inglewood Active Transportation and Safe Routes to School Master Plan to promote pedestrian and bicycle safety and provide appropriate and supportive active transportation infrastructure. Further, development of the proposed project will not prevent the City from completing any proposed transit, bicycle, or pedestrian facilities. It is therefore determined that the proposed project will result in a less than significant impact on active transportation and public transit in the vicinity of the project site.
- ***Non-CEQA Analysis*** – Eight (8) study intersections were reviewed for consistency with the City of Inglewood’s intersection standards. The study intersections were evaluated using the City-approved Intersection Utilization Capacity (ICU) methodology for signalized intersections and the Highway Capacity Manual (HCM) methodology for unsignalized intersections to determine the LOS under existing, existing with project, and future without and with project conditions. Based on application of the City’s LOS standards, the proposed project is not required to identify or construct intersection improvements at any of the study intersections.

## APPENDIX A

### MEMORANDUM OF UNDERSTANDING

**DRAFT**

**LINSCOTT  
LAW &  
GREENSPAN**

**engineers**

## MEMORANDUM

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To:	Boytrese Osias City of Inglewood – Public Works Department	Date:	October 6, 2021
From:	Clare M. Look-Jaeger, P.E. Chin S. Taing, PTP, RSP1 Linscott, Law & Greenspan, Engineers	LLG Ref:	1-21-4437-1
Subject:	Morningside High School Site Upgrade Project – Transportation Impact Study Scope of Work		

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**Engineers & Planners**  
Traffic  
Transportation  
Parking

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Greenspan, Engineers**

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Pasadena  
Irvine  
San Diego  
Woodland Hills

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following Transportation Impact Study Scope of Work for the proposed Morningside High School Site Upgrade Project (“proposed project”) located at 10500 South Yukon Avenue in the City of Inglewood for your review and approval.

### **Transportation Study Scope of Work**

The Transportation Impact Analysis Report for the proposed Morningside High School Site Upgrade Project will be prepared according to City of Inglewood analysis and significance criteria and methodology.

- A. Project Location:** The Morningside High School campus is located at 10500 South Yukon Avenue in the City of Inglewood, California. The site is generally bounded by 104<sup>th</sup> Street to the north, residential uses to the south, the Woodworth Elementary School and Monroe Middle School to the east, and Yukon Avenue to the west. Surface parking is currently provided on-site in surface lots fronting Yukon Avenue and bus parking is provided in the surface lot fronting 104<sup>th</sup> Street. See attached *Figure 1-1, Site Vicinity Map*.
- B. Project Description:** The Morningside High School Site Upgrade Project consists of revitalizing and updating the existing campus by replacing the aging athletic school facilities. The proposed project components include: 1) demolition of ten buildings (eight permanent buildings and two portables); 2) reconstruction of the football stadium and track and team locker rooms; 3) reconstruction and relocation of the baseball field, softball field, six tennis courts, and basketball court; 4) increase in the on-site parking supply by 169 spaces; 5) reduction of on-site bus parking by 20 spaces, and 6) corresponding landscape and hardscape updates. Additional seating is planned for the athletic fields with stadium seating increasing from 600 seats to 1,515 seats, baseball seating decreasing from 300 seats to 246 seats, and softball seating is planned to include 186 new seats. The project build-out and occupancy year is anticipated by the end of year 2023. Student enrollment and faculty/staffing populations are not expected to increase as part of the proposed project. Please refer to the attached *Figure 2-2, Site Plan*.

## CEQA Transportation Assessment

**C. Vehicle Miles Traveled (VMT) Analysis:** The City of Inglewood has not established VMT analysis procedures at this time; therefore, the project-related VMT impact has been assessed qualitatively based on guidance from the OPR's Technical Advisory and review of VMT policies. The Technical Advisory provides the following potential screening criteria for certain land development projects that may be presumed to result in a less than significant VMT impact:

- Local-serving retail less than 50,000 square feet, including schools, daycare, student housing, etc.
- Small projects generating less than 110 trips per day
- Residential and office projects located in areas with low-VMT
- Projects near transit stations or major transit stop along a high quality transit corridor
- Residential projects with a high percentage of affordable housing

As mentioned in the *Technical Advisory*, schools are considered local serving in nature and tend to shorten trips and reduce VMT, similar to local serving retail uses. It is also noted that lead agencies may presume such local serving uses result in a less than significant transportation impact. Similarly, the proposed project would improve the proximity of schools serving the local community, thereby shortening travel distances and reducing VMT. Therefore, based on the above screening criteria, the proposed project is presumed to have a less than significant transportation impact for the purposes of CEQA environmental review.

## D. Active Transportation and Public Transit Analysis:

A qualitative review will be conducted to evaluate whether the project is consistent with the City's adopted policies, plans, and programs regarding public transit, bicycle, and pedestrian facilities. This review will focus on the City's current General Plan Circulation Element.

## Non-CEQA Transportation Assessment

**E. Project Study Area:** The following four (4) key study intersections have been identified for non-CEQA operational level of service analyses. See attached *Figure 1-1, Site Vicinity Map*.

### Study Intersections

1. Yukon Avenue/Century Boulevard (signalized)
2. Yukon Avenue/104<sup>th</sup> Street (signalized)
3. Yukon Avenue/108<sup>th</sup> Street (signalized)

4. Crenshaw Boulevard/104<sup>th</sup> Street (signalized)

**F. Traffic Counts:** New manual intersection turning movement counts will be conducted for the weekday morning (7:00 to 9:00 AM) and afternoon (4:00 to 6:00 PM) peak commute periods at these locations. However, the volumes obtained from the new counts may need to be manually adjusted given the Covid-19 pandemic conditions to be determined through comparison with any historic counts at the study intersections, if available.

**G. Year 2023 Cumulative Traffic:**

- Ambient Growth Rate: 1.0% per year.
- Cumulative Projects: LLG will consult with the Los Angeles County Department of Regional Planning and the Cities of Inglewood and Hawthorne to identify planned development within one-half mile radius of the farthest outlying study intersections. *Table 3-4, Related Projects List and Trip Generation* and *Figure 3-5, Location of Related Projects* to be provided.

**H. Project Traffic Generation:** As mentioned previously, the proposed project is not expected to result in an increase in the student enrollment or faculty/staff population. As such, the trip generation potential of the proposed project will be estimated using empirical trip rates derived from the proposed increase in seating capacity for stadium seating (i.e., the proposed 915-seat increase) and softball field seating (i.e., 186 new seats) as well as site-specific programming information provided for the athletic events/games.

Since an average vehicle ridership (AVR) of only 1.5 persons per vehicle has been assumed for spectators and fifty percent (50%) of this increase is assumed to overlap with the weekday PM peak hour, the proposed project is conservatively forecast to generate 1,468 new daily trips, with 367 vehicle trips (198 inbound, 169 outbound) during the PM peak hour on a typical weekday with scheduled athletic home events/games. Typically, for larger-scale sporting events, a much higher AVR could be expected (i.e., in the range of between 2.0 and 2.75 AVR). See attached *Table 2-1 – Project Trip Generation Forecast*.

**I. Project Trip Distribution Pattern:** See attached *Figure 2-3, Project Trip Distribution*.

**J. Analysis Scenarios:** The following analysis scenarios will be prepared for the weekday AM and PM peak hour conditions in order to assess potential traffic impacts associated with the proposed project:

- (a) Existing Traffic Conditions.
- (b) Existing Plus Project Traffic Conditions.
- (c) Future 2023 Cumulative Pre-Project Traffic Conditions.
- (d) Future 2023 Cumulative Plus Project Traffic Conditions.
- (e) Scenario (d) with Improvements, if necessary.

**K. Thresholds of Significance:**

Based on prior studies prepared in the City of Inglewood, we understand the City utilizes the thresholds from the Los Angeles County Department of Public Works (LACDPW) *Traffic Impact Analysis Report Guidelines*, January 1997, although the County has issued more recent guidelines. The potential impacts of project-generated traffic at each study intersection will be identified according to the County’s methodology for calculating the level of impact due to traffic generated by the proposed project as follows:

COUNTY OF LOS ANGELES INTERSECTION IMPACT THRESHOLD CRITERIA		
Pre-Project v/c	Level of Service	Project Related Increase in v/c
≥ 0.71 - 0.80	C	equal to or greater than 0.04
≥ 0.81 - 0.90	D	equal to or greater than 0.02
≥ 0.91 or more	E/F	equal to or greater than 0.01

The ICU calculations incorporate a lane capacity of 1,600 vehicles per hour (vph) for left-turn and shared lanes, 1,700 vph for through and right-turn lanes, and 2,880 vph for dual left-turn lanes. A clearance interval of 0.10 is also included in the ICU calculations.

**L. Parking:** The parking assessment will include a review of the current City of Inglewood Municipal Code off-street parking requirements as applicable to the proposed project. Determine the surplus or deficiency in the on-site parking supply as compared to the Code parking requirements. Based on input provided to LLG regarding the special events/programs/athletic events and anticipated attendance, the forecast peak weekday and weekend parking demand will be determined. Determine the weekday and weekend future peak parking demand for the Morningside High School Site Upgrade Project. Compare the forecast weekday and weekend peak shared parking demand to the future parking supply and identify any surplus or deficiency.

Pending your review of the above information, we will proceed with the transportation impact analysis. Please feel free to contact us at 626.796.2322 if you have any questions, comments, or suggested revisions regarding the above. Thank you.

**Approved by:**

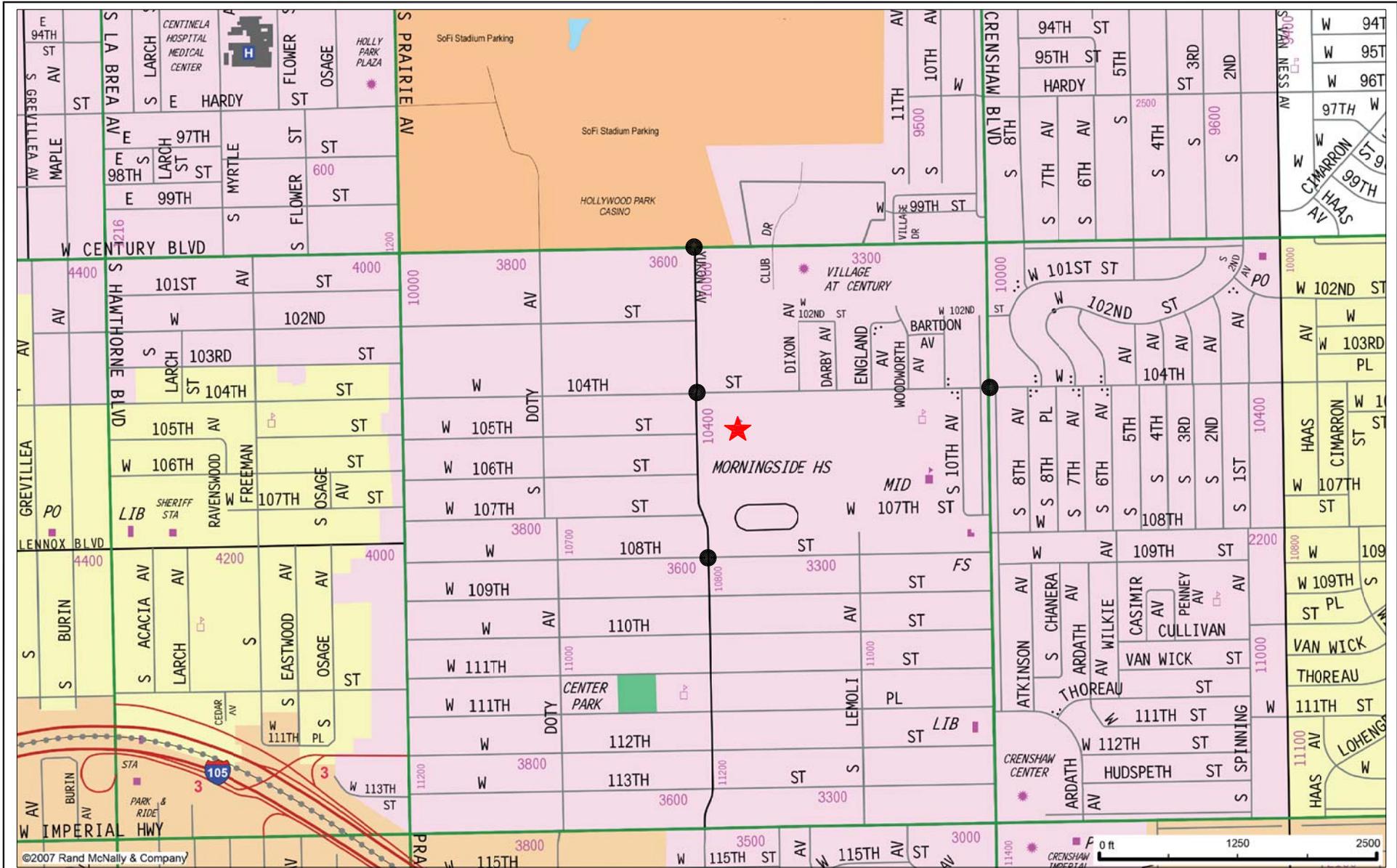
\_\_\_\_\_  
City of Inglewood

\_\_\_\_\_  
Date

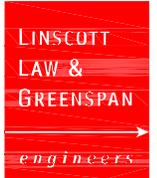
Attachments

c: File

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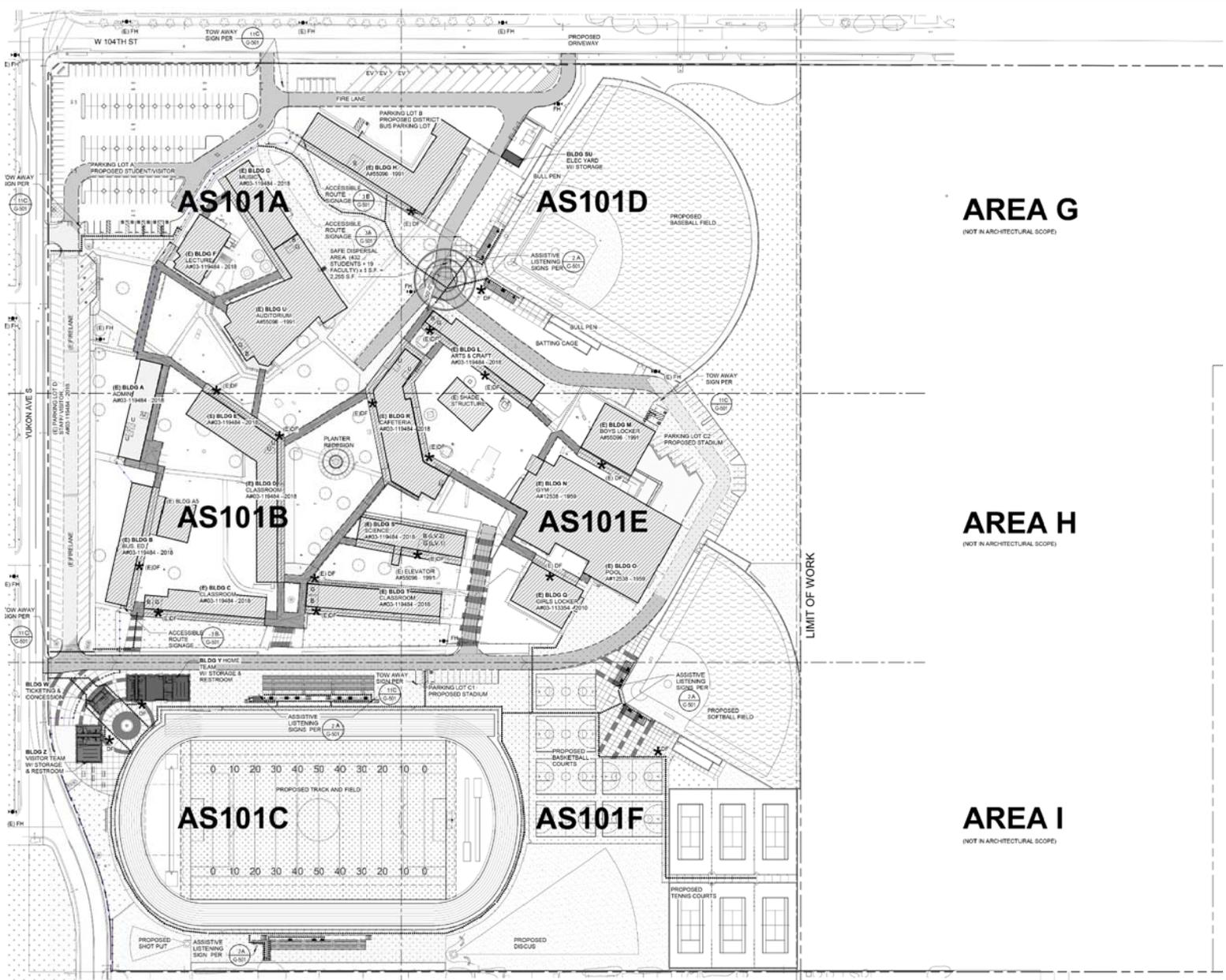
MAP SOURCE: RAND MCNALLY & COMPANY



- Project Site
- Study Location

Figure 1-1  
Vicinity Map

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MAP SOURCE: LIONAKIS

**AREA G**  
(NOT IN ARCHITECTURAL SCOPE)

**AREA H**  
(NOT IN ARCHITECTURAL SCOPE)

**AREA I**  
(NOT IN ARCHITECTURAL SCOPE)

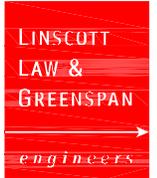
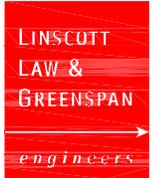
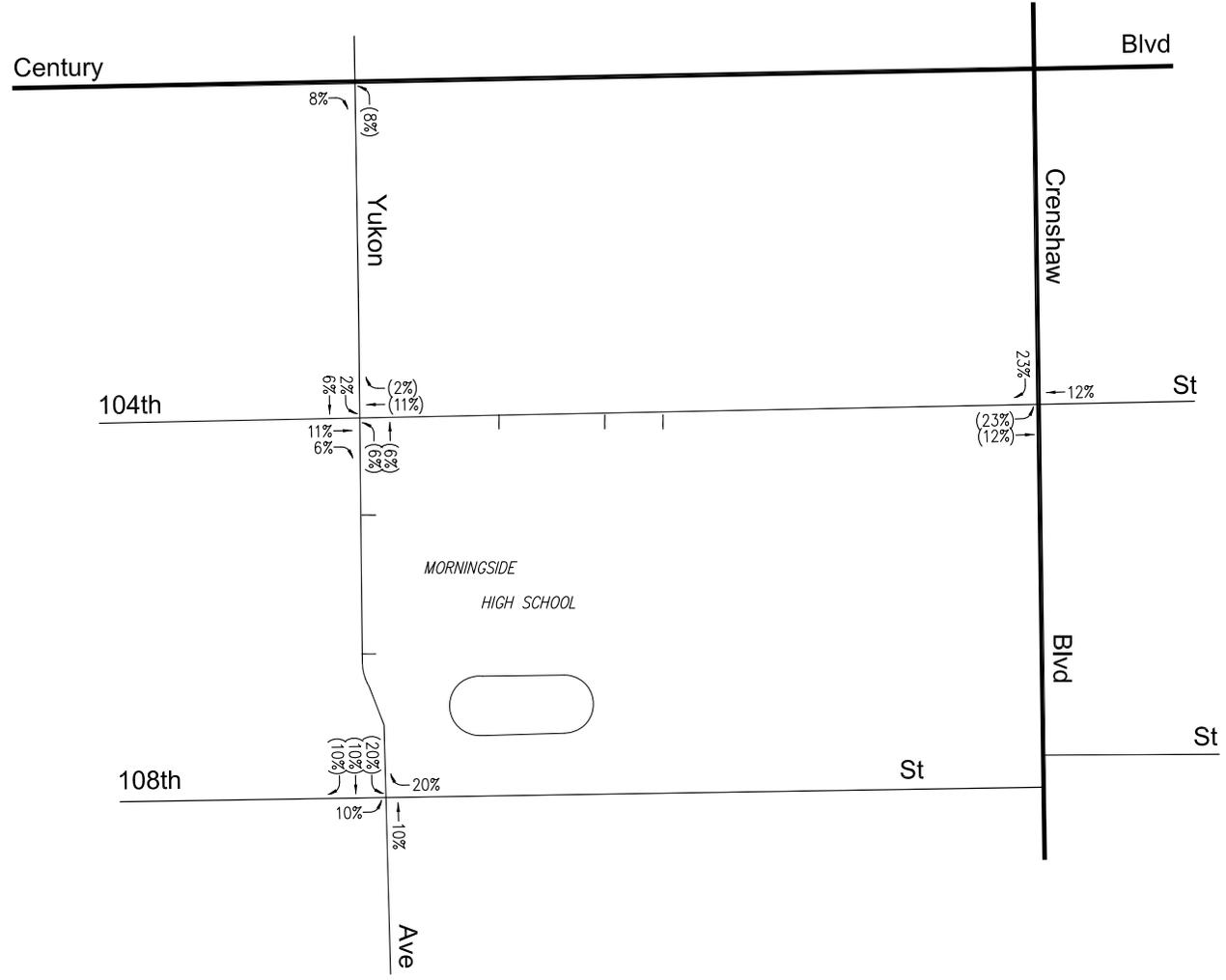


Figure 2-2  
Site Plan

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XX = Inbound Percentage  
(XX) = Outbound Percentage

Figure 2-3  
Project Trip Distribution

**Table 2-1  
PROJECT TRIP GENERATION FORECAST**

<b>TRIP GENERATION RATES</b>									
LAND USE CATEGORY	LAND USE CODE	VARIABLE	WEEKDAY DAILY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
				IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
Athletic Events/Games	[1]	Per Seat	1.333	--	--	--	54%	46%	0.333

<b>PROJECT TRIP GENERATION FORECAST</b>									
LAND USE	LAND USE CODE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
				IN	OUT	TOTAL	IN	OUT	TOTAL
<i><b>Proposed Project</b></i>									
Stadium Seating (addition)	[1]	915 Seats	1,220	--	--	--	165	140	305
Softball Field Seating (new)	[1]	186 Seats	248	--	--	--	33	29	62
<b>TOTAL PROJECT TRIPS</b>			<b>1,468</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>198</b>	<b>169</b>	<b>367</b>

[1] Trip generation rates are based on rates derived from the increase in seating capacity for the athletic fields as part of the proposed project when compared to the existing Morningside High School campus. An average vehicle ridership of 1.5 persons/vehicle was assumed to estimate the number of person trips to the number of vehicle trips. The athletic games are expected to occur in the late afternoon/early evening and it is assumed that 50% of the trips associated with the games/events would occur during the commuter PM peak hour.

[2] Trips are one-way traffic movements, entering or leaving.

**APPENDIX B**  
**TRAFFIC, PEDESTRIAN, AND BICYCLE COUNT DATA**

**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_CenturyBlvd  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 1

**Groups Printed- Vehicles**

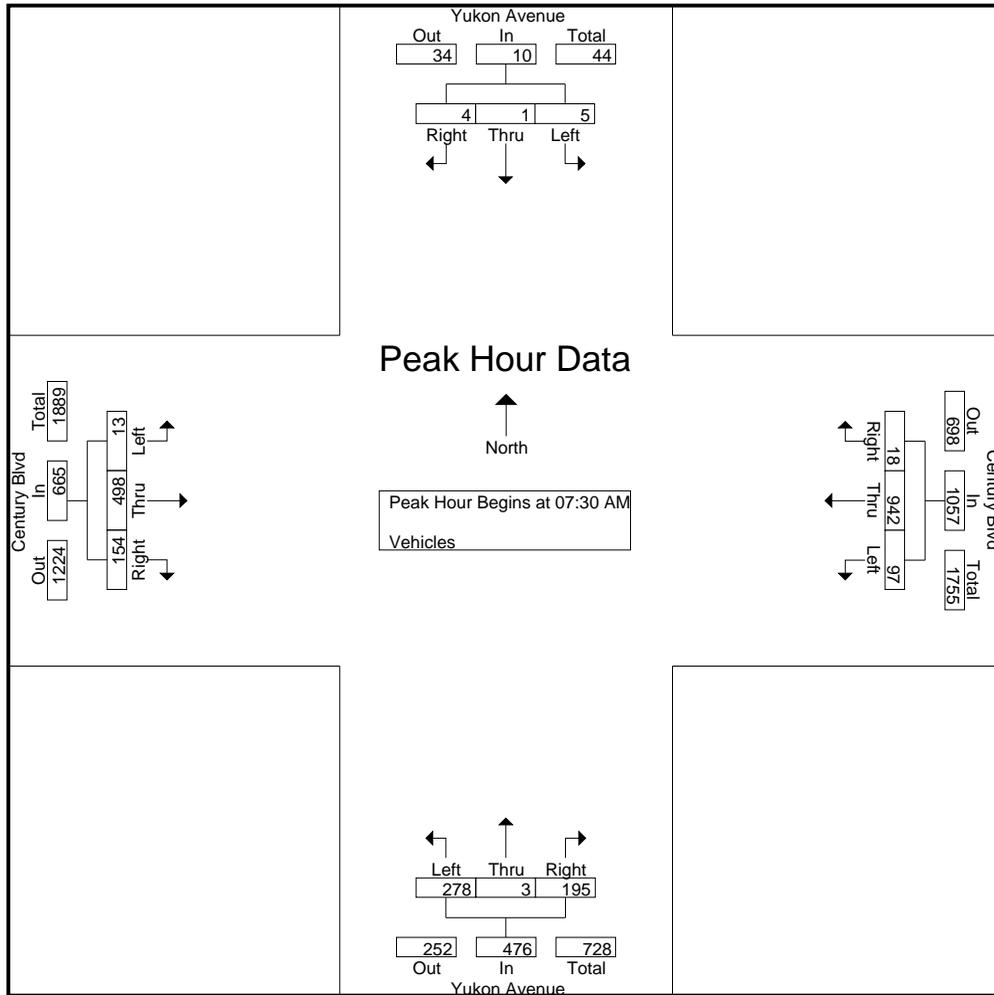
Start Time	Yukon Avenue Southbound			Century Blvd Westbound			Yukon Avenue Northbound			Century Blvd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	2	0	1	11	241	5	45	0	29	4	87	28	453
07:15 AM	1	0	1	16	268	1	63	0	34	0	72	19	475
07:30 AM	1	0	1	18	258	7	60	0	39	5	103	32	524
07:45 AM	2	0	1	25	265	6	72	3	41	3	116	32	566
Total	6	0	4	70	1032	19	240	3	143	12	378	111	2018
08:00 AM	0	0	1	27	233	2	81	0	56	4	142	52	598
08:15 AM	2	1	1	27	186	3	65	0	59	1	137	38	520
08:30 AM	1	0	2	19	174	13	56	3	62	4	147	43	524
08:45 AM	2	1	2	37	146	9	44	0	44	5	126	27	443
Total	5	2	6	110	739	27	246	3	221	14	552	160	2085
04:00 PM	3	0	3	50	162	0	52	0	62	0	249	53	634
04:15 PM	2	1	3	36	187	1	69	2	60	0	293	54	708
04:30 PM	2	1	3	49	145	2	59	2	64	1	302	57	687
04:45 PM	2	4	1	34	176	4	76	0	66	2	273	52	690
Total	9	6	10	169	670	7	256	4	252	3	1117	216	2719
05:00 PM	9	2	4	45	166	0	49	0	52	4	262	51	644
05:15 PM	2	5	6	28	187	1	64	0	56	1	285	46	681
05:30 PM	2	3	1	42	175	3	58	0	74	3	254	54	669
05:45 PM	7	4	2	35	171	1	45	0	67	0	271	51	654
Total	20	14	13	150	699	5	216	0	249	8	1072	202	2648
Grand Total	40	22	33	499	3140	58	958	10	865	37	3119	689	9470
Apprch %	42.1	23.2	34.7	13.5	84.9	1.6	52.3	0.5	47.2	1	81.1	17.9	
Total %	0.4	0.2	0.3	5.3	33.2	0.6	10.1	0.1	9.1	0.4	32.9	7.3	

**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_CenturyBlvd  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 2

Start Time	Yukon Avenue Southbound				Century Blvd Westbound				Yukon Avenue Northbound				Century Blvd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	1	0	1	2	18	258	7	283	60	0	39	99	5	103	32	140	524
07:45 AM	2	0	1	3	25	<b>265</b>	6	<b>296</b>	72	3	41	116	3	116	32	151	566
08:00 AM	0	0	1	1	27	233	2	262	81	0	56	137	4	<b>142</b>	<b>52</b>	<b>198</b>	<b>598</b>
08:15 AM	2	1	1	4	27	186	3	216	65	0	59	124	1	137	38	176	520
Total Volume	5	1	4	10	97	942	18	1057	278	3	195	476	13	498	154	665	2208
% App. Total	50	10	40		9.2	89.1	1.7		58.4	0.6	41		2	74.9	23.2		
PHF	.625	.250	1.00	.625	.898	.889	.643	.893	.858	.250	.826	.869	.650	.877	.740	.840	.923

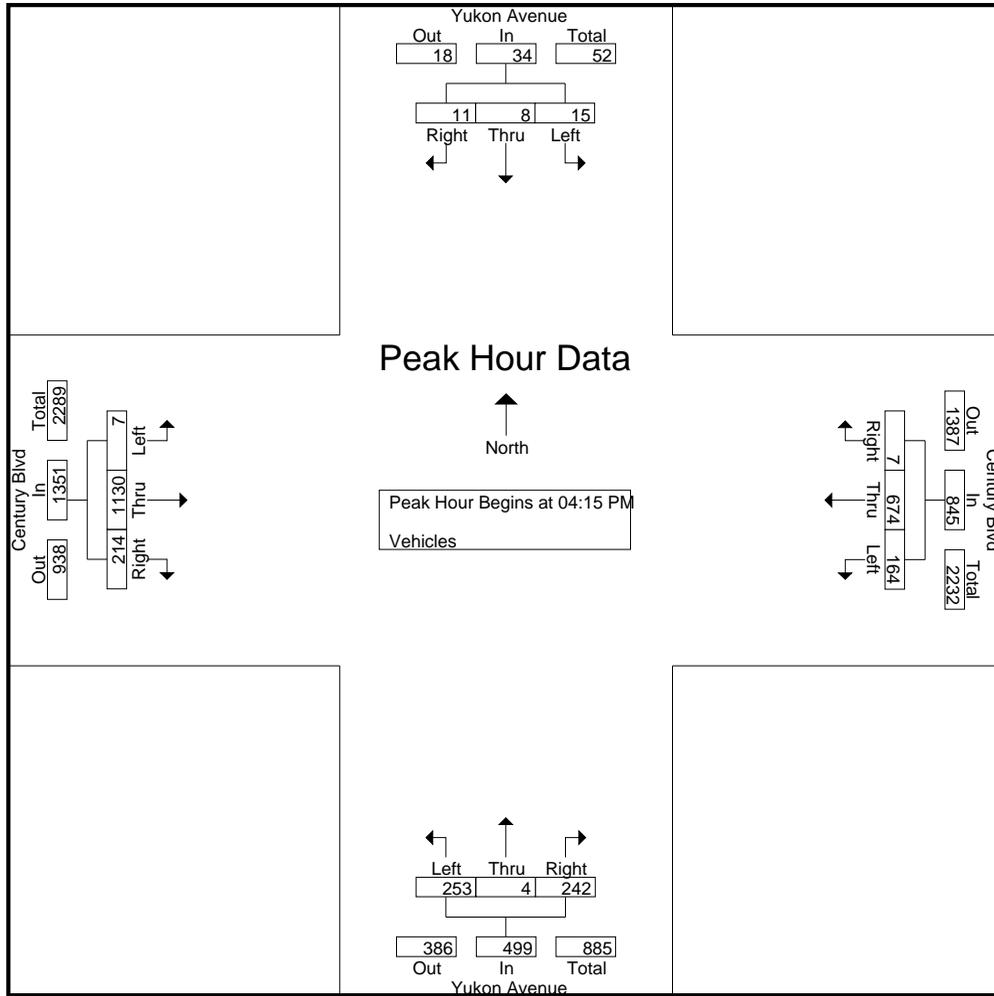
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_CenturyBlvd  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Yukon Avenue Southbound				Century Blvd Westbound				Yukon Avenue Northbound				Century Blvd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	2	1	3	6	36	187	1	224	69	2	60	131	0	293	54	347	708
04:30 PM	2	1	3	6	49	145	2	196	59	2	64	125	1	302	57	360	687
04:45 PM	2	4	1	7	34	176	4	214	76	0	66	142	2	273	52	327	690
05:00 PM	9	2	4	15	45	166	0	211	49	0	52	101	4	262	51	317	644
Total Volume	15	8	11	34	164	674	7	845	253	4	242	499	7	1130	214	1351	2729
% App. Total	44.1	23.5	32.4		19.4	79.8	0.8		50.7	0.8	48.5		0.5	83.6	15.8		
PHF	.417	.500	.688	.567	.837	.901	.438	.943	.832	.500	.917	.879	.438	.935	.939	.938	.964



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_CenturyBlvd\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 1

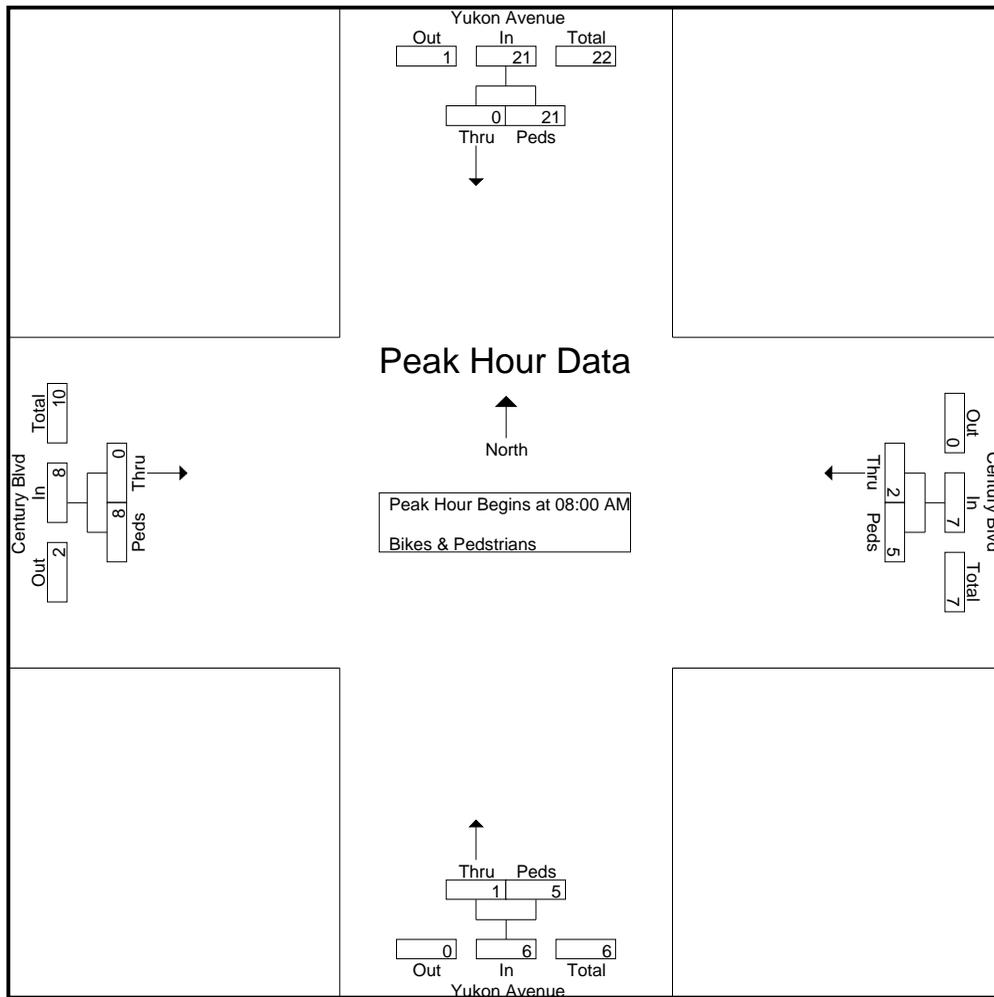
**Groups Printed- Bikes & Pedestrians**

Start Time	Yukon Avenue Southbound		Century Blvd Westbound		Yukon Avenue Northbound		Century Blvd Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	0	2	0	0	1	2	0	1	6
07:15 AM	0	3	0	1	0	3	0	0	7
07:30 AM	1	4	0	1	1	0	0	1	8
07:45 AM	1	0	0	2	0	5	0	0	8
Total	2	9	0	4	2	10	0	2	29
08:00 AM	0	3	1	1	0	1	0	2	8
08:15 AM	0	8	0	0	0	2	0	1	11
08:30 AM	0	7	0	1	0	1	0	3	12
08:45 AM	0	3	1	3	1	1	0	2	11
Total	0	21	2	5	1	5	0	8	42
04:00 PM	2	5	2	3	0	5	0	1	18
04:15 PM	1	5	0	3	1	3	0	0	13
04:30 PM	1	9	0	4	0	2	0	2	18
04:45 PM	2	4	1	3	0	1	0	1	12
Total	6	23	3	13	1	11	0	4	61
05:00 PM	2	3	0	1	0	2	0	3	11
05:15 PM	0	4	0	2	1	2	0	1	10
05:30 PM	1	5	0	2	0	3	2	0	13
05:45 PM	3	5	1	2	0	1	0	1	13
Total	6	17	1	7	1	8	2	5	47
Grand Total	14	70	6	29	5	34	2	19	179
Apprch %	16.7	83.3	17.1	82.9	12.8	87.2	9.5	90.5	
Total %	7.8	39.1	3.4	16.2	2.8	19	1.1	10.6	

**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_CenturyBlvd\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 2

Start Time	Yukon Avenue Southbound			Century Blvd Westbound			Yukon Avenue Northbound			Century Blvd Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	3	3	1	1	2	0	1	1	0	2	2	8
08:15 AM	0	8	8	0	0	0	0	2	2	0	1	1	11
08:30 AM	0	7	7	0	1	1	0	1	1	0	3	3	12
08:45 AM	0	3	3	1	3	4	1	1	2	0	2	2	11
Total Volume	0	21	21	2	5	7	1	5	6	0	8	8	42
% App. Total	0	100		28.6	71.4		16.7	83.3		0	100		
PHF	.000	.656	.656	.500	.417	.438	.250	.625	.750	.000	.667	.667	.875

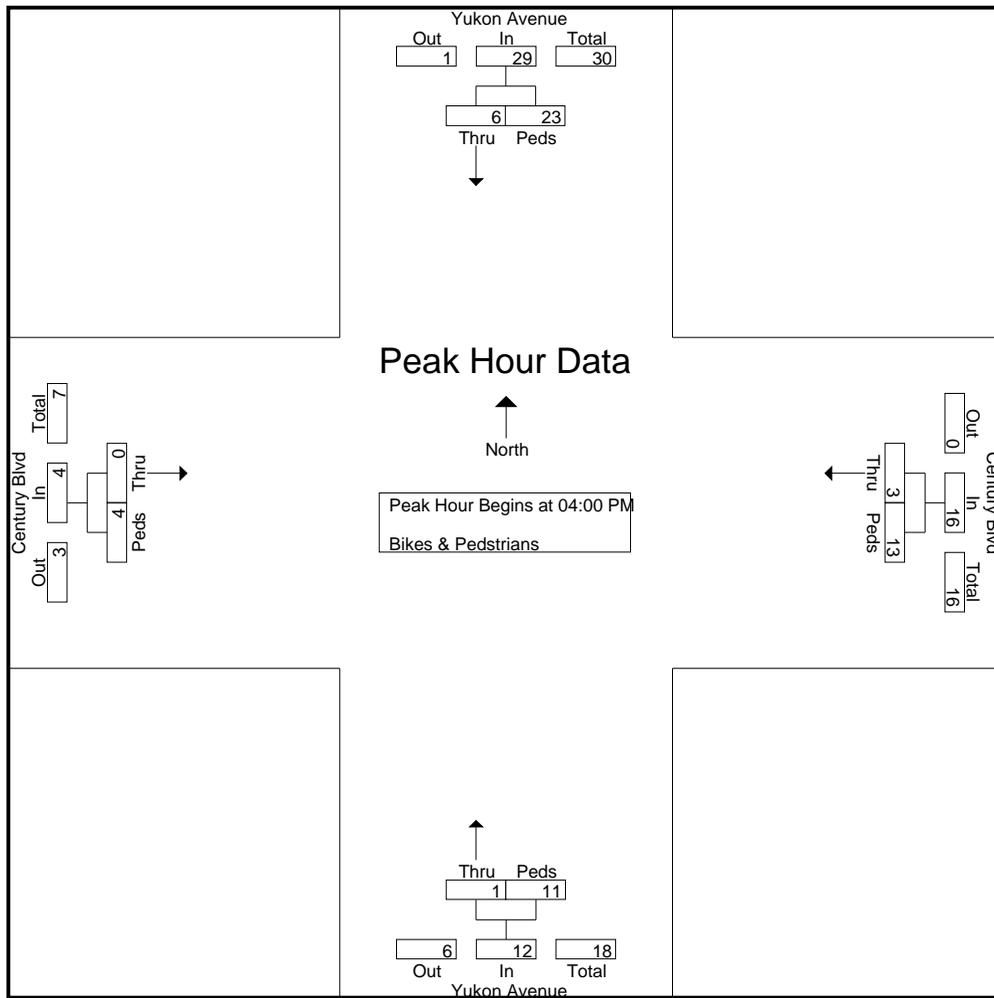


**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_CenturyBlvd\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Yukon Avenue Southbound			Century Blvd Westbound			Yukon Avenue Northbound			Century Blvd Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
04:00 PM	2	5	7	2	3	5	0	5	5	0	1	1	18
04:15 PM	1	5	6	0	3	3	1	3	4	0	0	0	13
04:30 PM	1	9	10	0	4	4	0	2	2	0	2	2	18
04:45 PM	2	4	6	1	3	4	0	1	1	0	1	1	12
Total Volume	6	23	29	3	13	16	1	11	12	0	4	4	61
% App. Total	20.7	79.3		18.8	81.2		8.3	91.7		0	100		
PHF	.750	.639	.725	.375	.813	.800	.250	.550	.600	.000	.500	.500	.847

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_104thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 1

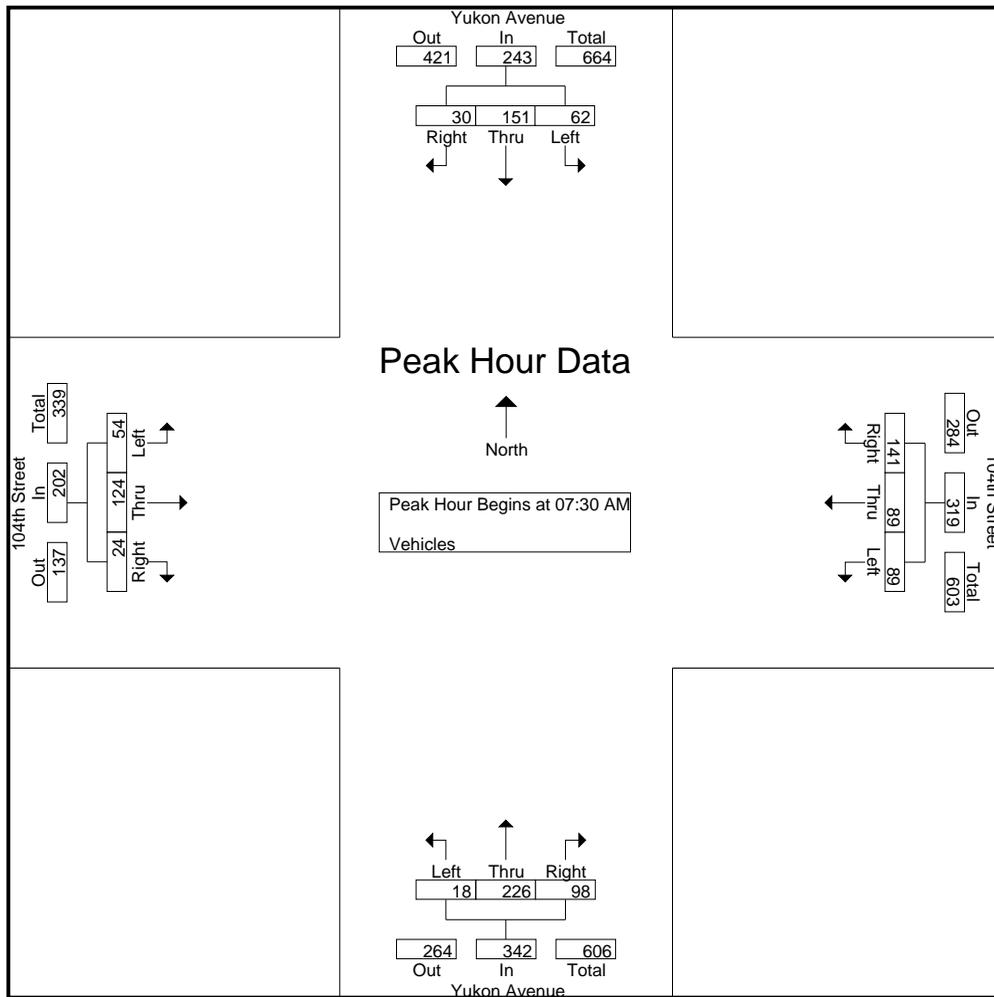
**Groups Printed- Vehicles**

Start Time	Yukon Avenue Southbound			104th Street Westbound			Yukon Avenue Northbound			104th Street Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	13	22	8	8	15	22	3	23	8	10	14	2	148
07:15 AM	8	21	1	4	12	31	3	30	7	7	15	3	142
07:30 AM	17	27	4	14	27	34	4	35	13	4	20	3	202
07:45 AM	18	27	6	21	18	43	1	45	25	10	40	11	265
Total	56	97	19	47	72	130	11	133	53	31	89	19	757
08:00 AM	17	53	6	39	29	39	6	75	40	17	35	7	363
08:15 AM	10	44	14	15	15	25	7	71	20	23	29	3	276
08:30 AM	7	31	12	5	7	28	3	39	17	17	25	4	195
08:45 AM	12	35	8	7	5	26	4	36	6	16	15	1	171
Total	46	163	40	66	56	118	20	221	83	73	104	15	1005
04:00 PM	33	61	10	5	19	37	1	51	17	18	37	0	289
04:15 PM	27	57	9	6	16	23	4	62	8	19	50	4	285
04:30 PM	38	64	10	6	15	32	2	45	12	24	43	2	293
04:45 PM	42	38	10	6	12	26	4	58	7	20	36	3	262
Total	140	220	39	23	62	118	11	216	44	81	166	9	1129
05:00 PM	30	73	10	6	21	27	4	47	9	22	41	6	296
05:15 PM	28	65	12	8	10	36	3	52	12	18	29	3	276
05:30 PM	41	59	10	10	14	35	7	58	9	21	45	4	313
05:45 PM	22	64	6	4	20	25	4	44	7	17	44	2	259
Total	121	261	38	28	65	123	18	201	37	78	159	15	1144
Grand Total	363	741	136	164	255	489	60	771	217	263	518	58	4035
Apprch %	29.3	59.8	11	18.1	28.1	53.9	5.7	73.6	20.7	31.3	61.7	6.9	
Total %	9	18.4	3.4	4.1	6.3	12.1	1.5	19.1	5.4	6.5	12.8	1.4	

**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_104thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
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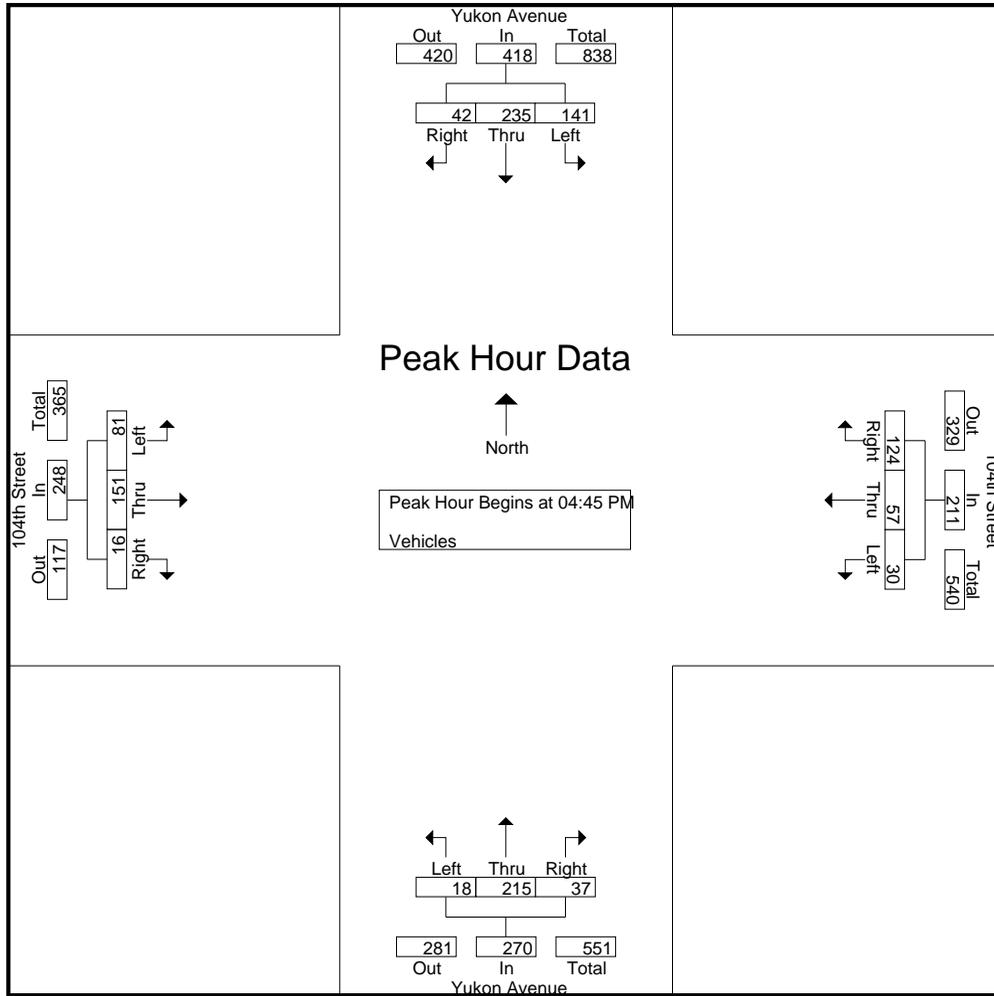
Start Time	Yukon Avenue Southbound				104th Street Westbound				Yukon Avenue Northbound				104th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	17	27	4	48	14	27	34	75	4	35	13	52	4	20	3	27	202
07:45 AM	18	27	6	51	21	18	43	82	1	45	25	71	10	40	11	61	265
08:00 AM	17	53	6	76	39	29	39	107	6	75	40	121	17	35	7	59	363
08:15 AM	10	44	14	68	15	15	25	55	7	71	20	98	23	29	3	55	276
Total Volume	62	151	30	243	89	89	141	319	18	226	98	342	54	124	24	202	1106
% App. Total	25.5	62.1	12.3		27.9	27.9	44.2		5.3	66.1	28.7		26.7	61.4	11.9		
PHF	.861	.712	.536	.799	.571	.767	.820	.745	.643	.753	.613	.707	.587	.775	.545	.828	.762



**CITY TRAFFIC COUNTERS**  
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File Name : YukonAve\_104thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
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Start Time	Yukon Avenue Southbound				104th Street Westbound				Yukon Avenue Northbound				104th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	42	38	10	90	6	12	26	44	4	58	7	69	20	36	3	59	262
05:00 PM	30	73	10	113	6	21	27	54	4	47	9	60	22	41	6	69	296
05:15 PM	28	65	12	105	8	10	36	54	3	52	12	67	18	29	3	50	276
05:30 PM	41	59	10	110	10	14	35	59	7	58	9	74	21	45	4	70	313
Total Volume	141	235	42	418	30	57	124	211	18	215	37	270	81	151	16	248	1147
% App. Total	33.7	56.2	10		14.2	27	58.8		6.7	79.6	13.7		32.7	60.9	6.5		
PHF	.839	.805	.875	.925	.750	.679	.861	.894	.643	.927	.771	.912	.920	.839	.667	.886	.916



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_104thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
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**Groups Printed- Bikes & Pedestrians**

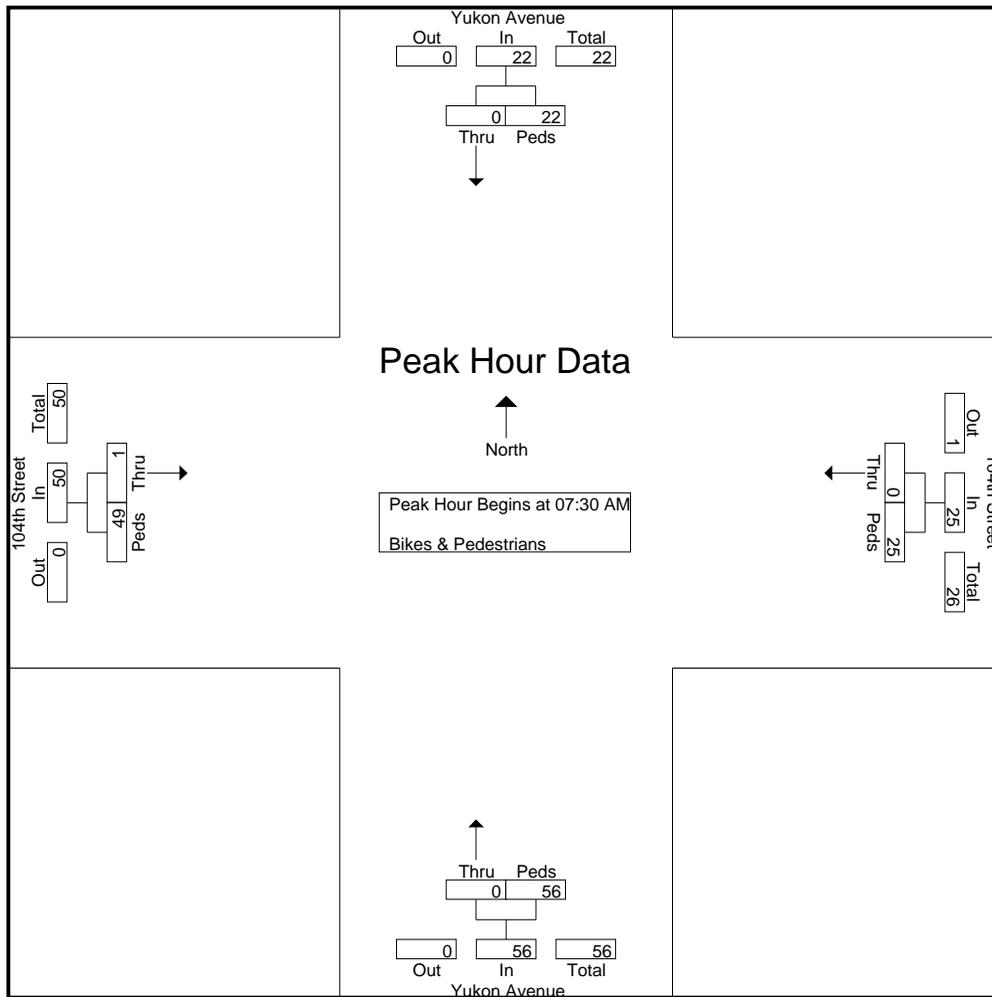
Start Time	Yukon Avenue Southbound		104th Street Westbound		Yukon Avenue Northbound		104th Street Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	0	1	0	1	0	2	0	4	8
07:15 AM	0	4	0	0	0	3	0	3	10
07:30 AM	0	7	0	6	0	13	0	11	37
07:45 AM	0	6	0	11	0	14	0	15	46
Total	0	18	0	18	0	32	0	33	101
08:00 AM	0	6	0	7	0	22	0	18	53
08:15 AM	0	3	0	1	0	7	1	5	17
08:30 AM	0	3	0	3	0	2	0	3	11
08:45 AM	1	2	1	4	0	5	0	5	18
Total	1	14	1	15	0	36	1	31	99
04:00 PM	2	2	2	1	0	4	0	6	17
04:15 PM	0	5	0	1	0	3	0	4	13
04:30 PM	0	0	0	1	0	3	0	2	6
04:45 PM	1	1	1	5	0	6	0	6	20
Total	3	8	3	8	0	16	0	18	56
05:00 PM	0	1	0	2	0	2	0	5	10
05:15 PM	0	1	0	5	0	8	0	2	16
05:30 PM	0	2	0	1	0	2	0	7	12
05:45 PM	1	7	1	3	2	10	0	6	30
Total	1	11	1	11	2	22	0	20	68
Grand Total	5	51	5	52	2	106	1	102	324
Apprch %	8.9	91.1	8.8	91.2	1.9	98.1	1	99	
Total %	1.5	15.7	1.5	16	0.6	32.7	0.3	31.5	

**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_104thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 2

Start Time	Yukon Avenue Southbound			104th Street Westbound			Yukon Avenue Northbound			104th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
07:30 AM	0	7	7	0	6	6	0	13	13	0	11	11	37
07:45 AM	0	6	6	0	11	11	0	14	14	0	15	15	46
08:00 AM	0	6	6	0	7	7	0	22	22	0	18	18	53
08:15 AM	0	3	3	0	1	1	0	7	7	1	5	6	17
Total Volume	0	22	22	0	25	25	0	56	56	1	49	50	153
% App. Total	0	100		0	100		0	100		2	98		
PHF	.000	.786	.786	.000	.568	.568	.000	.636	.636	.250	.681	.694	.722

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:30 AM

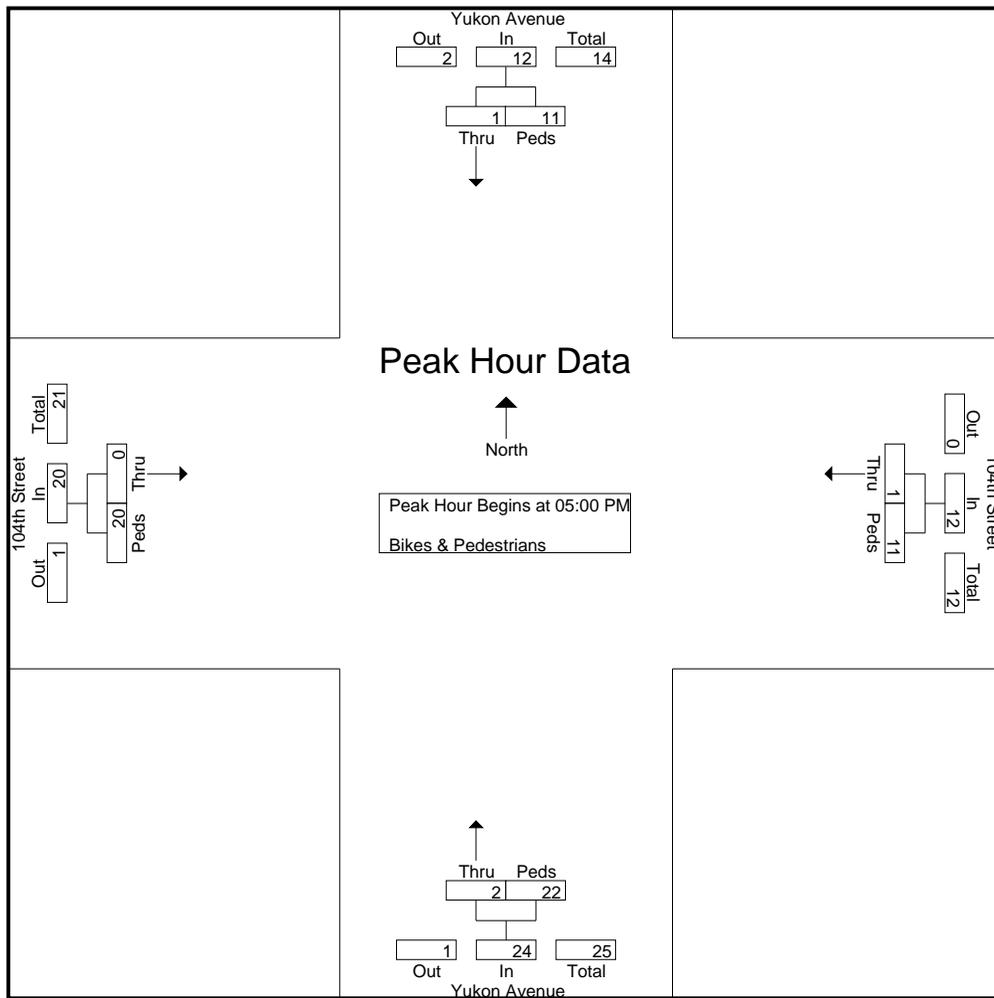


**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_104thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Yukon Avenue Southbound			104th Street Westbound			Yukon Avenue Northbound			104th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
05:00 PM	0	1	1	0	2	2	0	2	2	0	5	5	10
05:15 PM	0	1	1	0	5	5	0	8	8	0	2	2	16
05:30 PM	0	2	2	0	1	1	0	2	2	0	7	7	12
05:45 PM	1	7	8	1	3	4	2	10	12	0	6	6	30
Total Volume	1	11	12	1	11	12	2	22	24	0	20	20	68
% App. Total	8.3	91.7		8.3	91.7		8.3	91.7		0	100		
PHF	.250	.393	.375	.250	.550	.600	.250	.550	.500	.000	.714	.714	.567

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_108thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 1

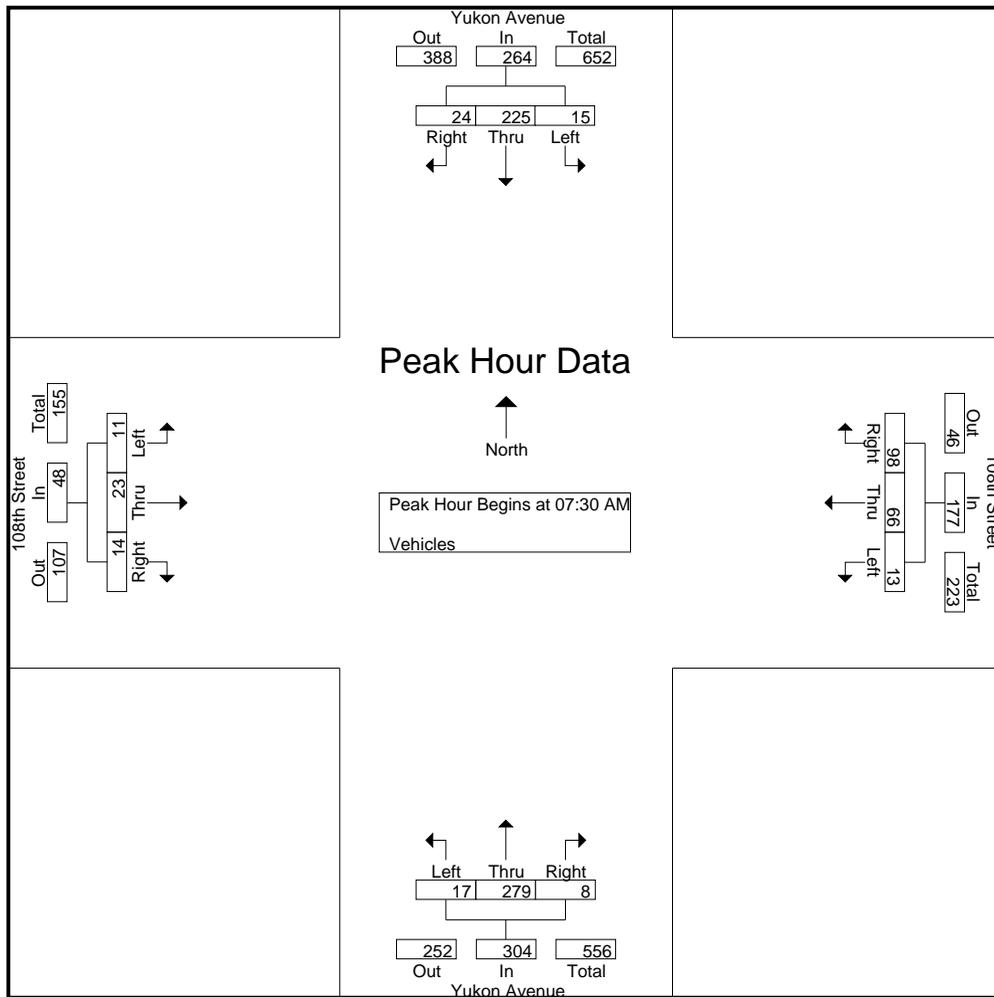
Groups Printed- Vehicles

Start Time	Yukon Avenue Southbound			108th Street Westbound			Yukon Avenue Northbound			108th Street Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	3	24	1	2	12	7	0	22	0	1	7	1	80
07:15 AM	4	26	1	1	16	7	0	30	0	4	4	1	94
07:30 AM	5	49	5	0	15	14	2	48	0	0	8	6	152
07:45 AM	6	55	8	3	17	28	7	68	3	4	5	4	208
Total	18	154	15	6	60	56	9	168	3	9	24	12	534
08:00 AM	1	74	5	4	21	43	2	86	1	6	5	3	251
08:15 AM	3	47	6	6	13	13	6	77	4	1	5	1	182
08:30 AM	5	32	1	2	4	10	1	33	1	1	1	0	91
08:45 AM	3	32	5	0	7	11	2	29	2	0	1	1	93
Total	12	185	17	12	45	77	11	225	8	8	12	5	617
04:00 PM	8	63	4	2	17	8	3	55	2	6	11	3	182
04:15 PM	9	64	4	4	13	16	4	51	2	3	13	10	193
04:30 PM	13	54	7	0	9	10	3	34	2	6	10	3	151
04:45 PM	14	41	4	1	14	23	1	40	1	4	13	2	158
Total	44	222	19	7	53	57	11	180	7	19	47	18	684
05:00 PM	13	66	5	2	8	10	2	45	2	3	18	2	176
05:15 PM	6	68	2	1	9	11	7	43	3	9	8	5	172
05:30 PM	10	62	1	4	13	19	0	47	3	8	10	1	178
05:45 PM	11	69	4	0	14	9	1	36	2	7	15	4	172
Total	40	265	12	7	44	49	10	171	10	27	51	12	698
Grand Total	114	826	63	32	202	239	41	744	28	63	134	47	2533
Apprch %	11.4	82.4	6.3	6.8	42.7	50.5	5	91.5	3.4	25.8	54.9	19.3	
Total %	4.5	32.6	2.5	1.3	8	9.4	1.6	29.4	1.1	2.5	5.3	1.9	

**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_108thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
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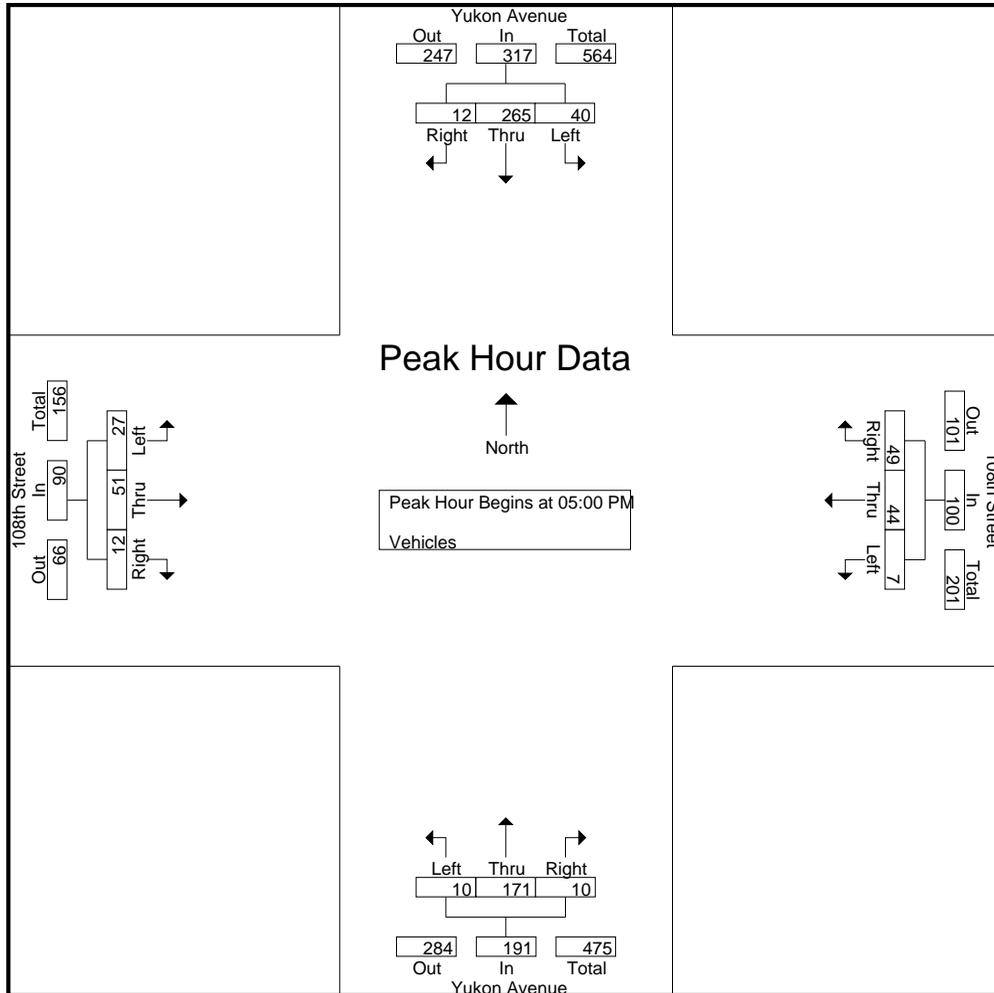
Start Time	Yukon Avenue Southbound				108th Street Westbound				Yukon Avenue Northbound				108th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	49	5	59	0	15	14	29	2	48	0	50	0	8	6	14	152
07:45 AM	6	55	8	69	3	17	28	48	7	68	3	78	4	5	4	13	208
08:00 AM	1	74	5	80	4	21	43	68	2	86	1	89	6	5	3	14	251
08:15 AM	3	47	6	56	6	13	13	32	6	77	4	87	1	5	1	7	182
Total Volume	15	225	24	264	13	66	98	177	17	279	8	304	11	23	14	48	793
% App. Total	5.7	85.2	9.1		7.3	37.3	55.4		5.6	91.8	2.6		22.9	47.9	29.2		
PHF	.625	.760	.750	.825	.542	.786	.570	.651	.607	.811	.500	.854	.458	.719	.583	.857	.790



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_108thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Yukon Avenue Southbound				108th Street Westbound				Yukon Avenue Northbound				108th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	13	66	5	84	2	8	10	20	2	45	2	49	3	18	2	23	176
05:15 PM	6	68	2	76	1	9	11	21	7	43	3	53	9	8	5	22	172
05:30 PM	10	62	1	73	4	13	19	36	0	47	3	50	8	10	1	19	178
05:45 PM	11	69	4	84	0	14	9	23	1	36	2	39	7	15	4	26	172
Total Volume	40	265	12	317	7	44	49	100	10	171	10	191	27	51	12	90	698
% App. Total	12.6	83.6	3.8		7	44	49		5.2	89.5	5.2		30	56.7	13.3		
PHF	.769	.960	.600	.943	.438	.786	.645	.694	.357	.910	.833	.901	.750	.708	.600	.865	.980



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_108thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
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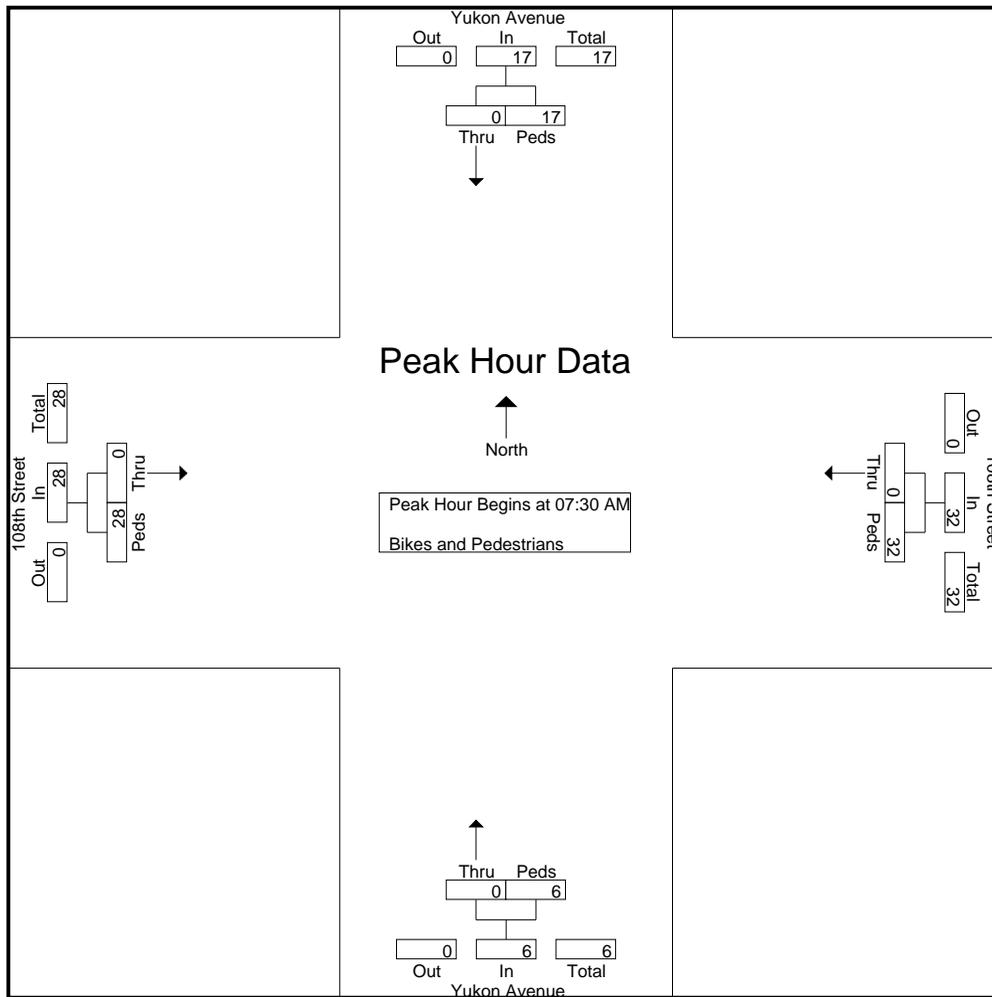
Groups Printed- Bikes and Pedestrians

Start Time	Yukon Avenue Southbound		108th Street Westbound		Yukon Avenue Northbound		108th Street Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	1	0	0	0	0	0	0	2	3
07:15 AM	0	0	0	0	1	1	0	4	6
07:30 AM	0	6	0	9	0	0	0	8	23
07:45 AM	0	5	0	8	0	2	0	5	20
Total	1	11	0	17	1	3	0	19	52
08:00 AM	0	4	0	8	0	1	0	11	24
08:15 AM	0	2	0	7	0	3	0	4	16
08:30 AM	0	0	1	1	0	0	0	0	2
08:45 AM	0	1	1	6	0	0	0	1	9
Total	0	7	2	22	0	4	0	16	51
04:00 PM	0	1	1	3	0	4	0	6	15
04:15 PM	0	0	0	1	0	0	0	1	2
04:30 PM	0	1	0	1	1	2	0	8	13
04:45 PM	1	0	1	2	0	4	1	0	9
Total	1	2	2	7	1	10	1	15	39
05:00 PM	0	1	0	6	1	0	0	4	12
05:15 PM	3	1	0	4	1	1	1	1	12
05:30 PM	0	2	0	0	0	0	1	3	6
05:45 PM	0	1	0	0	1	1	0	1	4
Total	3	5	0	10	3	2	2	9	34
Grand Total	5	25	4	56	5	19	3	59	176
Apprch %	16.7	83.3	6.7	93.3	20.8	79.2	4.8	95.2	
Total %	2.8	14.2	2.3	31.8	2.8	10.8	1.7	33.5	

**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_108thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 2

Start Time	Yukon Avenue Southbound			108th Street Westbound			Yukon Avenue Northbound			108th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	6	6	0	9	9	0	0	0	0	8	8	23
07:45 AM	0	5	5	0	8	8	0	2	2	0	5	5	20
08:00 AM	0	4	4	0	8	8	0	1	1	0	11	11	24
08:15 AM	0	2	2	0	7	7	0	3	3	0	4	4	16
Total Volume	0	17	17	0	32	32	0	6	6	0	28	28	83
% App. Total	0	100		0	100		0	100		0	100		
PHF	.000	.708	.708	.000	.889	.889	.000	.500	.500	.000	.636	.636	.865

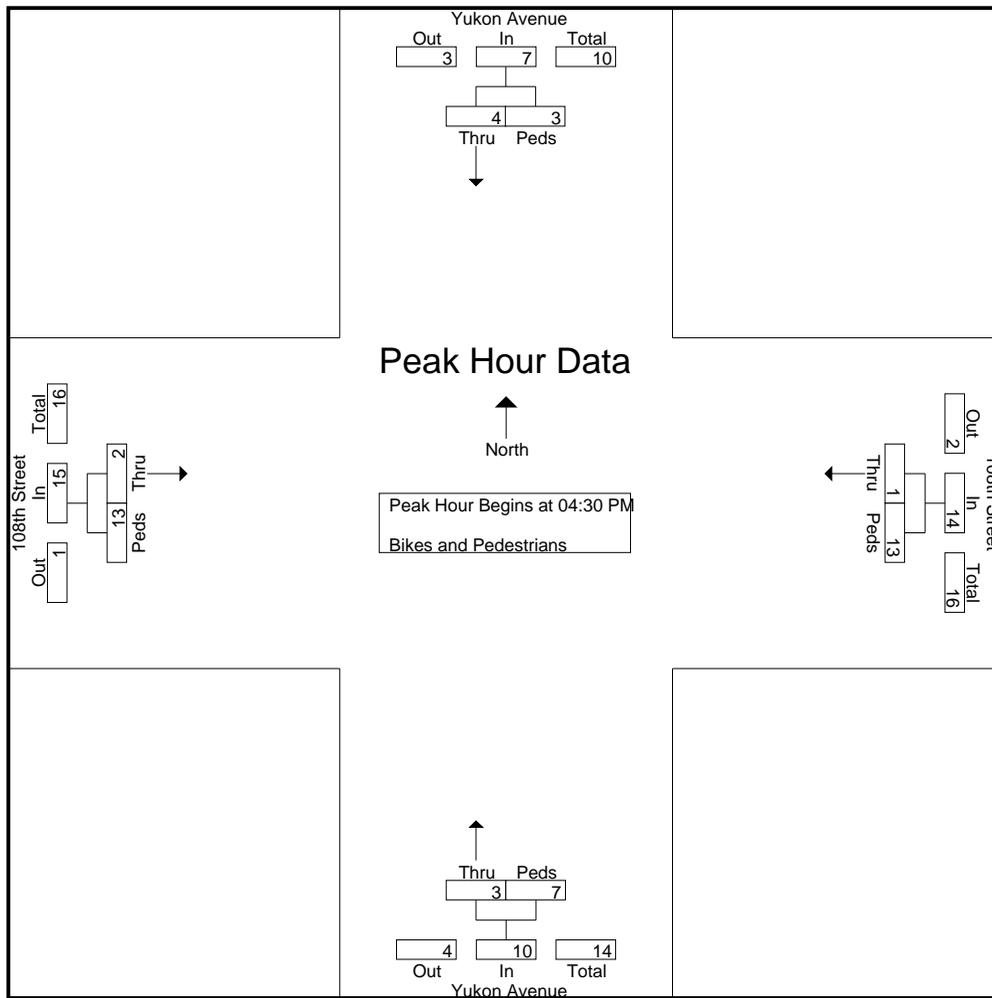


**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : YukonAve\_108thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Yukon Avenue Southbound			108th Street Westbound			Yukon Avenue Northbound			108th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
04:30 PM	0	1	1	0	1	1	1	2	3	0	8	8	13
04:45 PM	1	0	1	1	2	3	0	4	4	1	0	1	9
05:00 PM	0	1	1	0	6	6	1	0	1	0	4	4	12
05:15 PM	3	1	4	0	4	4	1	1	2	1	1	2	12
Total Volume	4	3	7	1	13	14	3	7	10	2	13	15	46
% App. Total	57.1	42.9		7.1	92.9		30	70		13.3	86.7		
PHF	.333	.750	.438	.250	.542	.583	.750	.438	.625	.500	.406	.469	.885

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : DixonAve\_104thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
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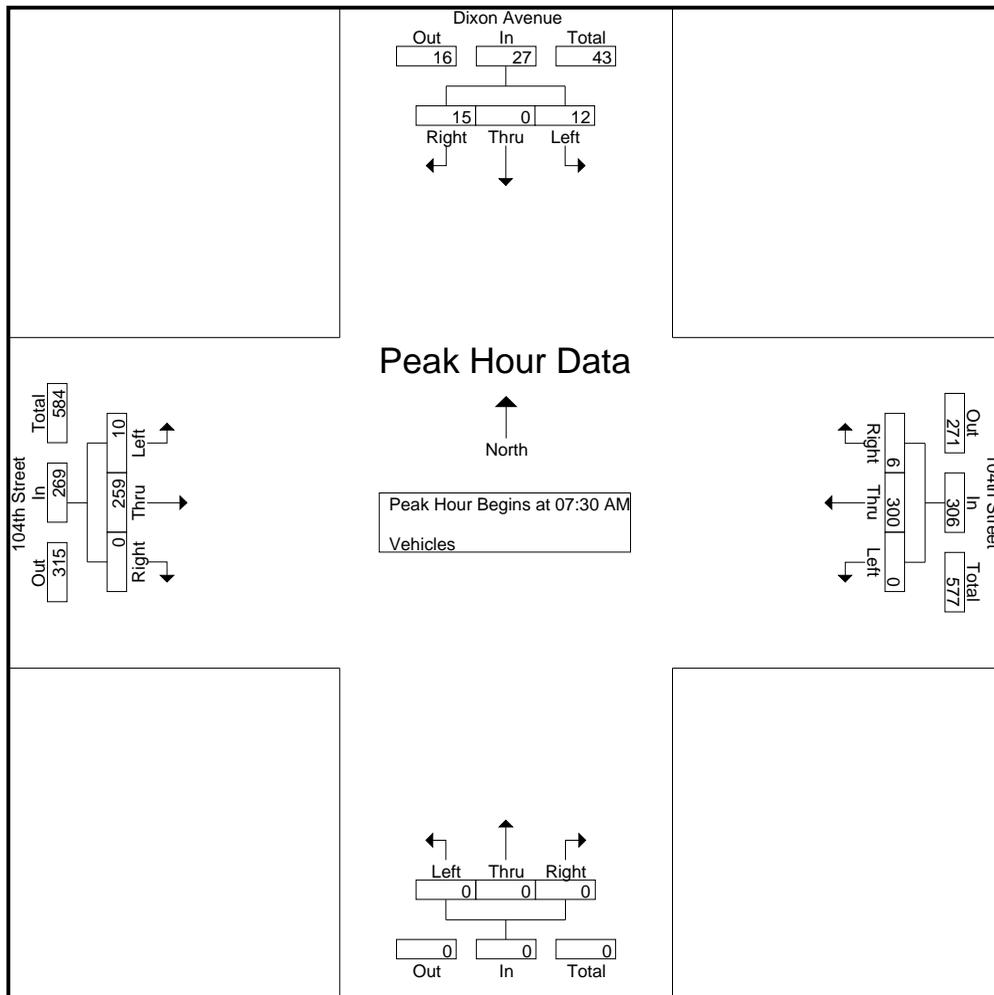
Groups Printed- Vehicles

Start Time	Dixon Avenue Southbound			104th Street Westbound			Northbound			104th Street Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	3	0	7	0	40	1	0	0	0	1	31	0	83
07:15 AM	7	0	3	0	38	3	0	0	0	5	26	0	82
07:30 AM	2	0	6	0	68	0	0	0	0	3	43	0	122
07:45 AM	5	0	6	0	74	1	0	0	0	2	84	0	172
Total	17	0	22	0	220	5	0	0	0	11	184	0	459
08:00 AM	3	0	1	0	103	3	0	0	0	1	81	0	192
08:15 AM	2	0	2	0	55	2	0	0	0	4	51	0	116
08:30 AM	2	0	4	0	38	0	0	0	0	0	36	0	80
08:45 AM	1	0	3	0	36	0	0	0	0	3	30	0	73
Total	8	0	10	0	232	5	0	0	0	8	198	0	461
04:00 PM	1	0	2	0	47	7	0	0	0	2	85	0	144
04:15 PM	4	0	2	0	43	1	0	0	0	4	84	0	138
04:30 PM	5	0	4	0	47	3	0	0	0	4	86	0	149
04:45 PM	2	0	2	0	40	1	0	0	0	4	74	0	123
Total	12	0	10	0	177	12	0	0	0	14	329	0	554
05:00 PM	1	0	1	0	54	4	0	0	0	2	65	0	127
05:15 PM	6	0	5	0	48	3	0	0	0	3	83	0	148
05:30 PM	4	0	2	0	57	6	0	0	0	6	96	0	171
05:45 PM	3	0	2	0	51	3	0	0	0	3	79	0	141
Total	14	0	10	0	210	16	0	0	0	14	323	0	587
Grand Total	51	0	52	0	839	38	0	0	0	47	1034	0	2061
Apprch %	49.5	0	50.5	0	95.7	4.3	0	0	0	4.3	95.7	0	
Total %	2.5	0	2.5	0	40.7	1.8	0	0	0	2.3	50.2	0	

**CITY TRAFFIC COUNTERS**  
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File Name : DixonAve\_104thSt  
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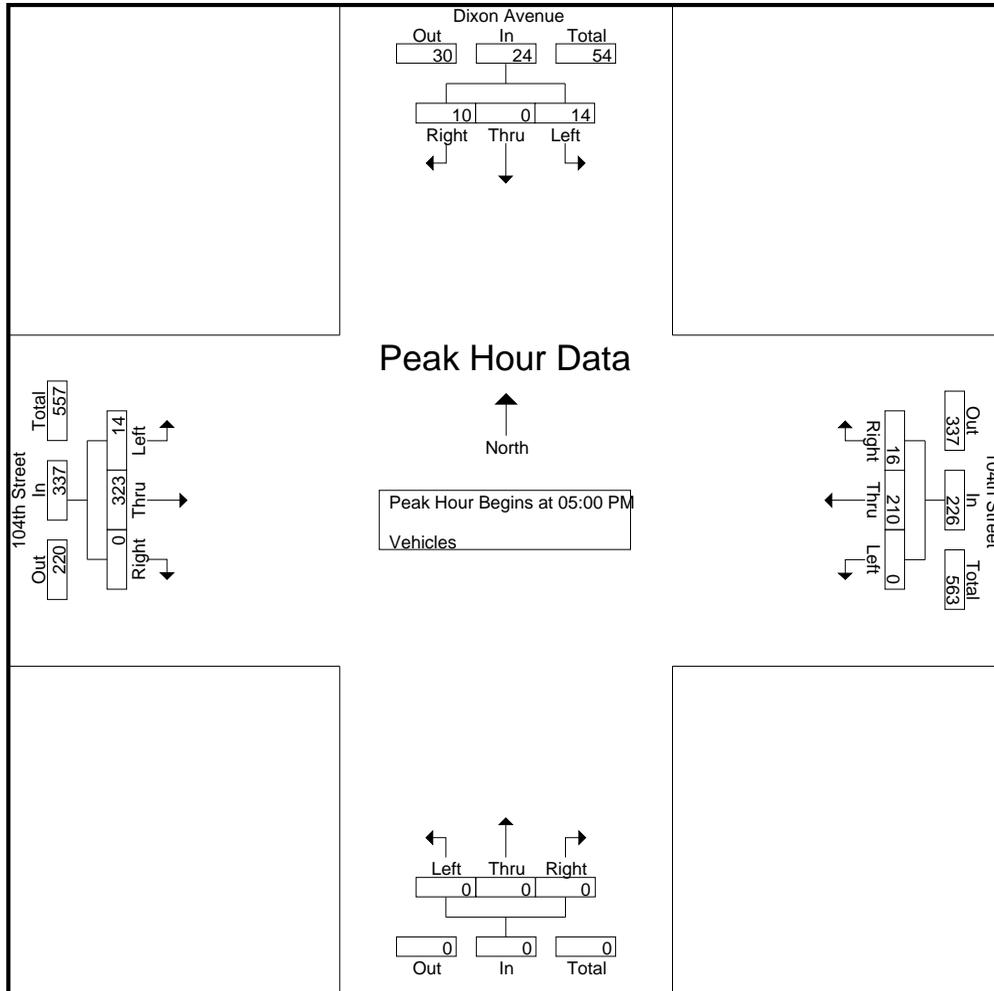
Start Time	Dixon Avenue Southbound				104th Street Westbound				Northbound				104th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	0	6	8	0	68	0	68	0	0	0	0	3	43	0	46	122
07:45 AM	5	0	6	11	0	74	1	75	0	0	0	0	2	84	0	86	172
08:00 AM	3	0	1	4	0	103	3	106	0	0	0	0	1	81	0	82	192
08:15 AM	2	0	2	4	0	55	2	57	0	0	0	0	4	51	0	55	116
Total Volume	12	0	15	27	0	300	6	306	0	0	0	0	10	259	0	269	602
% App. Total	44.4	0	55.6		0	98	2		0	0	0		3.7	96.3	0		
PHF	.600	.000	.625	.614	.000	.728	.500	.722	.000	.000	.000	.000	.625	.771	.000	.782	.784



**CITY TRAFFIC COUNTERS**  
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File Name : DixonAve\_104thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
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Start Time	Dixon Avenue Southbound				104th Street Westbound				Northbound				104th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	1	2	0	54	4	58	0	0	0	0	2	65	0	67	127
05:15 PM	6	0	5	11	0	48	3	51	0	0	0	0	3	83	0	86	148
05:30 PM	4	0	2	6	0	57	6	63	0	0	0	0	6	96	0	102	171
05:45 PM	3	0	2	5	0	51	3	54	0	0	0	0	3	79	0	82	141
Total Volume	14	0	10	24	0	210	16	226	0	0	0	0	14	323	0	337	587
% App. Total	58.3	0	41.7		0	92.9	7.1		0	0	0		4.2	95.8	0		
PHF	.583	.000	.500	.545	.000	.921	.667	.897	.000	.000	.000	.000	.583	.841	.000	.826	.858



**CITY TRAFFIC COUNTERS**  
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File Name : DixonAve\_104thSt\_BP  
 Site Code : 00000000  
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Groups Printed- Bikes and Pedestrians

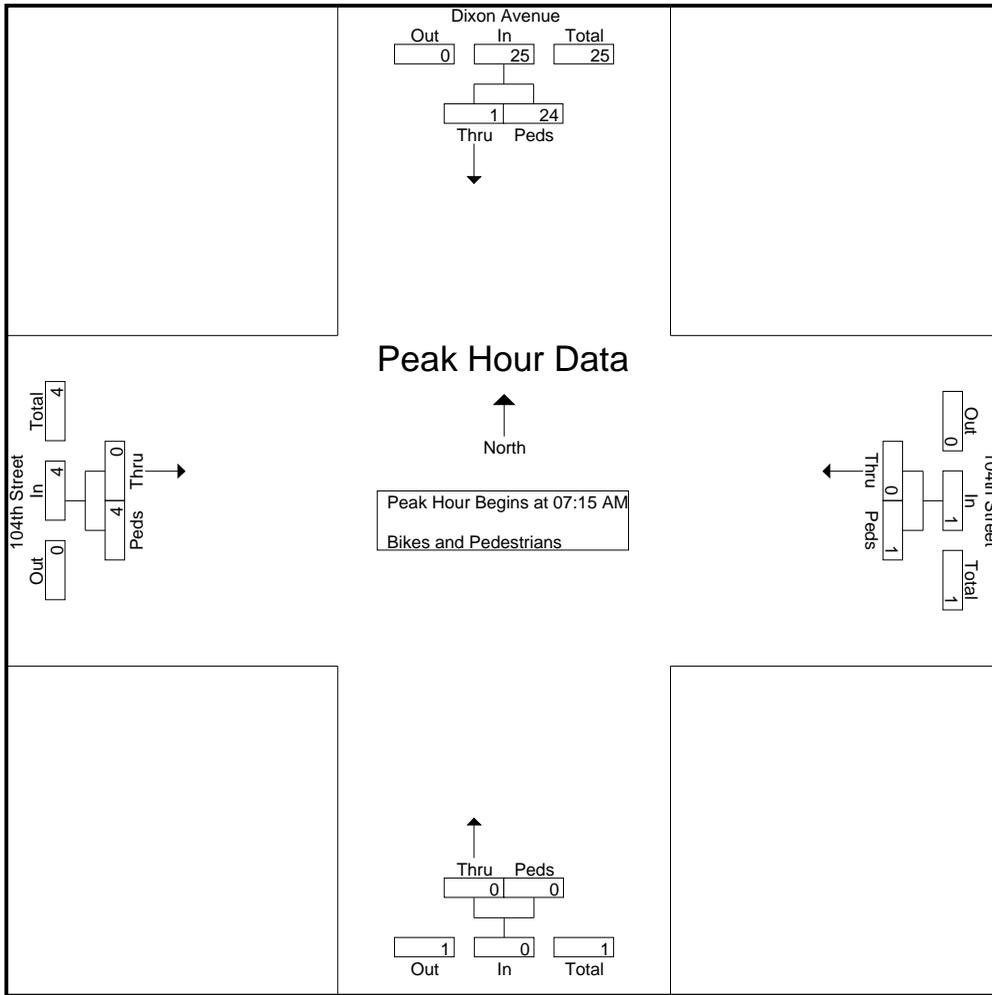
Start Time	Dixon Avenue Southbound		104th Street Westbound		Northbound		104th Street Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	1	3	0	0	0	0	0	0	4
07:15 AM	0	5	0	0	0	0	0	0	5
07:30 AM	0	6	0	0	0	0	0	1	7
07:45 AM	1	7	0	0	0	0	0	3	11
Total	2	21	0	0	0	0	0	4	27
08:00 AM	0	6	0	1	0	0	0	0	7
08:15 AM	0	3	0	0	0	0	0	0	3
08:30 AM	0	2	0	0	0	0	0	0	2
08:45 AM	0	0	1	0	0	0	0	0	1
Total	0	11	1	1	0	0	0	0	13
04:00 PM	0	2	0	1	0	0	0	1	4
04:15 PM	0	2	0	0	0	0	0	1	3
04:30 PM	0	9	0	0	0	0	0	1	10
04:45 PM	0	2	0	0	0	0	0	0	2
Total	0	15	0	1	0	0	0	3	19
05:00 PM	0	4	0	0	0	0	0	1	5
05:30 PM	0	4	0	0	0	0	0	0	4
Total	0	8	0	0	0	0	0	1	9
Grand Total	2	55	1	2	0	0	0	8	68
Apprch %	3.5	96.5	33.3	66.7	0	0	0	100	
Total %	2.9	80.9	1.5	2.9	0	0	0	11.8	

**CITY TRAFFIC COUNTERS**  
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File Name : DixonAve\_104thSt\_BP  
 Site Code : 00000000  
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Start Time	Dixon Avenue Southbound			104th Street Westbound			Northbound			104th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
07:15 AM	0	5	5	0	0	0	0	0	0	0	0	0	5
07:30 AM	0	6	6	0	0	0	0	0	0	0	1	1	7
07:45 AM	1	7	8	0	0	0	0	0	0	0	3	3	11
08:00 AM	0	6	6	0	1	1	0	0	0	0	0	0	7
Total Volume	1	24	25	0	1	1	0	0	0	0	4	4	30
% App. Total	4	96		0	100		0	0		0	100		
PHF	.250	.857	.781	.000	.250	.250	.000	.000	.000	.000	.333	.333	.682

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:15 AM

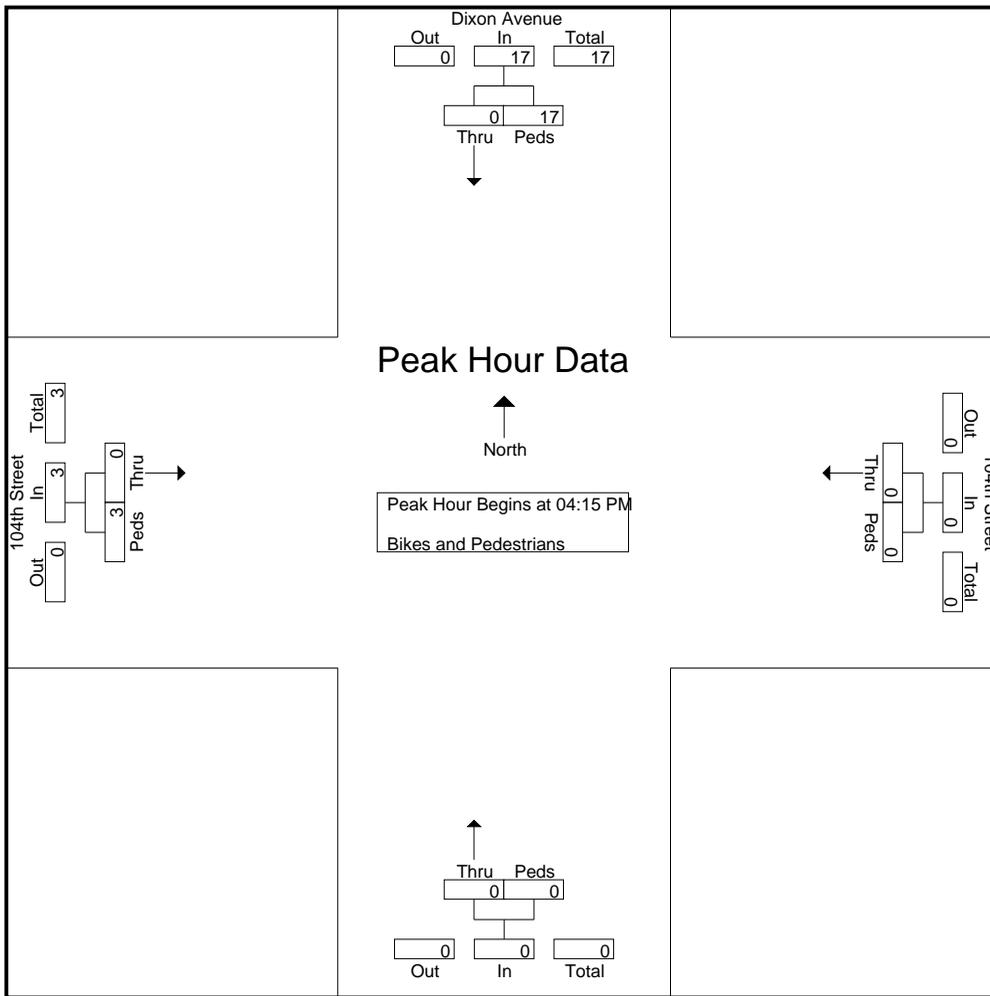


**CITY TRAFFIC COUNTERS**  
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File Name : DixonAve\_104thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Dixon Avenue Southbound			104th Street Westbound			Northbound			104th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
04:15 PM	0	2	2	0	0	0	0	0	0	0	1	1	3
04:30 PM	0	9	9	0	0	0	0	0	0	0	1	1	10
04:45 PM	0	2	2	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	4	4	0	0	0	0	0	0	0	1	1	5
Total Volume	0	17	17	0	0	0	0	0	0	0	3	3	20
% App. Total	0	100		0	0		0	0		0	100		
PHF	.000	.472	.472	.000	.000	.000	.000	.000	.000	.000	.750	.750	.500

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:15 PM



**CITY TRAFFIC COUNTERS**  
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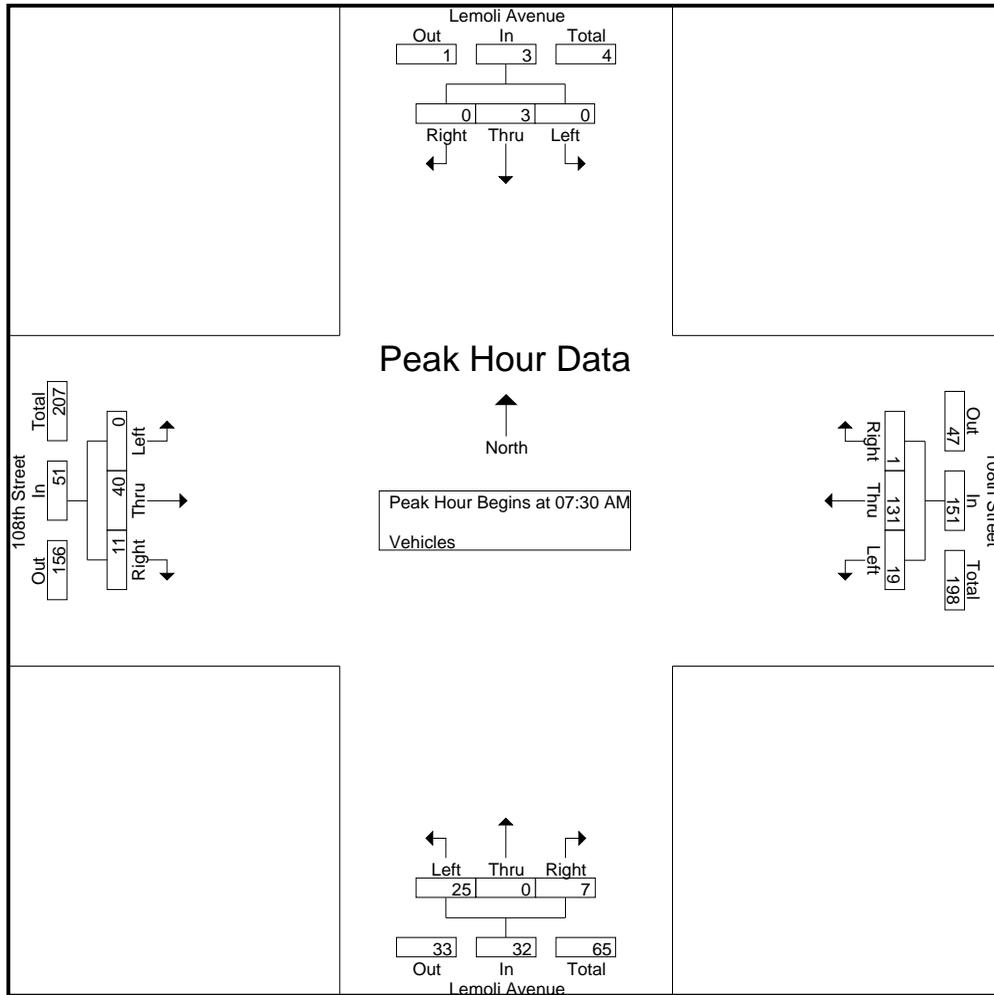
Groups Printed- Vehicles

Start Time	Lemoli Avenue Southbound			108th Street Westbound			Lemoli Avenue Northbound			108th Street Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	15	0	2	0	1	0	7	1	26
07:15 AM	0	0	0	1	18	0	5	0	1	0	10	2	37
07:30 AM	0	1	0	5	27	0	2	0	0	0	14	3	52
07:45 AM	0	0	0	5	34	1	8	0	3	0	10	4	65
Total	0	1	0	11	94	1	17	0	5	0	41	10	180
08:00 AM	0	1	0	9	46	0	12	0	1	0	7	2	78
08:15 AM	0	1	0	0	24	0	3	0	3	0	9	2	42
08:30 AM	0	0	0	3	8	0	2	0	1	0	7	3	24
08:45 AM	0	0	0	0	15	1	1	0	2	0	7	1	27
Total	0	2	0	12	93	1	18	0	7	0	30	8	171
04:00 PM	1	0	0	5	27	0	2	0	0	1	16	2	54
04:15 PM	0	0	0	4	26	1	5	0	2	0	19	4	61
04:30 PM	0	0	0	3	16	0	3	0	1	0	21	1	45
04:45 PM	0	1	1	4	28	0	5	2	0	0	19	9	69
Total	1	1	1	16	97	1	15	2	3	1	75	16	229
05:00 PM	0	0	0	1	15	0	1	0	1	0	20	6	44
05:15 PM	0	0	0	6	18	0	0	0	3	0	12	5	44
05:30 PM	1	0	0	1	25	0	3	0	6	0	16	0	52
05:45 PM	0	0	0	3	19	0	3	0	2	0	19	3	49
Total	1	0	0	11	77	0	7	0	12	0	67	14	189
Grand Total	2	4	1	50	361	3	57	2	27	1	213	48	769
Apprch %	28.6	57.1	14.3	12.1	87.2	0.7	66.3	2.3	31.4	0.4	81.3	18.3	
Total %	0.3	0.5	0.1	6.5	46.9	0.4	7.4	0.3	3.5	0.1	27.7	6.2	

**CITY TRAFFIC COUNTERS**  
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File Name : LemoliAve\_108thSt  
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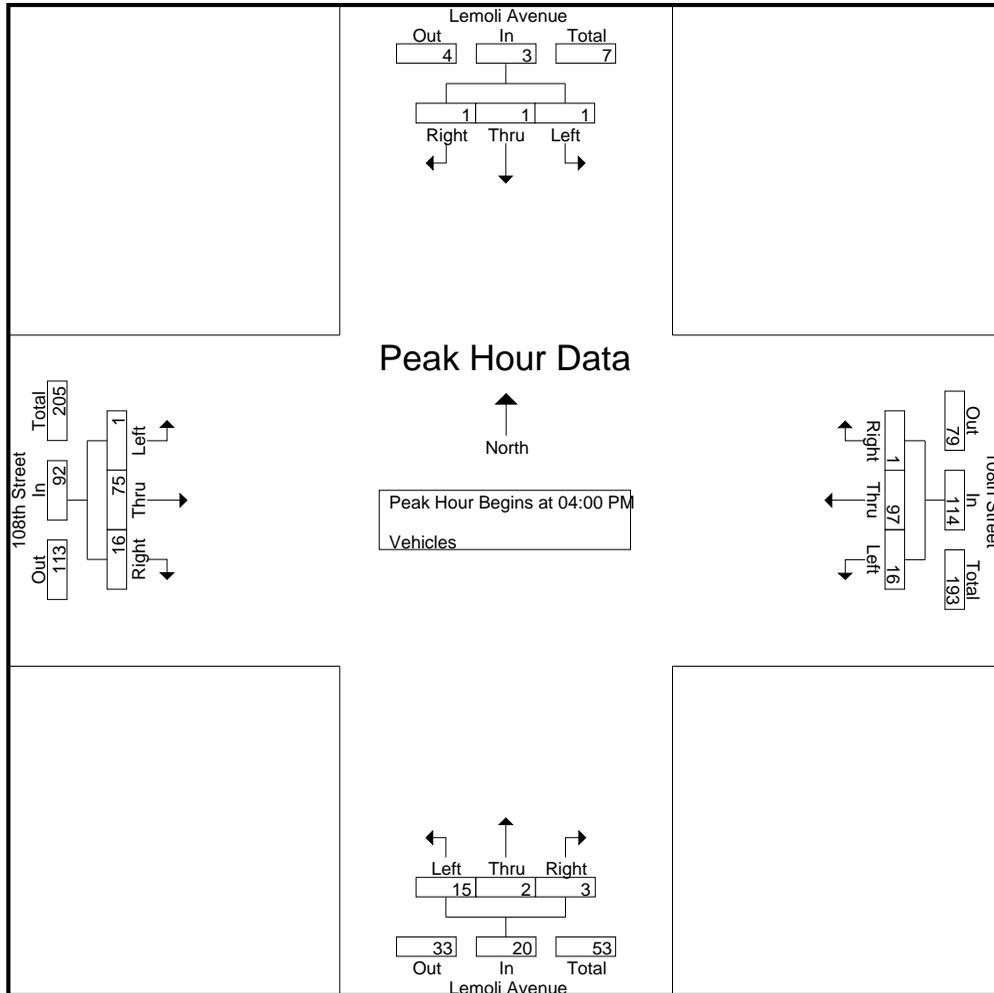
Start Time	Lemoli Avenue Southbound				108th Street Westbound				Lemoli Avenue Northbound				108th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	1	0	1	5	27	0	32	2	0	0	2	0	14	3	17	52
07:45 AM	0	0	0	0	5	34	1	40	8	0	3	11	0	10	4	14	65
08:00 AM	0	1	0	1	9	46	0	55	12	0	1	13	0	7	2	9	78
08:15 AM	0	1	0	1	0	24	0	24	3	0	3	6	0	9	2	11	42
Total Volume	0	3	0	3	19	131	1	151	25	0	7	32	0	40	11	51	237
% App. Total	0	100	0		12.6	86.8	0.7		78.1	0	21.9		0	78.4	21.6		
PHF	.000	.750	.000	.750	.528	.712	.250	.686	.521	.000	.583	.615	.000	.714	.688	.750	.760



**CITY TRAFFIC COUNTERS**  
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Start Time	Lemoli Avenue Southbound				108th Street Westbound				Lemoli Avenue Northbound				108th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	0	0	1	5	27	0	32	2	0	0	2	1	16	2	19	54
04:15 PM	0	0	0	0	4	26	1	31	5	0	2	7	0	19	4	23	61
04:30 PM	0	0	0	0	3	16	0	19	3	0	1	4	0	21	1	22	45
04:45 PM	0	1	1	2	4	28	0	32	5	2	0	7	0	19	9	28	69
Total Volume	1	1	1	3	16	97	1	114	15	2	3	20	1	75	16	92	229
% App. Total	33.3	33.3	33.3		14	85.1	0.9		75	10	15		1.1	81.5	17.4		
PHF	.250	.250	.250	.375	.800	.866	.250	.891	.750	.250	.375	.714	.250	.893	.444	.821	.830



**CITY TRAFFIC COUNTERS**  
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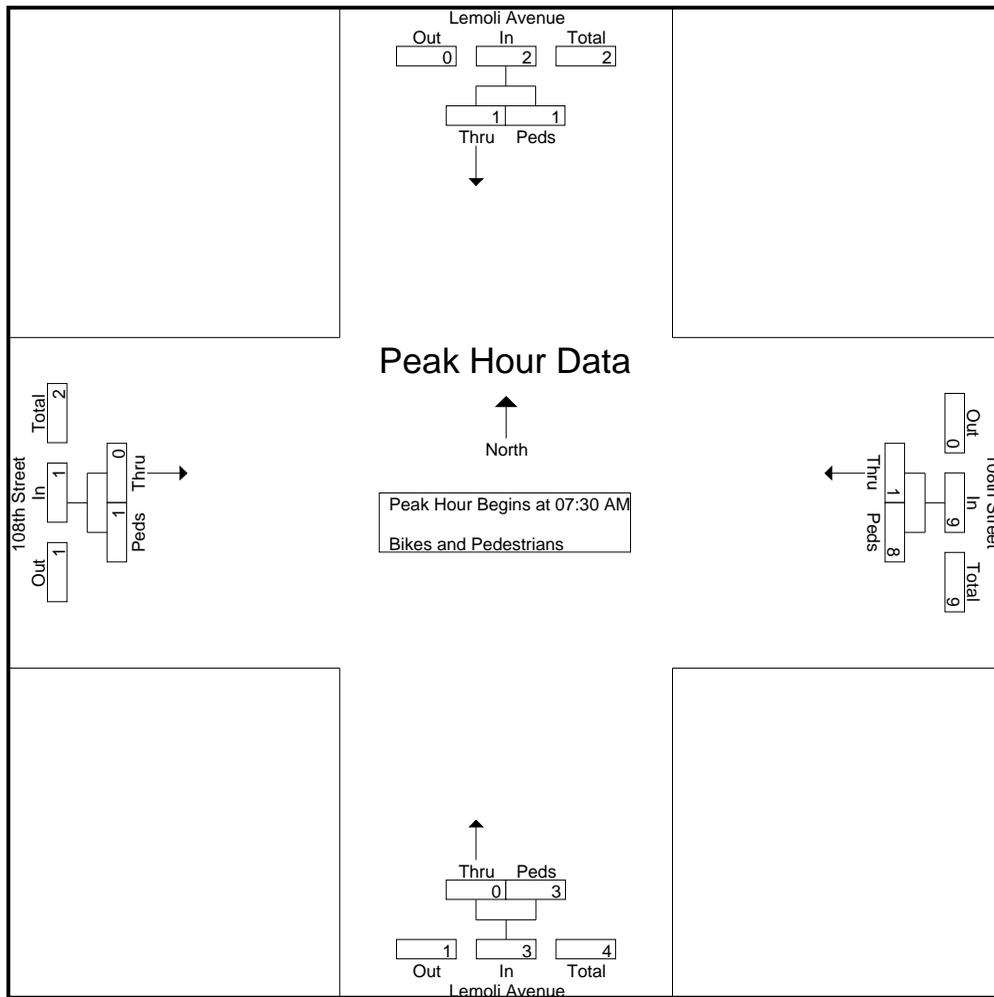
Groups Printed- Bikes and Pedestrians

Start Time	Lemoli Avenue Southbound		108th Street Westbound		Lemoli Avenue Northbound		108th Street Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	0	0	1	1	0	0	0	2	4
07:15 AM	1	0	0	0	1	0	0	2	4
07:30 AM	1	0	0	0	0	0	0	1	2
07:45 AM	0	0	0	3	0	1	0	0	4
Total	2	0	1	4	1	1	0	5	14
08:00 AM	0	1	1	1	0	1	0	0	4
08:15 AM	0	0	0	4	0	1	0	0	5
08:45 AM	0	0	0	0	0	0	0	1	1
Total	0	1	1	5	0	2	0	1	10
04:00 PM	0	0	0	0	0	7	1	0	8
04:15 PM	0	0	0	0	1	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	2	2
04:45 PM	1	2	0	0	0	1	1	0	5
Total	1	2	0	0	1	8	2	2	16
05:00 PM	0	0	0	0	1	2	2	0	5
05:15 PM	2	0	1	2	1	0	0	1	7
05:30 PM	0	1	0	1	0	0	0	1	3
05:45 PM	1	0	0	0	0	1	0	0	2
Total	3	1	1	3	2	3	2	2	17
Grand Total	6	4	3	12	4	14	4	10	57
Apprch %	60	40	20	80	22.2	77.8	28.6	71.4	
Total %	10.5	7	5.3	21.1	7	24.6	7	17.5	

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 Site Code : 00000000  
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Start Time	Lemoli Avenue Southbound			108th Street Westbound			Lemoli Avenue Northbound			108th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	1	0	1	0	0	0	0	0	0	0	1	1	2
07:45 AM	0	0	0	0	3	3	0	1	1	0	0	0	4
08:00 AM	0	1	1	1	1	2	0	1	1	0	0	0	4
08:15 AM	0	0	0	0	4	4	0	1	1	0	0	0	5
Total Volume	1	1	2	1	8	9	0	3	3	0	1	1	15
% App. Total	50	50		11.1	88.9		0	100		0	100		
PHF	.250	.250	.500	.250	.500	.563	.000	.750	.750	.000	.250	.250	.750

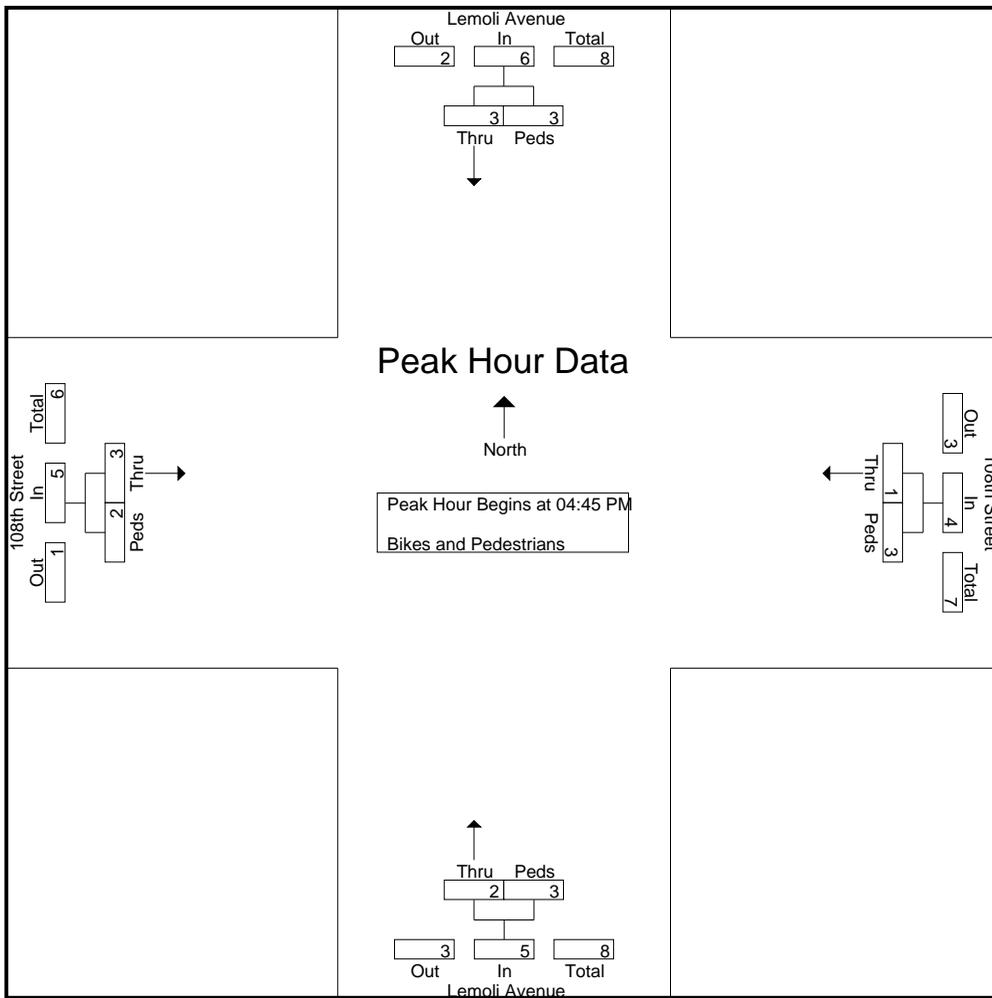


**CITY TRAFFIC COUNTERS**  
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File Name : LemoliAve\_108thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Lemoli Avenue Southbound			108th Street Westbound			Lemoli Avenue Northbound			108th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
04:45 PM	1	2	3	0	0	0	0	1	1	1	0	1	5
05:00 PM	0	0	0	0	0	0	1	2	3	2	0	2	5
05:15 PM	2	0	2	1	2	3	1	0	1	0	1	1	7
05:30 PM	0	1	1	0	1	1	0	0	0	0	1	1	3
Total Volume	3	3	6	1	3	4	2	3	5	3	2	5	20
% App. Total	50	50		25	75		40	60		60	40		
PHF	.375	.375	.500	.250	.375	.333	.500	.375	.417	.375	.500	.625	.714

Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : WoodworthAve\_104thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
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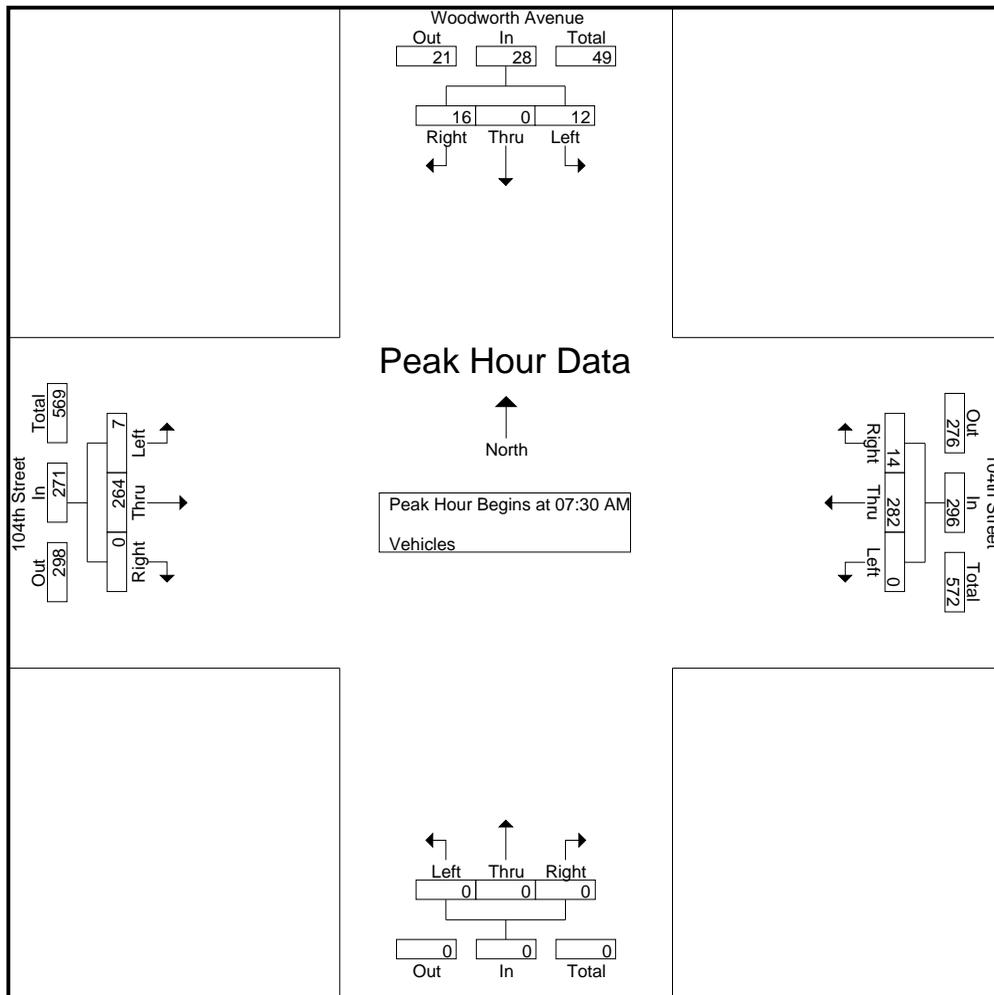
Groups Printed- Vehicles

Start Time	Woodworth Avenue Southbound			104th Street Westbound			Northbound			104th Street Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	1	0	2	0	38	0	0	0	0	1	41	0	83
07:15 AM	1	0	5	0	31	2	0	0	0	1	43	0	83
07:30 AM	2	0	4	0	61	2	0	0	0	2	49	0	120
07:45 AM	6	0	4	0	69	3	0	0	0	1	81	0	164
Total	10	0	15	0	199	7	0	0	0	5	214	0	450
08:00 AM	3	0	6	0	93	5	0	0	0	3	88	0	198
08:15 AM	1	0	2	0	59	4	0	0	0	1	46	0	113
08:30 AM	3	0	1	0	44	2	0	0	0	1	41	0	92
08:45 AM	2	0	2	0	39	6	0	0	0	2	37	0	88
Total	9	0	11	0	235	17	0	0	0	7	212	0	491
04:00 PM	2	0	2	0	57	5	0	0	0	6	83	0	155
04:15 PM	6	0	5	0	45	6	0	0	0	4	80	0	146
04:30 PM	4	0	3	0	55	10	0	0	0	5	86	0	163
04:45 PM	1	0	3	0	41	5	0	0	0	2	79	0	131
Total	13	0	13	0	198	26	0	0	0	17	328	0	595
05:00 PM	4	0	1	0	52	6	0	0	0	1	62	0	126
05:15 PM	9	0	7	0	45	9	0	0	0	0	89	0	159
05:30 PM	2	0	3	0	60	4	0	0	0	2	102	0	173
05:45 PM	4	0	1	0	55	6	0	0	0	7	75	0	148
Total	19	0	12	0	212	25	0	0	0	10	328	0	606
Grand Total	51	0	51	0	844	75	0	0	0	39	1082	0	2142
Apprch %	50	0	50	0	91.8	8.2	0	0	0	3.5	96.5	0	
Total %	2.4	0	2.4	0	39.4	3.5	0	0	0	1.8	50.5	0	

**CITY TRAFFIC COUNTERS**  
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File Name : WoodworthAve\_104thSt  
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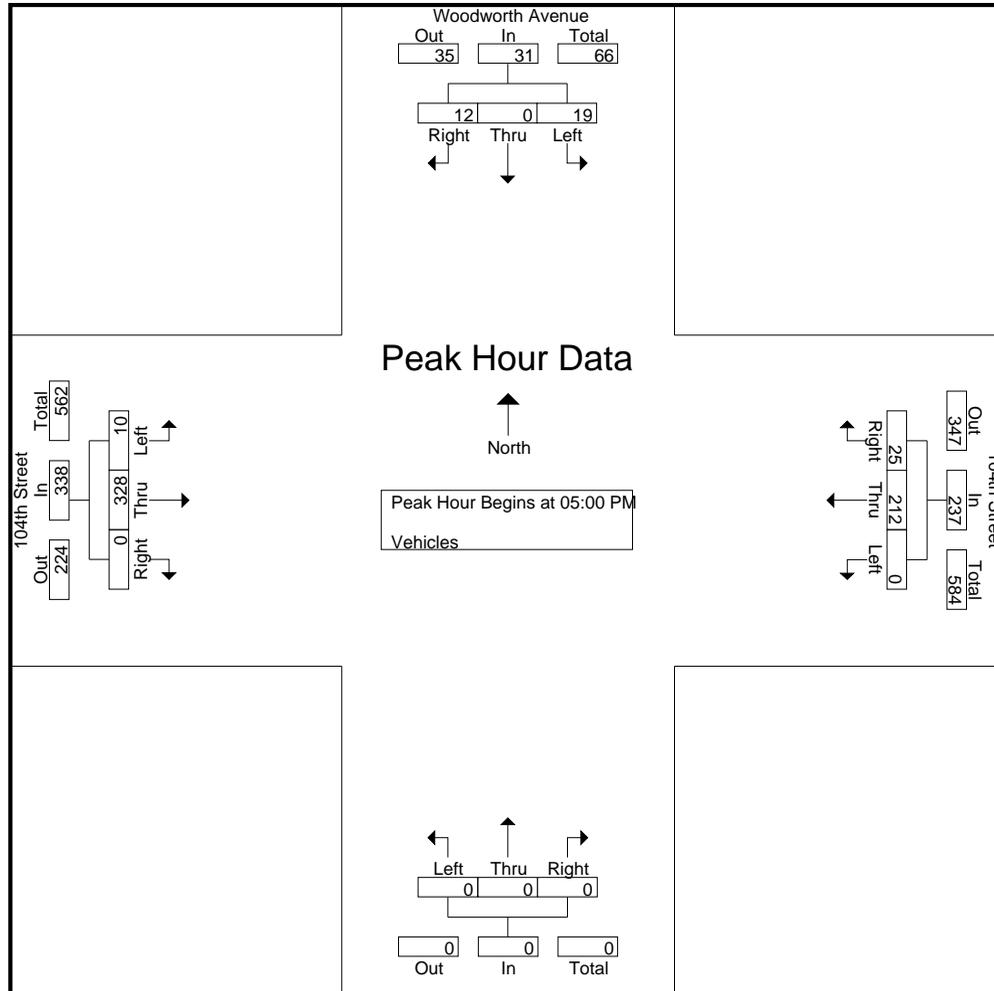
Start Time	Woodworth Avenue Southbound				104th Street Westbound				Northbound				104th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	0	4	6	0	61	2	63	0	0	0	0	2	49	0	51	120
07:45 AM	6	0	4	10	0	69	3	72	0	0	0	0	1	81	0	82	164
08:00 AM	3	0	6	9	0	93	5	98	0	0	0	0	3	88	0	91	198
08:15 AM	1	0	2	3	0	59	4	63	0	0	0	0	1	46	0	47	113
Total Volume	12	0	16	28	0	282	14	296	0	0	0	0	7	264	0	271	595
% App. Total	42.9	0	57.1		0	95.3	4.7		0	0	0		2.6	97.4	0		
PHF	.500	.000	.667	.700	.000	.758	.700	.755	.000	.000	.000	.000	.583	.750	.000	.745	.751



**CITY TRAFFIC COUNTERS**  
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File Name : WoodworthAve\_104thSt  
 Site Code : 00000000  
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Start Time	Woodworth Avenue Southbound				104th Street Westbound				Northbound				104th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	0	1	5	0	52	6	58	0	0	0	0	1	62	0	63	126
05:15 PM	9	0	7	16	0	45	9	54	0	0	0	0	0	89	0	89	159
05:30 PM	2	0	3	5	0	60	4	64	0	0	0	0	2	102	0	104	173
05:45 PM	4	0	1	5	0	55	6	61	0	0	0	0	7	75	0	82	148
Total Volume	19	0	12	31	0	212	25	237	0	0	0	0	10	328	0	338	606
% App. Total	61.3	0	38.7		0	89.5	10.5		0	0	0		3	97	0		
PHF	.528	.000	.429	.484	.000	.883	.694	.926	.000	.000	.000	.000	.357	.804	.000	.813	.876



**CITY TRAFFIC COUNTERS**  
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File Name : WoodworthAve\_104thSt\_BP  
 Site Code : 00000000  
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Groups Printed- Bikes and Pedestrians

Start Time	Woodworth Avenue Southbound		104th Street Westbound		Northbound		104th Street Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	1	0	0	0	0	0	0	2	3
07:15 AM	0	6	0	0	0	0	0	1	7
07:30 AM	0	8	0	0	0	0	0	2	10
07:45 AM	1	21	0	0	0	0	0	0	22
Total	2	35	0	0	0	0	0	5	42
08:00 AM	0	13	0	0	0	0	0	2	15
08:15 AM	0	2	0	0	0	0	0	0	2
08:30 AM	0	3	0	0	0	0	0	0	3
08:45 AM	0	4	0	1	0	0	1	1	7
Total	0	22	0	1	0	0	1	3	27
04:00 PM	0	3	0	0	0	0	0	0	3
04:15 PM	0	1	0	0	0	0	0	1	2
04:30 PM	0	3	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	1	1
Total	0	7	0	0	0	0	0	2	9
05:00 PM	0	2	0	0	0	0	0	2	4
05:15 PM	0	2	0	0	0	0	0	1	3
05:30 PM	0	1	0	0	0	0	0	0	1
05:45 PM	0	2	0	0	0	0	0	2	4
Total	0	7	0	0	0	0	0	5	12
Grand Total	2	71	0	1	0	0	1	15	90
Apprch %	2.7	97.3	0	100	0	0	6.2	93.8	
Total %	2.2	78.9	0	1.1	0	0	1.1	16.7	

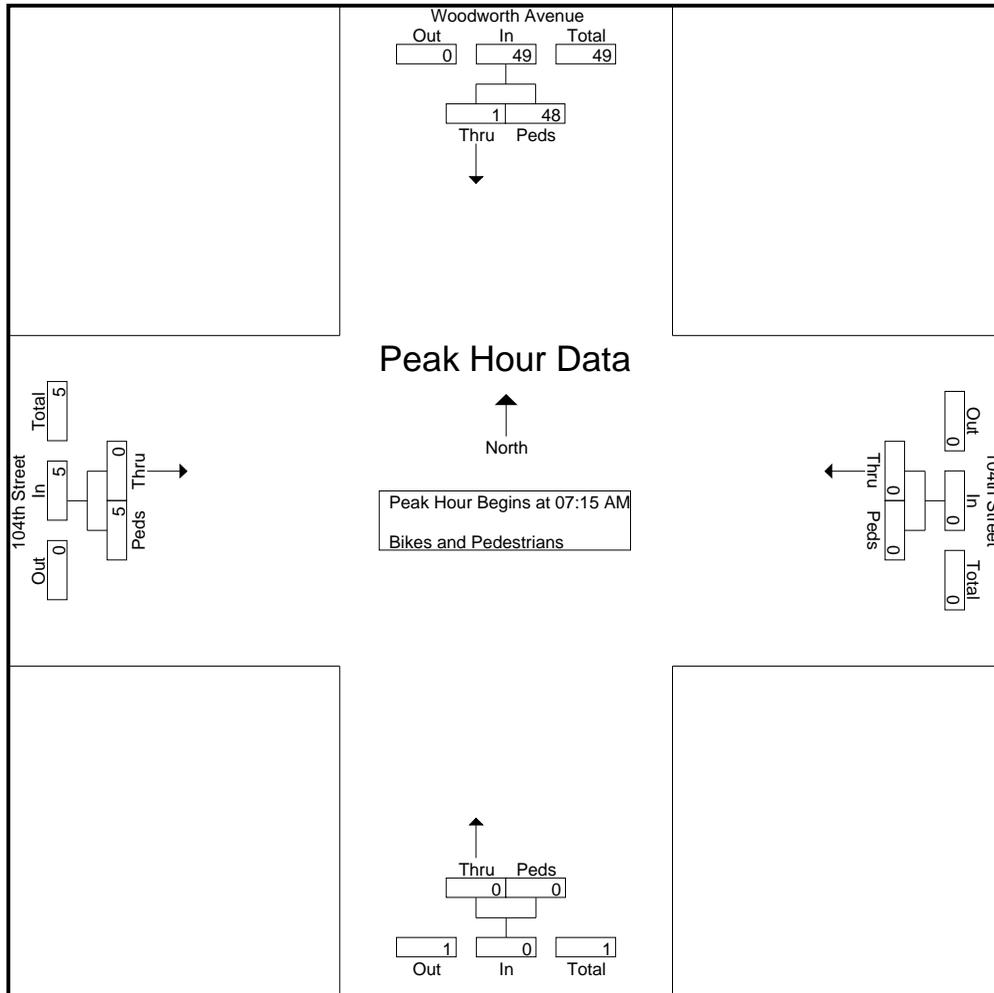
**CITY TRAFFIC COUNTERS**  
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File Name : WoodworthAve\_104thSt\_BP  
 Site Code : 00000000  
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Start Time	Woodworth Avenue Southbound			104th Street Westbound			Northbound			104th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
07:15 AM	0	6	6	0	0	0	0	0	0	0	1	1	7
07:30 AM	0	8	8	0	0	0	0	0	0	0	2	2	10
07:45 AM	1	21	22	0	0	0	0	0	0	0	0	0	22
08:00 AM	0	13	13	0	0	0	0	0	0	0	2	2	15
Total Volume	1	48	49	0	0	0	0	0	0	0	5	5	54
% App. Total	2	98		0	0		0	0		0	100		
PHF	.250	.571	.557	.000	.000	.000	.000	.000	.000	.000	.625	.625	.614

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

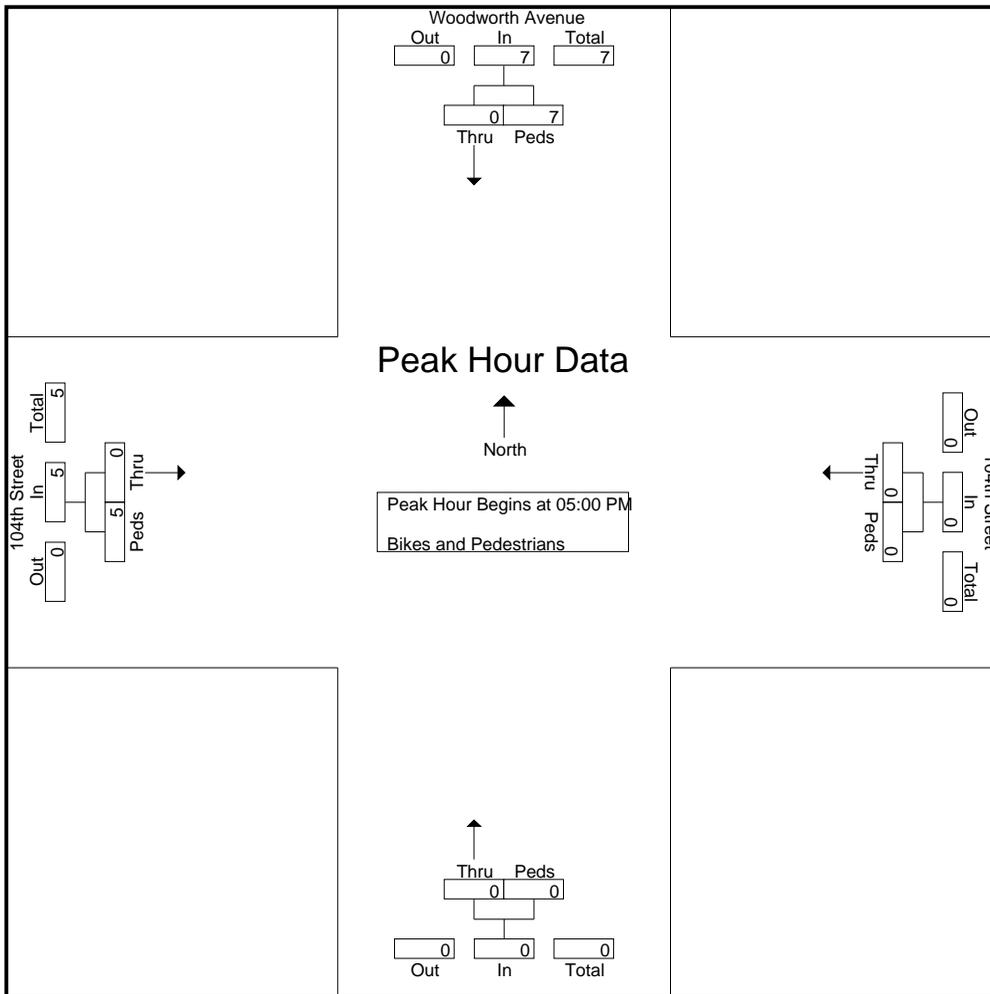


**CITY TRAFFIC COUNTERS**  
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File Name : WoodworthAve\_104thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Woodworth Avenue Southbound			104th Street Westbound			Northbound			104th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
05:00 PM	0	2	2	0	0	0	0	0	0	0	2	2	4
05:15 PM	0	2	2	0	0	0	0	0	0	0	1	1	3
05:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	2	2	0	0	0	0	0	0	0	2	2	4
Total Volume	0	7	7	0	0	0	0	0	0	0	5	5	12
% App. Total	0	100		0	0		0	0		0	100		
PHF	.000	.875	.875	.000	.000	.000	.000	.000	.000	.000	.625	.625	.750

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM



**CITY TRAFFIC COUNTERS**  
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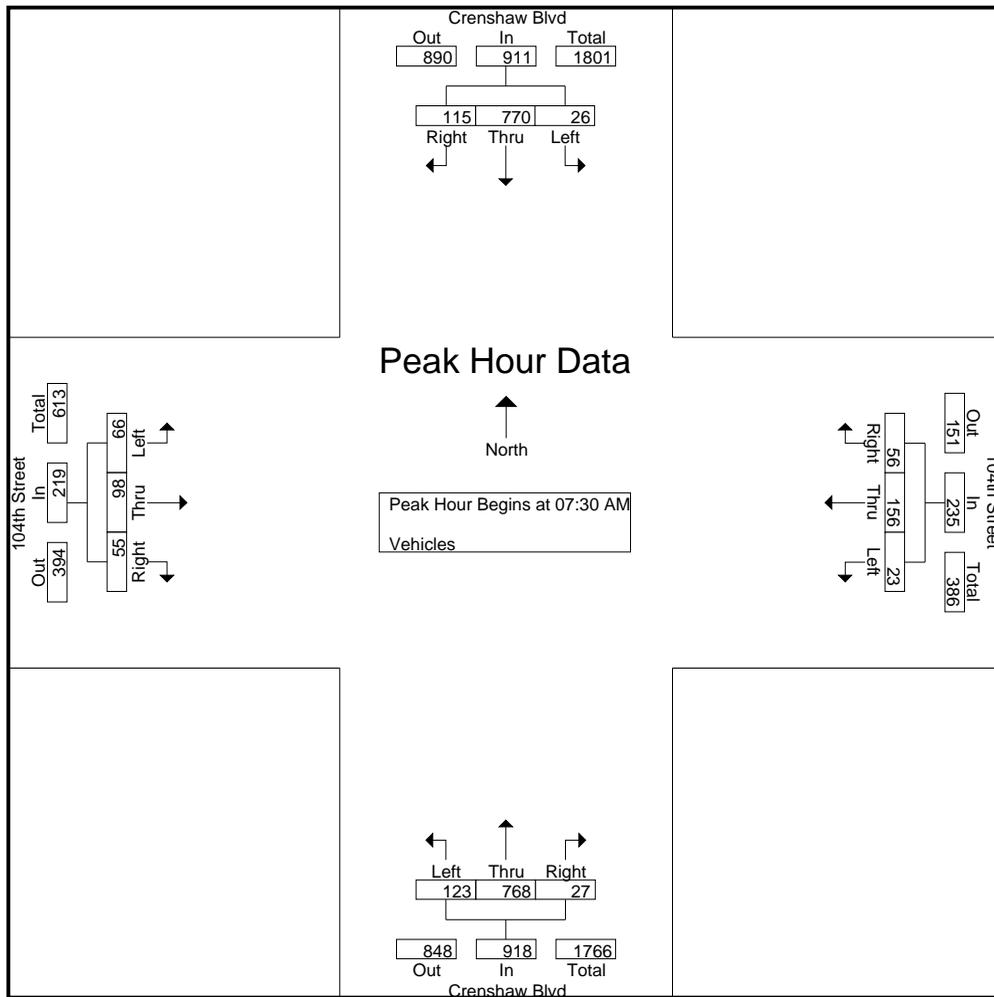
**Groups Printed- Vehicles**

Start Time	Crenshaw Blvd Southbound			104th Street Westbound			Crenshaw Blvd Northbound			104th Street Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	3	106	3	7	15	6	13	132	1	20	9	12	327
07:15 AM	3	178	5	4	24	12	15	184	3	10	15	20	473
07:30 AM	6	196	21	4	37	14	25	188	4	12	21	13	541
07:45 AM	5	188	40	5	50	14	39	209	4	22	34	18	628
Total	17	668	69	20	126	46	92	713	12	64	79	63	1969
08:00 AM	7	198	35	6	44	20	27	178	9	22	22	14	582
08:15 AM	8	188	19	8	25	8	32	193	10	10	21	10	532
08:30 AM	5	191	15	7	23	8	28	162	4	13	27	12	495
08:45 AM	7	182	11	5	22	5	23	173	4	15	24	16	487
Total	27	759	80	26	114	41	110	706	27	60	94	52	2096
04:00 PM	16	219	7	4	36	1	20	200	9	16	63	10	601
04:15 PM	18	224	8	7	27	3	25	198	7	12	61	14	604
04:30 PM	18	226	9	6	37	6	22	181	8	15	44	10	582
04:45 PM	14	232	7	7	23	6	25	192	6	8	43	9	572
Total	66	901	31	24	123	16	92	771	30	51	211	43	2359
05:00 PM	17	263	10	5	28	8	26	185	10	12	43	11	618
05:15 PM	20	243	8	7	27	7	22	188	10	12	52	17	613
05:30 PM	14	267	14	8	30	9	23	185	12	16	55	12	645
05:45 PM	16	245	8	8	27	8	20	159	9	11	44	10	565
Total	67	1018	40	28	112	32	91	717	41	51	194	50	2441
Grand Total	177	3346	220	98	475	135	385	2907	110	226	578	208	8865
Apprch %	4.7	89.4	5.9	13.8	67.1	19.1	11.3	85.4	3.2	22.3	57.1	20.6	
Total %	2	37.7	2.5	1.1	5.4	1.5	4.3	32.8	1.2	2.5	6.5	2.3	

**CITY TRAFFIC COUNTERS**  
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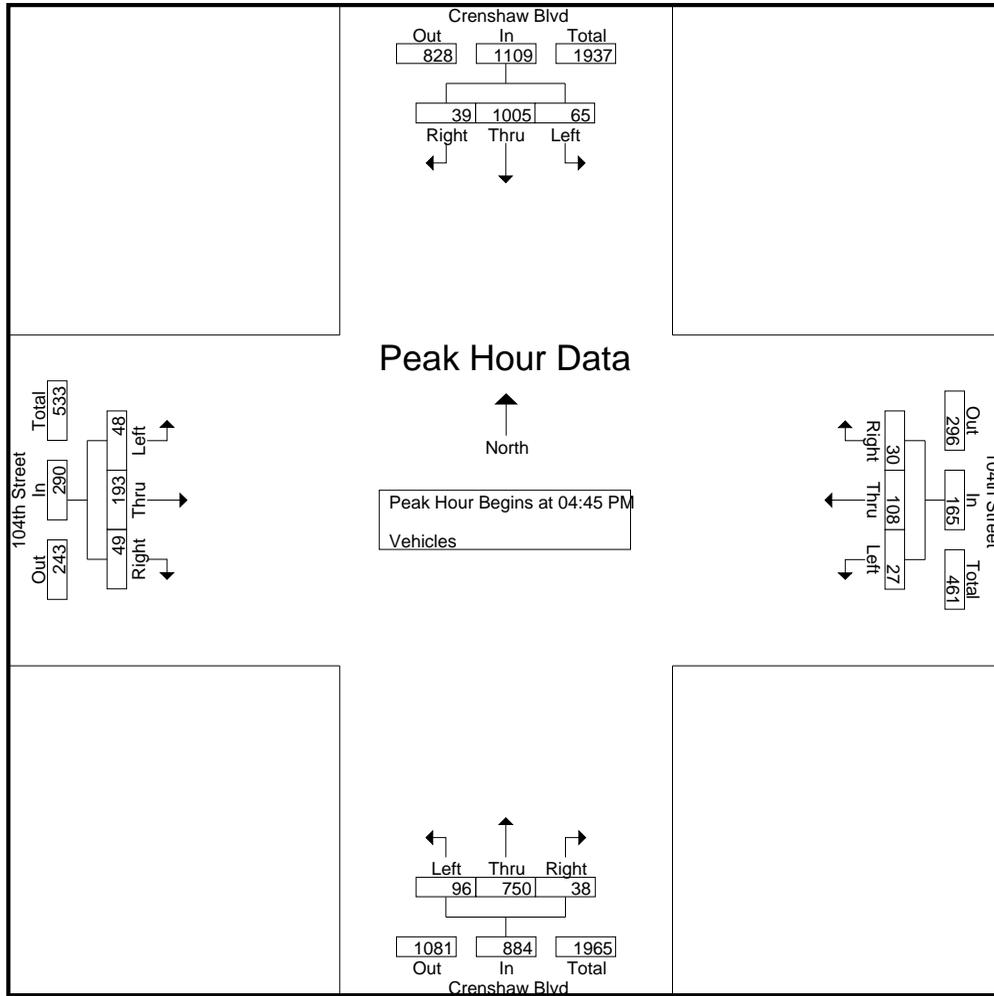
Start Time	Crenshaw Blvd Southbound				104th Street Westbound				Crenshaw Blvd Northbound				104th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	6	196	21	223	4	37	14	55	25	188	4	217	12	21	13	46	541
07:45 AM	5	188	40	233	5	50	14	69	39	209	4	252	22	34	18	74	628
08:00 AM	7	198	35	240	6	44	20	70	27	178	9	214	22	22	14	58	582
08:15 AM	8	188	19	215	8	25	8	41	32	193	10	235	10	21	10	41	532
Total Volume	26	770	115	911	23	156	56	235	123	768	27	918	66	98	55	219	2283
% App. Total	2.9	84.5	12.6		9.8	66.4	23.8		13.4	83.7	2.9		30.1	44.7	25.1		
PHF	.813	.972	.719	.949	.719	.780	.700	.839	.788	.919	.675	.911	.750	.721	.764	.740	.909



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Start Time	Crenshaw Blvd Southbound				104th Street Westbound				Crenshaw Blvd Northbound				104th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	14	232	7	253	7	23	6	36	25	<b>192</b>	6	<b>223</b>	8	43	9	60	572
05:00 PM	17	263	10	290	5	28	8	41	<b>26</b>	185	10	221	12	43	11	66	618
05:15 PM	<b>20</b>	243	8	271	7	27	7	41	22	188	10	220	12	52	<b>17</b>	81	613
05:30 PM	14	<b>267</b>	<b>14</b>	<b>295</b>	<b>8</b>	<b>30</b>	<b>9</b>	<b>47</b>	23	185	<b>12</b>	220	<b>16</b>	<b>55</b>	12	<b>83</b>	<b>645</b>
Total Volume	65	1005	39	1109	27	108	30	165	96	750	38	884	48	193	49	290	2448
% App. Total	5.9	90.6	3.5		16.4	65.5	18.2		10.9	84.8	4.3		16.6	66.6	16.9		
PHF	.813	.941	.696	.940	.844	.900	.833	.878	.923	.977	.792	.991	.750	.877	.721	.873	.949



**CITY TRAFFIC COUNTERS**  
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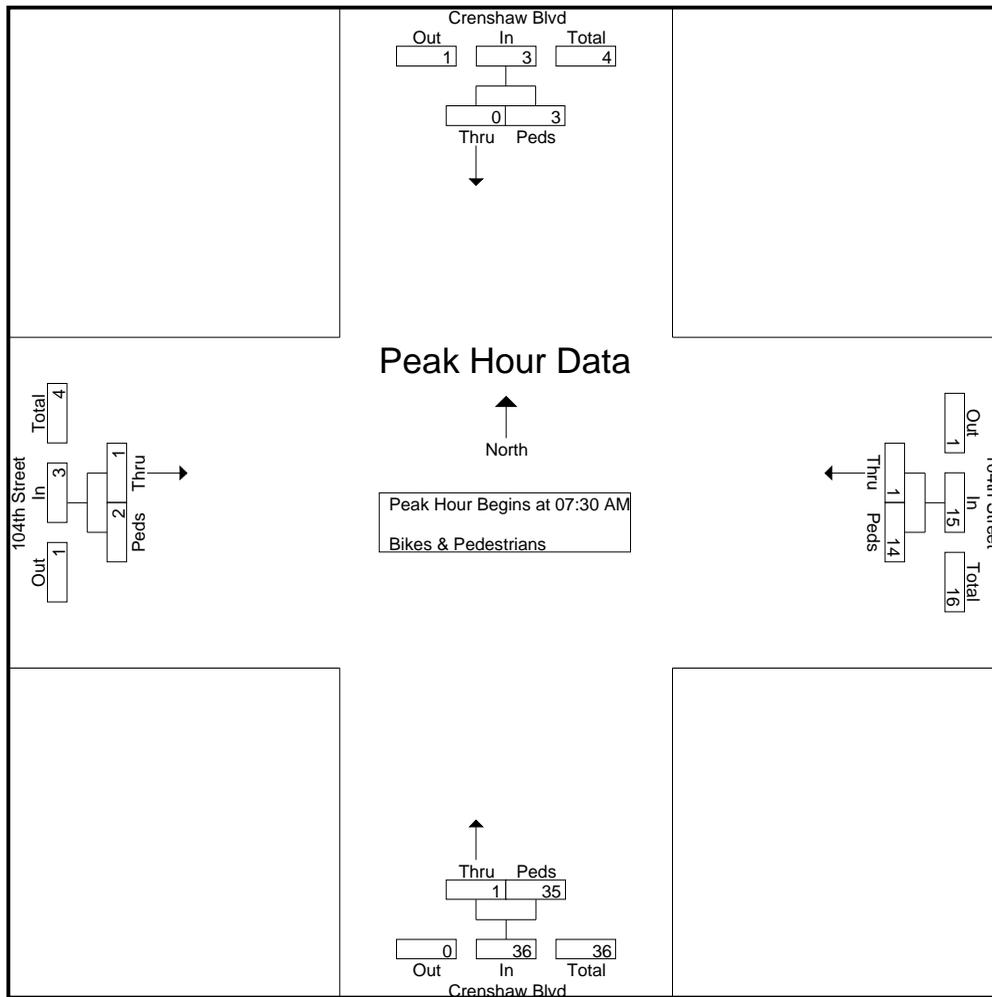
**Groups Printed- Bikes & Pedestrians**

Start Time	Crenshaw Blvd Southbound		104th Street Westbound		Crenshaw Blvd Northbound		104th Street Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	0	0	0	1	0	1	0	0	2
07:15 AM	0	1	0	0	0	1	0	0	2
07:30 AM	0	1	0	3	0	9	0	0	13
07:45 AM	0	1	0	4	1	9	1	2	18
Total	0	3	0	8	1	20	1	2	35
08:00 AM	0	1	1	3	0	9	0	0	14
08:15 AM	0	0	0	4	0	8	0	0	12
08:30 AM	1	0	0	0	0	1	0	0	2
08:45 AM	0	0	1	0	0	6	0	0	7
Total	1	1	2	7	0	24	0	0	35
04:00 PM	0	1	0	2	0	0	0	0	3
04:15 PM	0	1	0	1	0	1	0	1	4
04:45 PM	0	0	0	1	0	0	0	0	1
Total	0	2	0	4	0	1	0	1	8
05:00 PM	1	1	0	1	0	0	0	0	3
05:15 PM	0	0	0	0	0	1	0	0	1
05:30 PM	0	1	0	2	0	0	0	0	3
05:45 PM	0	1	0	1	0	0	0	0	2
Total	1	3	0	4	0	1	0	0	9
Grand Total	2	9	2	23	1	46	1	3	87
Apprch %	18.2	81.8	8	92	2.1	97.9	25	75	
Total %	2.3	10.3	2.3	26.4	1.1	52.9	1.1	3.4	

**CITY TRAFFIC COUNTERS**  
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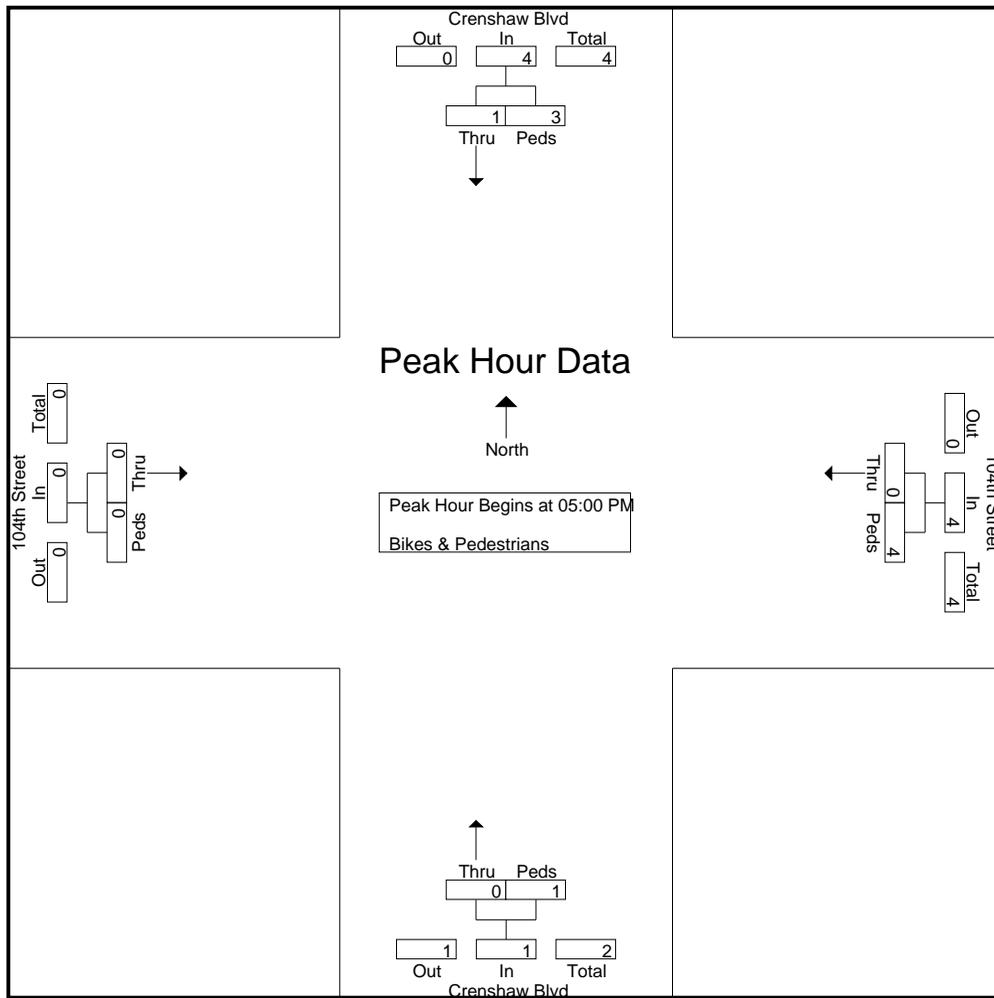
Start Time	Crenshaw Blvd Southbound			104th Street Westbound			Crenshaw Blvd Northbound			104th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	1	1	0	3	3	0	9	9	0	0	0	13
07:45 AM	0	1	1	0	4	4	1	9	10	1	2	3	18
08:00 AM	0	1	1	1	3	4	0	9	9	0	0	0	14
08:15 AM	0	0	0	0	4	4	0	8	8	0	0	0	12
Total Volume	0	3	3	1	14	15	1	35	36	1	2	3	57
% App. Total	0	100		6.7	93.3		2.8	97.2		33.3	66.7		
PHF	.000	.750	.750	.250	.875	.938	.250	.972	.900	.250	.250	.250	.792



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File Name : CrenshawBlvd\_104thSt\_BP  
 Site Code : 00000000  
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Start Time	Crenshaw Blvd Southbound			104th Street Westbound			Crenshaw Blvd Northbound			104th Street Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	1	1	2	0	1	1	0	0	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:30 PM	0	1	1	0	2	2	0	0	0	0	0	0	3
05:45 PM	0	1	1	0	1	1	0	0	0	0	0	0	2
Total Volume	1	3	4	0	4	4	0	1	1	0	0	0	9
% App. Total	25	75		0	100		0	100		0	0	0	
PHF	.250	.750	.500	.000	.500	.500	.000	.250	.250	.000	.000	.000	.750



**CITY TRAFFIC COUNTERS**  
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File Name : CrenshawBlvd\_108thSt  
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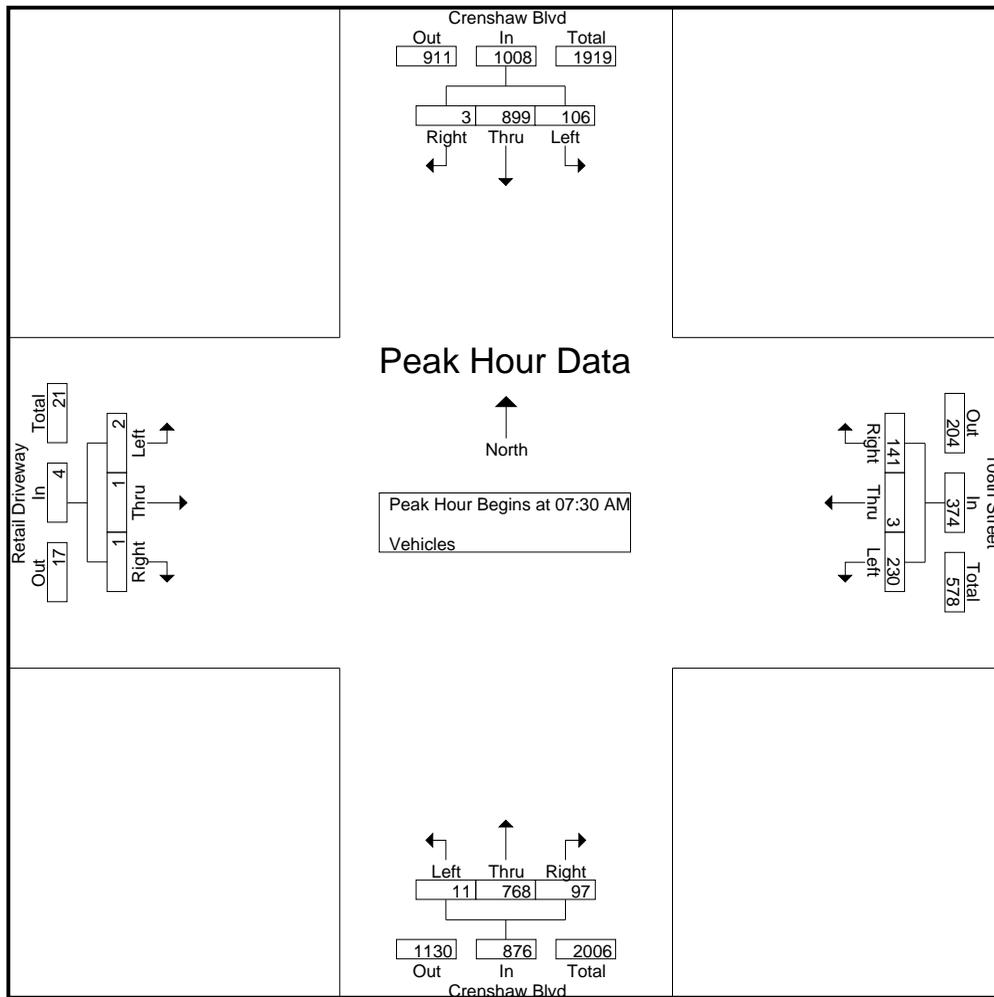
Groups Printed- Vehicles

Start Time	Crenshaw Blvd Southbound			108th Street Westbound			Crenshaw Blvd Northbound			Retail Driveway Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	12	120	0	27	0	21	0	136	13	0	0	0	329
07:15 AM	15	198	1	46	2	26	1	165	14	0	2	1	471
07:30 AM	21	189	0	55	0	38	3	171	15	0	1	0	493
07:45 AM	29	247	1	57	2	43	2	222	24	0	0	0	627
Total	77	754	2	185	4	128	6	694	66	0	3	1	1920
08:00 AM	30	242	2	74	1	32	4	180	24	1	0	1	591
08:15 AM	26	221	0	44	0	28	2	195	34	1	0	0	551
08:30 AM	20	189	1	31	0	26	4	163	28	0	0	0	462
08:45 AM	15	194	1	30	0	23	1	188	25	0	0	1	478
Total	91	846	4	179	1	109	11	726	111	2	0	2	2082
04:00 PM	51	204	0	24	0	20	1	225	53	0	0	1	579
04:15 PM	53	201	1	33	1	18	2	204	57	1	0	1	572
04:30 PM	42	212	1	20	1	19	2	200	74	0	1	1	573
04:45 PM	50	210	5	32	0	17	1	212	48	0	0	1	576
Total	196	827	7	109	2	74	6	841	232	1	1	4	2300
05:00 PM	59	232	2	16	0	17	2	195	75	0	0	0	598
05:15 PM	35	244	0	27	0	21	2	209	74	0	0	0	612
05:30 PM	55	241	2	23	0	17	1	219	60	0	0	1	619
05:45 PM	51	230	2	30	0	11	1	168	54	0	0	0	547
Total	200	947	6	96	0	66	6	791	263	0	0	1	2376
Grand Total	564	3374	19	569	7	377	29	3052	672	3	4	8	8678
Apprch %	14.3	85.3	0.5	59.7	0.7	39.6	0.8	81.3	17.9	20	26.7	53.3	
Total %	6.5	38.9	0.2	6.6	0.1	4.3	0.3	35.2	7.7	0	0	0.1	

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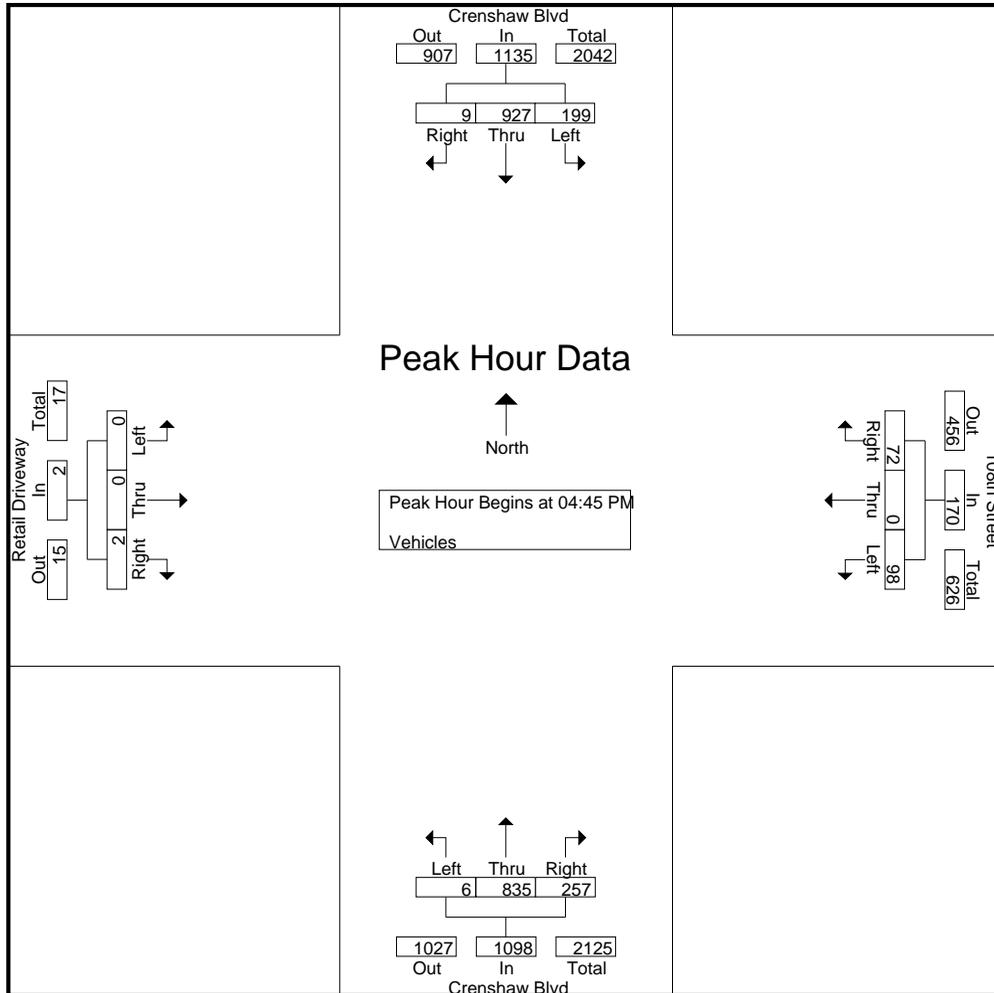
Start Time	Crenshaw Blvd Southbound				108th Street Westbound				Crenshaw Blvd Northbound				Retail Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	21	189	0	210	55	0	38	93	3	171	15	189	0	1	0	1	493
07:45 AM	29	247	1	277	57	2	43	102	2	222	24	248	0	0	0	0	627
08:00 AM	30	242	2	274	74	1	32	107	4	180	24	208	1	0	1	2	591
08:15 AM	26	221	0	247	44	0	28	72	2	195	34	231	1	0	0	1	551
Total Volume	106	899	3	1008	230	3	141	374	11	768	97	876	2	1	1	4	2262
% App. Total	10.5	89.2	0.3		61.5	0.8	37.7		1.3	87.7	11.1		50	25	25		
PHF	.883	.910	.375	.910	.777	.375	.820	.874	.688	.865	.713	.883	.500	.250	.250	.500	.902



**CITY TRAFFIC COUNTERS**  
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File Name : CrenshawBlvd\_108thSt  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Crenshaw Blvd Southbound				108th Street Westbound				Crenshaw Blvd Northbound				Retail Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	50	210	5	265	32	0	17	49	1	212	48	261	0	0	1	1	576
05:00 PM	59	232	2	293	16	0	17	33	2	195	75	272	0	0	0	0	598
05:15 PM	35	244	0	279	27	0	21	48	2	209	74	285	0	0	0	0	612
05:30 PM	55	241	2	298	23	0	17	40	1	219	60	280	0	0	1	1	619
Total Volume	199	927	9	1135	98	0	72	170	6	835	257	1098	0	0	2	2	2405
% App. Total	17.5	81.7	0.8		57.6	0	42.4		0.5	76	23.4		0	0	100		
PHF	.843	.950	.450	.952	.766	.000	.857	.867	.750	.953	.857	.963	.000	.000	.500	.500	.971



**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : CrenshawBlvd\_108thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 1

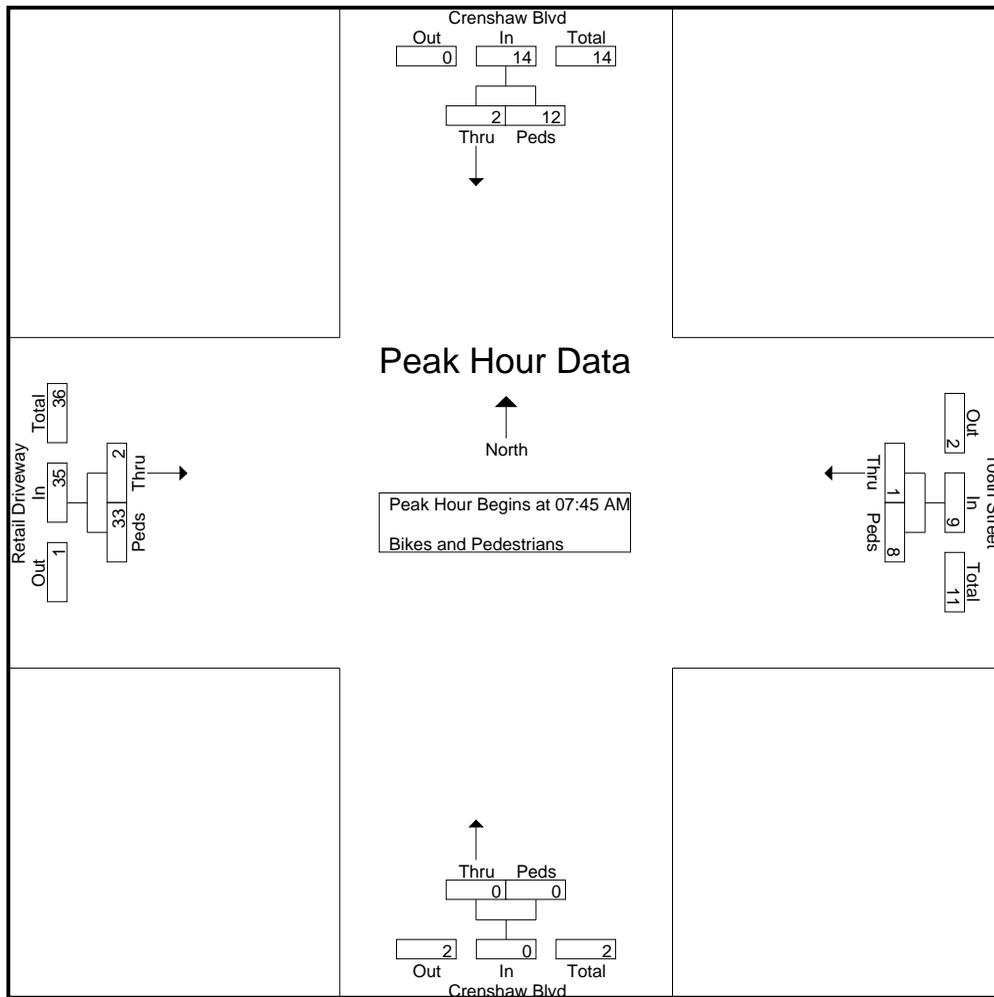
Groups Printed- Bikes and Pedestrians

Start Time	Crenshaw Blvd Southbound		108th Street Westbound		Crenshaw Blvd Northbound		Retail Driveway Eastbound		Int. Total
	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	
07:00 AM	0	0	0	1	0	0	0	2	3
07:15 AM	0	4	0	0	0	0	0	3	7
07:30 AM	0	4	0	0	0	0	0	4	8
07:45 AM	0	4	0	3	0	0	0	7	14
Total	0	12	0	4	0	0	0	16	32
08:00 AM	1	4	1	2	0	0	1	17	26
08:15 AM	0	3	0	0	0	0	0	6	9
08:30 AM	1	1	0	3	0	0	1	3	9
08:45 AM	0	2	1	2	0	0	1	3	9
Total	2	10	2	7	0	0	3	29	53
04:00 PM	0	0	0	1	0	0	0	3	4
04:15 PM	0	1	0	0	0	0	0	3	4
04:30 PM	0	1	1	2	0	0	1	5	10
04:45 PM	0	1	0	0	0	0	0	0	1
Total	0	3	1	3	0	0	1	11	19
05:00 PM	1	1	0	3	0	0	1	2	8
05:15 PM	0	1	0	1	0	0	0	2	4
05:30 PM	0	2	1	2	0	1	0	0	6
05:45 PM	0	2	0	1	0	0	1	1	5
Total	1	6	1	7	0	1	2	5	23
Grand Total	3	31	4	21	0	1	6	61	127
Apprch %	8.8	91.2	16	84	0	100	9	91	
Total %	2.4	24.4	3.1	16.5	0	0.8	4.7	48	

**CITY TRAFFIC COUNTERS**  
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File Name : CrenshawBlvd\_108thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 2

Start Time	Crenshaw Blvd Southbound			108th Street Westbound			Crenshaw Blvd Northbound			Retail Driveway Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	0	4	4	0	3	3	0	0	0	0	7	7	14
08:00 AM	1	4	5	1	2	3	0	0	0	1	17	18	26
08:15 AM	0	3	3	0	0	0	0	0	0	0	6	6	9
08:30 AM	1	1	2	0	3	3	0	0	0	1	3	4	9
Total Volume	2	12	14	1	8	9	0	0	0	2	33	35	58
% App. Total	14.3	85.7		11.1	88.9		0	0		5.7	94.3		
PHF	.500	.750	.700	.250	.667	.750	.000	.000	.000	.500	.485	.486	.558

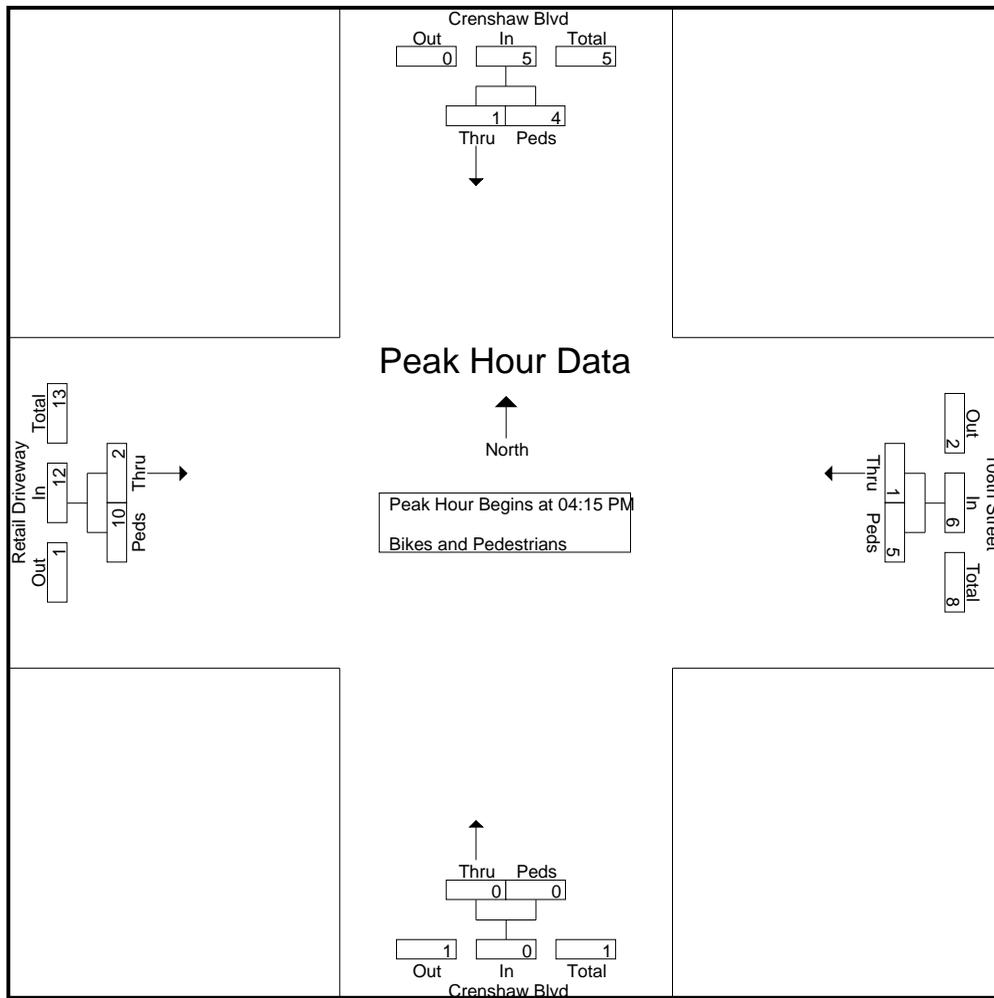


**CITY TRAFFIC COUNTERS**  
**WWW.CTCOUNTERS.COM**

File Name : CrenshawBlvd\_108thSt\_BP  
 Site Code : 00000000  
 Start Date : 3/30/2022  
 Page No : 3

Start Time	Crenshaw Blvd Southbound			108th Street Westbound			Crenshaw Blvd Northbound			Retail Driveway Eastbound			Int. Total
	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	
04:15 PM	0	1	1	0	0	0	0	0	0	0	3	3	4
04:30 PM	0	1	1	1	2	3	0	0	0	1	5	6	10
04:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	1
05:00 PM	1	1	2	0	3	3	0	0	0	1	2	3	8
Total Volume	1	4	5	1	5	6	0	0	0	2	10	12	23
% App. Total	20	80		16.7	83.3		0	0		16.7	83.3		
PHF	.250	1.00	.625	.250	.417	.500	.000	.000	.000	.500	.500	.500	.575

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:15 PM



## **APPENDIX C**

### **ICU/HCM AND LEVELS OF SERVICE EXPLANATION ICU/HCM DATA WORKSHEETS**

## INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing. The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics		
Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

### SERVICE LEVEL A

There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

### SERVICE LEVEL B

This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

### SERVICE LEVEL C

At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

### SERVICE LEVEL D

This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

### SERVICE LEVEL E

This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

### SERVICE LEVEL F

Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

## LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections	
Level of Service	Average Control Delay (Sec/Veh)
A	$\leq 10$
B	$> 10 \text{ and } \leq 15$
C	$> 15 \text{ and } \leq 25$
D	$> 25 \text{ and } \leq 35$
E	$> 35 \text{ and } \leq 50$
F	$> 50$

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

**LOS A** describes operations with very low control delay, up to 10 seconds per vehicle.

**LOS B** describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

**LOS C** describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

**LOS D** describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

**LOS E** describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

**LOS F** describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

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**INTERSECTION CAPACITY UTILIZATION**

N-S St: Yukon Avenue  
 E-W St: Century Boulevard  
 Project: Morningside High School Site Upgrade Project/1-21-4437-1  
 File: ICU1

Yukon Avenue @ Century Boulevard  
 Peak hr: AM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

2022 EXISTING TRAFFIC				2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT				
Movement	1	2	V/C	Added Volume	Total Volume	2	V/C	Added Volume	Total Volume	2	V/C	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2	V/C	Added Volume	Total Volume	2	V/C	
	Volume	Capacity	Ratio			Capacity	Ratio			Capacity	Ratio				Capacity	Ratio			Capacity	Ratio	Capacity
NB Left [3]	278	0	0.058	0	278	0	0.058	0	278	0	0.058	8	0	286	0	0.060	0	286	0	0.060	
NB Thru [3]	3	4800	0.099 *	0	3	4800	0.099 *	0	3	4800	0.099 *	0	0	3	4800	0.102 *	0	3	4800	0.102 *	
NB Right [3]	195	0	0.000	0	195	0	0.000	0	195	0	0.000	6	0	201	0	0.000	0	201	0	0.000	
SB Left [3]	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *	0	0	5	1600	0.003 *	0	5	1600	0.003 *	
SB Thru [3]	1	1600	0.001	0	1	1600	0.001	0	1	1600	0.001	0	0	1	1600	0.001	0	1	1600	0.001	
SB Right [3]	4	1600	0.003	0	4	1600	0.003	0	4	1600	0.003	0	0	4	1600	0.003	0	4	1600	0.003	
EB Left	13	1600	0.008 *	0	13	1600	0.008 *	0	13	1600	0.008 *	0	0	13	1600	0.008 *	0	13	1600	0.008 *	
EB Thru	498	4800	0.136	0	498	4800	0.136	0	498	4800	0.136	15	192	705	4800	0.180	0	705	4800	0.180	
EB Right	154	0	0.000	0	154	0	0.000	0	154	0	0.000	5	0	159	0	0.000	0	159	0	0.000	
WB Left	97	1600	0.061	0	97	1600	0.061	0	97	1600	0.061	3	0	100	1600	0.063	0	100	1600	0.063	
WB Thru	942	4800	0.196 *	0	942	4800	0.196 *	0	942	4800	0.196 *	29	318	1289	4800	0.269 *	0	1289	4800	0.269 *	
WB Right	18	1600	0.011	0	18	1600	0.011	0	18	1600	0.011	1	0	19	1600	0.012	0	19	1600	0.012	
Yellow Allowance			0.100 *					0.100 *					0.100 *					0.100 *			
ICU LOS			0.407 A					0.407 A					0.482 A					0.482 A			

\* Key conflicting movement as a part of ICU  
 1 Counts conducted by: City Traffic Counters  
 2 Capacity expressed in veh/hour of green  
 3 Split-phase operation.

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**INTERSECTION CAPACITY UTILIZATION**

N-S St: Yukon Avenue  
 E-W St: Century Boulevard  
 Project: Morningside High School Site Upgrade Project/1-21-4437-1  
 File: ICU1

Yukon Avenue @ Century Boulevard  
 Peak hr: PM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

2022 EXISTING TRAFFIC				2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT			
Movement	1	2	V/C	Added Volume	Total Volume	2	V/C	Added Volume	Total Volume	2	V/C	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2	V/C	Added Volume	Total Volume	2	V/C
	Volume	Capacity	Ratio			Capacity	Ratio			Capacity	Ratio				Capacity	Ratio			Capacity	Ratio
NB Left [3]	253	0	0.053	14	267	0	0.056	0	267	0	0.056	8	0	261	0	0.054	14	275	0	0.057
NB Thru [3]	4	4800	0.104 *	0	4	4800	0.107 *	0	4	4800	0.107 *	0	0	4	4800	0.107 *	0	4	4800	0.110 *
NB Right [3]	242	0	0.000	0	242	0	0.000	0	242	0	0.000	7	0	249	0	0.000	0	249	0	0.000
SB Left [3]	15	1600	0.009 *	0	15	1600	0.009 *	0	15	1600	0.009 *	0	0	15	1600	0.009 *	0	15	1600	0.009 *
SB Thru [3]	8	1600	0.005	0	8	1600	0.005	0	8	1600	0.005	0	0	8	1600	0.005	0	8	1600	0.005
SB Right [3]	11	1600	0.007	0	11	1600	0.007	0	11	1600	0.007	0	0	11	1600	0.007	0	11	1600	0.007
EB Left	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004	0	0	7	1600	0.004	0	7	1600	0.004
EB Thru	1130	4800	0.280 *	0	1130	4800	0.283 *	0	1130	4800	0.283 *	34	237	1401	4800	0.338 *	0	1401	4800	0.341 *
EB Right	214	0	0.000	16	230	0	0.000	0	230	0	0.000	6	0	220	0	0.000	16	236	0	0.000
WB Left	164	1600	0.103 *	0	164	1600	0.103 *	0	164	1600	0.103 *	5	0	169	1600	0.106 *	0	169	1600	0.106 *
WB Thru	674	4800	0.140	0	674	4800	0.140	0	674	4800	0.140	20	328	1022	4800	0.213	0	1022	4800	0.213
WB Right	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004	0	0	7	1600	0.004	0	7	1600	0.004
Yellow Allowance	0.100 *			0.100 *				0.100 *					0.100 *				0.100 *			
ICU	0.596			0.602				0.602					0.660				0.666			
LOS	A			B				B					B				B			

\* Key conflicting movement as a part of ICU  
 1 Counts conducted by: City Traffic Counters  
 2 Capacity expressed in veh/hour of green  
 3 Split-phase operation.

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**INTERSECTION CAPACITY UTILIZATION**

N-S St: Yukon Avenue  
 E-W St: 104th Street  
 Project: Morningside High School Site Upgrade Project/1-21-4437-1  
 File: ICU2

Yukon Avenue @ 104th Street  
 Peak hr: AM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

2022 EXISTING TRAFFIC				2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT			
Movement	1	2	V/C	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
	Volume	Capacity	Ratio																	
NB Left	18	1600	0.011	0	18	1600	0.011	0	18	1600	0.011	1	0	19	1600	0.012	0	19	1600	0.012
NB Thru	226	1600	0.203 *	0	226	1600	0.203 *	0	226	1600	0.203 *	7	0	233	1600	0.209 *	0	233	1600	0.209 *
NB Right	98	0	0.000	0	98	0	0.000	0	98	0	0.000	3	0	101	0	0.000	0	101	0	0.000
SB Left	62	1600	0.039 *	0	62	1600	0.039 *	0	62	1600	0.039 *	2	0	64	1600	0.040 *	0	64	1600	0.040 *
SB Thru	151	1600	0.113	0	151	1600	0.113	0	151	1600	0.113	5	0	156	1600	0.117	0	156	1600	0.117
SB Right	30	0	0.000	0	30	0	0.000	0	30	0	0.000	1	0	31	0	0.000	0	31	0	0.000
EB Left	54	0	0.034 *	0	54	0	0.034 *	0	54	0	0.034 *	2	0	56	0	0.035 *	0	56	0	0.035 *
EB Thru	124	1600	0.126	0	124	1600	0.126	0	124	1600	0.126	4	4	132	1600	0.133	0	132	1600	0.133
EB Right	24	0	0.000	0	24	0	0.000	0	24	0	0.000	1	0	25	0	0.000	0	25	0	0.000
WB Left	89	0	0.056	0	89	0	0.056	0	89	0	0.056	3	0	92	0	0.058	0	92	0	0.058
WB Thru	89	1600	0.199 *	0	89	1600	0.199 *	0	89	1600	0.199 *	3	9	101	1600	0.212 *	0	101	1600	0.212 *
WB Right	141	0	0.000	0	141	0	0.000	0	141	0	0.000	4	1	146	0	0.000	0	146	0	0.000
Yellow Allowance	0.100 *			0.100 *				0.100 *					0.100 *							
ICU LOS	0.574 A			0.574 A				0.574 A					0.596 A							

\* Key conflicting movement as a part of ICU  
 1 Counts conducted by: City Traffic Counters  
 2 Capacity expressed in veh/hour of green

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**INTERSECTION CAPACITY UTILIZATION**

N-S St: Yukon Avenue  
 E-W St: 104th Street  
 Project: Morningside High School Site Upgrade Project/1-21-4437-1  
 File: ICU2

Yukon Avenue @ 104th Street  
 Peak hr: PM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

2022 EXISTING TRAFFIC	2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT						
	Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity
NB Left	18	1600	0.011	10	28	1600	0.018	0	28	1600	0.018	1	0	19	1600	0.012	10	29	1600	0.018
NB Thru	215	1600	0.158 *	10	225	1600	0.164 *	0	225	1600	0.164 *	7	0	222	1600	0.163 *	10	232	1600	0.169 *
NB Right	37	0	0.000	0	37	0	0.000	0	37	0	0.000	1	0	38	0	0.000	0	38	0	0.000
SB Left	141	1600	0.088 *	4	145	1600	0.091 *	0	145	1600	0.091 *	4	1	146	1600	0.091 *	4	150	1600	0.094 *
SB Thru	235	1600	0.173	12	247	1600	0.181	0	247	1600	0.181	7	0	242	1600	0.178	12	254	1600	0.186
SB Right	42	0	0.000	0	42	0	0.000	0	42	0	0.000	1	0	43	0	0.000	0	43	0	0.000
EB Left	81	0	0.051 *	0	81	0	0.051 *	0	81	0	0.051 *	2	0	83	0	0.052 *	0	83	0	0.052
EB Thru	151	1600	0.155	22	173	1600	0.176	0	173	1600	0.176	5	14	170	1600	0.168	22	192	1600	0.189
EB Right	16	0	0.000	12	28	0	0.000	0	28	0	0.000	0	0	16	0	0.000	12	28	0	0.000
WB Left	30	0	0.019	0	30	0	0.019	0	30	0	0.019	1	0	31	0	0.019	0	31	0	0.019
WB Thru	57	1600	0.132 *	19	76	1600	0.146 *	0	76	1600	0.146 *	2	10	69	1600	0.143 *	19	88	1600	0.157
WB Right	124	0	0.000	3	127	0	0.000	0	127	0	0.000	4	1	129	0	0.000	3	132	0	0.000
Yellow Allowance	0.100 *			0.100 *				0.100 *					0.100 *							
ICU LOS	0.528 A			0.551 A				0.551 A					0.549 A							

\* Key conflicting movement as a part of ICU  
 1 Counts conducted by: City Traffic Counters  
 2 Capacity expressed in veh/hour of green

**LINSCOTT, LAW & GREENSPAN, ENGINEERS**  
 600 S. Lake Avenue, Ste 500, Pasadena 91106  
 (626) 796.2322 Fax (626) 792.0941

**INTERSECTION CAPACITY UTILIZATION**

N-S St: Yukon Avenue  
 E-W St: 108th Street  
 Project: Morningside High School Site Upgrade Project/1-21-4437-1  
 File: ICU3

Yukon Avenue @ 108th Street  
 Peak hr: AM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

2022 EXISTING TRAFFIC	2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT						
	Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity
NB Left	17	0	0.011	0	17	0	0.011	0	17	0	0.011	1	0	18	0	0.011	0	18	0	0.011
NB Thru	279	1600	0.190 *	0	279	1600	0.190 *	0	279	1600	0.190 *	8	0	287	1600	0.196 *	0	287	1600	0.196 *
NB Right	8	0	0.000	0	8	0	0.000	0	8	0	0.000	0	0	8	0	0.000	0	8	0	0.000
SB Left	15	0	0.009 *	0	15	0	0.009 *	0	15	0	0.009 *	0	0	15	0	0.009 *	0	15	0	0.009 *
SB Thru	225	1600	0.165	0	225	1600	0.165	0	225	1600	0.165	7	0	232	1600	0.170	0	232	1600	0.170
SB Right	24	0	0.000	0	24	0	0.000	0	24	0	0.000	1	0	25	0	0.000	0	25	0	0.000
EB Left	11	0	0.007 *	0	11	0	0.007 *	0	11	0	0.007 *	0	0	11	0	0.007 *	0	11	0	0.007 *
EB Thru	23	1600	0.030	0	23	1600	0.030	0	23	1600	0.030	1	0	24	1600	0.031	0	24	1600	0.031
EB Right	14	0	0.000	0	14	0	0.000	0	14	0	0.000	0	0	14	0	0.000	0	14	0	0.000
WB Left	13	0	0.008	0	13	0	0.008	0	13	0	0.008	0	0	13	0	0.008	0	13	0	0.008
WB Thru	66	1600	0.111 *	0	66	1600	0.111 *	0	66	1600	0.111 *	2	0	68	1600	0.114 *	0	68	1600	0.114 *
WB Right	98	0	0.000	0	98	0	0.000	0	98	0	0.000	3	0	101	0	0.000	0	101	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU LOS			0.417 A				0.417 A				0.417 A					0.426 A				0.426 A

\* Key conflicting movement as a part of ICU  
 1 Counts conducted by: City Traffic Counters  
 2 Capacity expressed in veh/hour of green

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**INTERSECTION CAPACITY UTILIZATION**

N-S St: Yukon Avenue  
 E-W St: 108th Street  
 Project: Morningside High School Site Upgrade Project/1-21-4437-1  
 File: ICU3

Yukon Avenue @ 108th Street  
 Peak hr: PM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

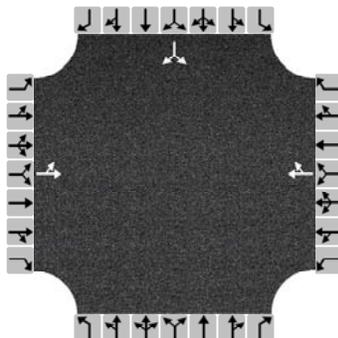
2022 EXISTING TRAFFIC				2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT			
Movement	1	2	V/C	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
	Volume	Capacity	Ratio																	
NB Left	10	0	0.006 *	0	10	0	0.006 *	0	10	0	0.006 *	0	0	10	0	0.006 *	0	10	0	0.006 *
NB Thru	171	1600	0.119	20	191	1600	0.132	0	191	1600	0.132	5	0	176	1600	0.123	20	196	1600	0.135
NB Right	10	0	0.000	0	10	0	0.000	0	10	0	0.000	0	0	10	0	0.000	0	10	0	0.000
SB Left	40	0	0.025	34	74	0	0.046	0	74	0	0.046	1	0	41	0	0.026	34	75	0	0.047
SB Thru	265	1600	0.198 *	17	282	1600	0.241 *	0	282	1600	0.241 *	8	0	273	1600	0.204 *	17	290	1600	0.246 *
SB Right	12	0	0.000	17	29	0	0.000	0	29	0	0.000	0	0	12	0	0.000	17	29	0	0.000
EB Left	27	0	0.017 *	20	47	0	0.029 *	0	47	0	0.029 *	1	0	28	0	0.018 *	20	48	0	0.030 *
EB Thru	51	1600	0.056	0	51	1600	0.069	0	51	1600	0.069	2	0	53	1600	0.058	0	53	1600	0.071
EB Right	12	0	0.000	0	12	0	0.000	0	12	0	0.000	0	0	12	0	0.000	0	12	0	0.000
WB Left	7	0	0.004	0	7	0	0.004	0	7	0	0.004	0	0	7	0	0.004	0	7	0	0.004
WB Thru	44	1600	0.063 *	0	44	1600	0.088 *	0	44	1600	0.088 *	1	0	45	1600	0.064 *	0	45	1600	0.089 *
WB Right	49	0	0.000	40	89	0	0.000	0	89	0	0.000	1	0	50	0	0.000	40	90	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *	
ICU LOS			0.384 A				0.464 A				0.464 A				0.391 A				0.471 A	

\* Key conflicting movement as a part of ICU  
 1 Counts conducted by: City Traffic Counters  
 2 Capacity expressed in veh/hour of green

# HCS All-Way Stop Control Report

General Information		Site Information	
Analyst	DLR	Intersection	Int. 4
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	104th Street
Analysis Year	2022	North/South Street	Dixon Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing AM Peak Hour		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	10	259			300	6				12		15
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	292			333						29		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.260			0.296						0.026		
Final Departure Headway, hd (s)	4.35			4.29						5.01		
Final Degree of Utilization, x	0.353			0.397						0.041		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.35			2.29						3.01		

## Capacity, Delay and Level of Service

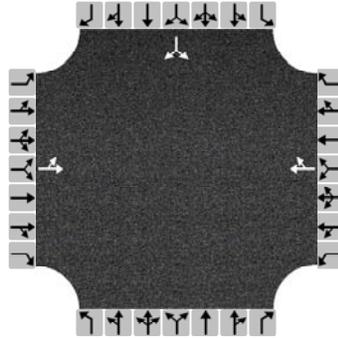
Flow Rate, v (veh/h)	292			333						29		
Capacity	828			839						719		
95% Queue Length, Q <sub>95</sub> (veh)	1.6			1.9						0.1		
Control Delay (s/veh)	9.7			10.1						8.2		
Level of Service, LOS	A			B						A		
Approach Delay (s/veh)	9.7			10.1						8.2		
Approach LOS	A			B						A		
Intersection Delay, s/veh   LOS	9.8						A					

# HCS All-Way Stop Control Report

## General Information

Analyst	DLR	Intersection	Int. 4
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	104th Street
Analysis Year	2022	North/South Street	Dixon Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing PM Peak Hour		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	14	323			210	16				14		10
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	366			246						26		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.326			0.218						0.023		
Final Departure Headway, hd (s)	4.26			4.32						5.10		
Final Degree of Utilization, x	0.434			0.295						0.037		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.26			2.32						3.10		

## Capacity, Delay and Level of Service

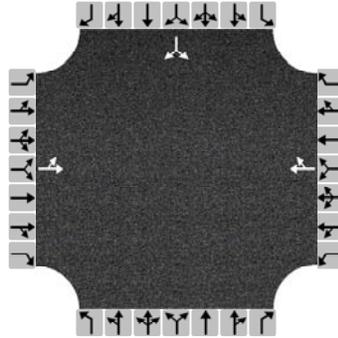
Flow Rate, v (veh/h)	366			246						26		
Capacity	845			833						705		
95% Queue Length, Q <sub>95</sub> (veh)	2.2			1.2						0.1		
Control Delay (s/veh)	10.5			9.1						8.3		
Level of Service, LOS	B			A						A		
Approach Delay (s/veh)	10.5			9.1						8.3		
Approach LOS	B			A						A		
Intersection Delay, s/veh   LOS	9.9						A					

# HCS All-Way Stop Control Report

## General Information

Analyst	DLR	Intersection	Int. 4
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	104th Street
Analysis Year	2022	North/South Street	Dixon Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing + Project PM PH		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	14	382			279	16				14		10
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	430			321						26		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.383			0.285						0.023		
Final Departure Headway, hd (s)	4.35			4.42						5.42		
Final Degree of Utilization, x	0.520			0.393						0.039		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.35			2.42						3.42		

## Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	430			321						26		
Capacity	828			815						664		
95% Queue Length, Q <sub>95</sub> (veh)	3.1			1.9						0.1		
Control Delay (s/veh)	12.0			10.2						8.6		
Level of Service, LOS	B			B						A		
Approach Delay (s/veh)	12.0			10.2						8.6		
Approach LOS	B			B						A		
Intersection Delay, s/veh   LOS	11.1						B					

# HCS All-Way Stop Control Report

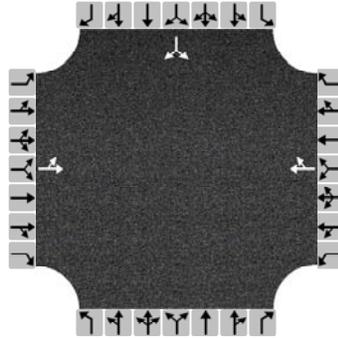
## General Information

Analyst	DLR
Agency/Co.	LLG Engineers
Date Performed	5/13/2022
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Future Pre-Project PM PH
Project Description	Morningside High School Site Upgrade Project/4437

## Site Information

Intersection	Int. 4
Jurisdiction	City of Inglewood
East/West Street	104th Street
North/South Street	Dixon Avenue
Peak Hour Factor	0.92

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	14	348			227	16				14		10
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	393			264						26		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.350			0.235						0.023		
Final Departure Headway, hd (s)	4.28			4.35						5.20		
Final Degree of Utilization, x	0.468			0.319						0.038		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.28			2.35						3.20		

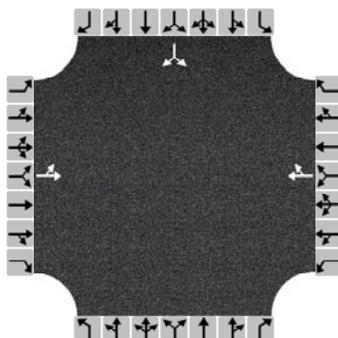
## Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	393			264						26		
Capacity	840			827						692		
95% Queue Length, Q <sub>95</sub> (veh)	2.5			1.4						0.1		
Control Delay (s/veh)	11.0			9.4						8.4		
Level of Service, LOS	B			A						A		
Approach Delay (s/veh)	11.0			9.4						8.4		
Approach LOS	B			A						A		
Intersection Delay, s/veh   LOS	10.3						B					

# HCS All-Way Stop Control Report

General Information		Site Information	
Analyst	DLR	Intersection	Int. 4
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	104th Street
Analysis Year	2025	North/South Street	Dixon Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Future With Project PM PH		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	14	407			296	16				14		10
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	458			339						26		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.407			0.301						0.023		
Final Departure Headway, hd (s)	4.37			4.45						5.52		
Final Degree of Utilization, x	0.555			0.419						0.040		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.37			2.45						3.52		

## Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	458			339						26		
Capacity	824			810						652		
95% Queue Length, Q <sub>95</sub> (veh)	3.5			2.1						0.1		
Control Delay (s/veh)	12.7			10.6						8.7		
Level of Service, LOS	B			B						A		
Approach Delay (s/veh)	12.7			10.6						8.7		
Approach LOS	B			B						A		
Intersection Delay, s/veh   LOS	11.7						B					

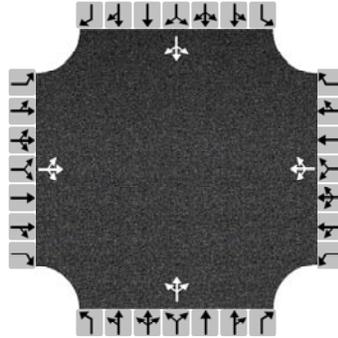
# HCS All-Way Stop Control Report

## General Information

Analyst	DLR	Intersection	Int. 5
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	108th Street
Analysis Year	2022	North/South Street	Lemoli Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing AM Peak Hour		
Project Description	Morningside High School Site Upgrade Project/4437		

## Site Information

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	0	40	11	19	131	1	25	0	7	0	3	0
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	55			164			35			3		
Percent Heavy Vehicles	2			2			2			2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.049			0.146			0.031			0.003		
Final Departure Headway, hd (s)	4.05			4.10			4.43			4.44		
Final Degree of Utilization, x	0.062			0.187			0.043			0.004		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.05			2.10			2.43			2.44		

## Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	55			164			35			3		
Capacity	889			879			812			810		
95% Queue Length, Q <sub>95</sub> (veh)	0.2			0.7			0.1			0.0		
Control Delay (s/veh)	7.3			8.0			7.6			7.5		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.3			8.0			7.6			7.5		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh   LOS	7.8						A					

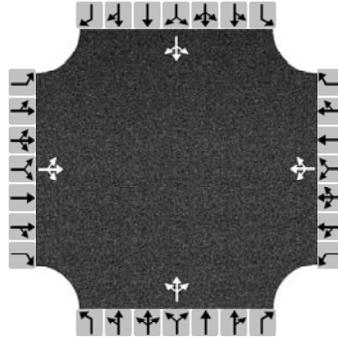
# HCS All-Way Stop Control Report

## General Information

Analyst	DLR	Intersection	Int. 5
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	108th Street
Analysis Year	2022	North/South Street	Lemoli Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing PM Peak Hour		
Project Description	Morningside High School Site Upgrade Project/4437		

## Site Information

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	1	75	16	16	97	1	15	2	3	1	1	1
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	100			124			22			3		
Percent Heavy Vehicles	2			2			2			2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.089			0.110			0.019			0.003		
Final Departure Headway, hd (s)	4.01			4.11			4.47			4.30		
Final Degree of Utilization, x	0.111			0.141			0.027			0.004		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.01			2.11			2.47			2.30		

## Capacity, Delay and Level of Service

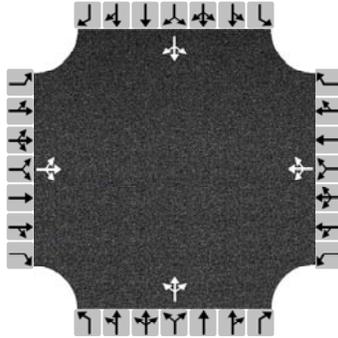
Flow Rate, v (veh/h)	100			124			22			3		
Capacity	898			876			805			837		
95% Queue Length, Q <sub>95</sub> (veh)	0.4			0.5			0.1			0.0		
Control Delay (s/veh)	7.5			7.8			7.6			7.3		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.5			7.8			7.6			7.3		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh   LOS	7.7						A					

# HCS All-Way Stop Control Report

## General Information

Analyst	DLR	Intersection	Int. 5
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	108th Street
Analysis Year	2022	North/South Street	Lemoli Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing + Project PM PH		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	1	109	16	16	137	1	15	2	3	1	1	1
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	137			167			22			3		
Percent Heavy Vehicles	2			2			2			2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.122			0.149			0.019			0.003		
Final Departure Headway, hd (s)	4.08			4.14			4.64			4.47		
Final Degree of Utilization, x	0.155			0.193			0.028			0.004		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.08			2.14			2.64			2.47		

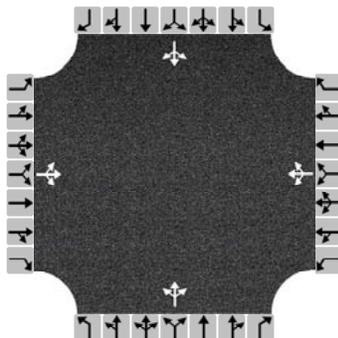
## Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	137			167			22			3		
Capacity	882			869			775			805		
95% Queue Length, Q <sub>95</sub> (veh)	0.5			0.7			0.1			0.0		
Control Delay (s/veh)	7.8			8.1			7.8			7.5		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.8			8.1			7.8			7.5		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh   LOS	8.0						A					

# HCS All-Way Stop Control Report

General Information		Site Information	
Analyst	DLR	Intersection	Int. 5
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	108th Street
Analysis Year	2025	North/South Street	Lemoli Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Future Pre-Project PM PH		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	1	77	16	16	100	1	15	2	3	1	1	1
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	102			127			22			3		
Percent Heavy Vehicles	2			2			2			2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.091			0.113			0.019			0.003		
Final Departure Headway, hd (s)	4.01			4.11			4.48			4.31		
Final Degree of Utilization, x	0.114			0.145			0.027			0.004		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.01			2.11			2.48			2.31		

## Capacity, Delay and Level of Service

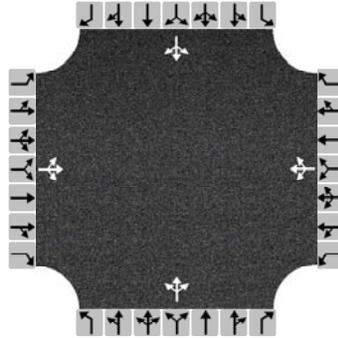
Flow Rate, v (veh/h)	102			127			22			3		
Capacity	897			876			803			835		
95% Queue Length, Q <sub>95</sub> (veh)	0.4			0.5			0.1			0.0		
Control Delay (s/veh)	7.5			7.8			7.6			7.3		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.5			7.8			7.6			7.3		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh   LOS	7.7						A					

# HCS All-Way Stop Control Report

## General Information

Analyst	DLR	Intersection	Int. 5
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	108th Street
Analysis Year	2025	North/South Street	Lemoli Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Future With Project PM PH		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	1	111	16	16	140	1	15	2	3	1	1	1
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	139			171			22			3		
Percent Heavy Vehicles	2			2			2			2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.124			0.152			0.019			0.003		
Final Departure Headway, hd (s)	4.09			4.14			4.66			4.49		
Final Degree of Utilization, x	0.158			0.196			0.028			0.004		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.09			2.14			2.66			2.49		

## Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	139			171			22			3		
Capacity	881			869			773			802		
95% Queue Length, Q <sub>95</sub> (veh)	0.6			0.7			0.1			0.0		
Control Delay (s/veh)	7.8			8.2			7.8			7.5		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.8			8.2			7.8			7.5		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh   LOS	8.0						A					

# HCS All-Way Stop Control Report

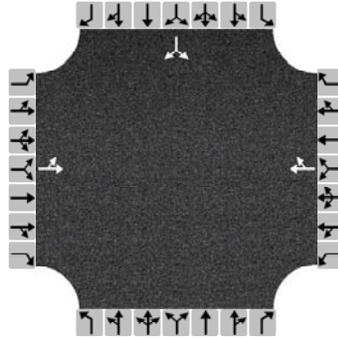
## General Information

Analyst	DLR
Agency/Co.	LLG Engineers
Date Performed	5/13/2022
Analysis Year	2022
Analysis Time Period (hrs)	0.25
Time Analyzed	Existing AM Peak Hour
Project Description	Morningside High School Site Upgrade Project/4437

## Site Information

Intersection	Int. 6
Jurisdiction	City of Inglewood
East/West Street	104th Street
North/South Street	Woodworth Avenue
Peak Hour Factor	0.92

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	7	264			282	14				12		16
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	295			322						30		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.262			0.286						0.027		
Final Departure Headway, hd (s)	4.34			4.28						4.98		
Final Degree of Utilization, x	0.355			0.383						0.042		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.34			2.28						2.98		

## Capacity, Delay and Level of Service

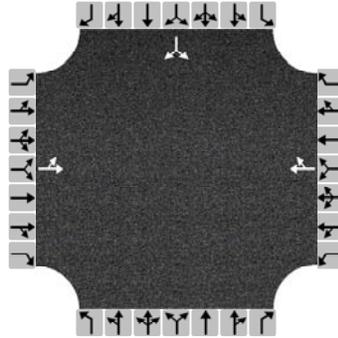
Flow Rate, v (veh/h)	295			322						30		
Capacity	830			841						723		
95% Queue Length, Q <sub>95</sub> (veh)	1.6			1.8						0.1		
Control Delay (s/veh)	9.7			9.9						8.2		
Level of Service, LOS	A			A						A		
Approach Delay (s/veh)	9.7			9.9						8.2		
Approach LOS	A			A						A		
Intersection Delay, s/veh   LOS	9.7						A					

# HCS All-Way Stop Control Report

## General Information

Analyst	DLR	Intersection	Int. 6
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	104th Street
Analysis Year	2022	North/South Street	Woodworth Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing PM Peak Hour		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	10	328			212	25				19		12
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	367			258						34		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.327			0.229						0.030		
Final Departure Headway, hd (s)	4.30			4.33						5.16		
Final Degree of Utilization, x	0.438			0.310						0.048		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.30			2.33						3.16		

## Capacity, Delay and Level of Service

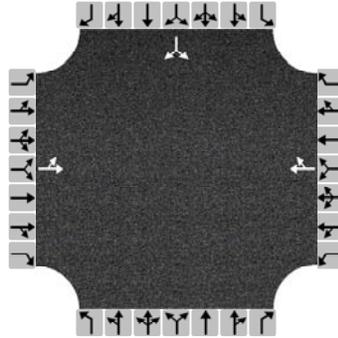
Flow Rate, v (veh/h)	367			258						34		
Capacity	838			832						698		
95% Queue Length, Q <sub>95</sub> (veh)	2.3			1.3						0.2		
Control Delay (s/veh)	10.6			9.3						8.4		
Level of Service, LOS	B			A						A		
Approach Delay (s/veh)	10.6			9.3						8.4		
Approach LOS	B			A						A		
Intersection Delay, s/veh   LOS	10.0						A					

# HCS All-Way Stop Control Report

## General Information

Analyst	DLR	Intersection	Int. 6
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	104th Street
Analysis Year	2022	North/South Street	Woodworth Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing + Project PM PH		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	10	387			281	25				19		12
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	432			333						34		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.384			0.296						0.030		
Final Departure Headway, hd (s)	4.38			4.43						5.48		
Final Degree of Utilization, x	0.525			0.409						0.051		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.38			2.43						3.48		

## Capacity, Delay and Level of Service

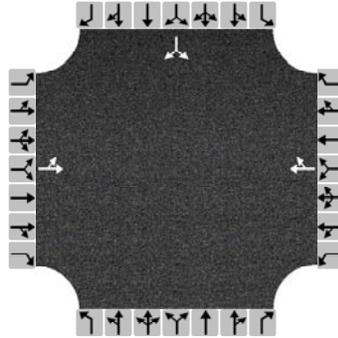
Flow Rate, v (veh/h)	432			333						34		
Capacity	821			813						657		
95% Queue Length, Q <sub>95</sub> (veh)	3.1			2.0						0.2		
Control Delay (s/veh)	12.1			10.5						8.8		
Level of Service, LOS	B			B						A		
Approach Delay (s/veh)	12.1			10.5						8.8		
Approach LOS	B			B						A		
Intersection Delay, s/veh   LOS	11.3						B					

# HCS All-Way Stop Control Report

## General Information

Analyst	DLR	Intersection	Int. 6
Agency/Co.	LLG Engineers	Jurisdiction	City of Inglewood
Date Performed	5/13/2022	East/West Street	104th Street
Analysis Year	2025	North/South Street	Woodworth Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Future Pre-Project PM PH		
Project Description	Morningside High School Site Upgrade Project/4437		

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	10	353			229	26				20		12
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	395			277						35		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.351			0.246						0.031		
Final Departure Headway, hd (s)	4.32			4.37						5.29		
Final Degree of Utilization, x	0.474			0.337						0.051		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.32			2.37						3.29		

## Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	395			277						35		
Capacity	833			823						681		
95% Queue Length, Q <sub>95</sub> (veh)	2.6			1.5						0.2		
Control Delay (s/veh)	11.2			9.6						8.6		
Level of Service, LOS	B			A						A		
Approach Delay (s/veh)	11.2			9.6						8.6		
Approach LOS	B			A						A		
Intersection Delay, s/veh   LOS	10.4						B					

# HCS All-Way Stop Control Report

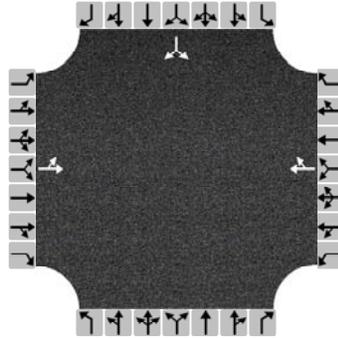
## General Information

Analyst	DLR
Agency/Co.	LLG Engineers
Date Performed	5/13/2022
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Future With Project PM PH
Project Description	Morningside High School Site Upgrade Project/4437

## Site Information

Intersection	Int. 6
Jurisdiction	City of Inglewood
East/West Street	104th Street
North/South Street	Woodworth Avenue
Peak Hour Factor	0.92

## Lanes



## Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	10	412			298	26				20		12
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	459			352						35		
Percent Heavy Vehicles	2			2						2		

## Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.408			0.313						0.031		
Final Departure Headway, hd (s)	4.41			4.47						5.59		
Final Degree of Utilization, x	0.562			0.437						0.054		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.41			2.47						3.59		

## Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	459			352						35		
Capacity	816			806						644		
95% Queue Length, Q <sub>95</sub> (veh)	3.6			2.2						0.2		
Control Delay (s/veh)	12.9			10.9						8.9		
Level of Service, LOS	B			B						A		
Approach Delay (s/veh)	12.9			10.9						8.9		
Approach LOS	B			B						A		
Intersection Delay, s/veh   LOS	11.9						B					

**LINSCOTT, LAW & GREENSPAN, ENGINEERS**

600 S. Lake Avenue, Ste 500, Pasadena 91106  
 (626) 796.2322 Fax (626) 792.0941

**INTERSECTION CAPACITY UTILIZATION**

N-S St: Crenshaw Boulevard  
 E-W St: 104th Street  
 Project: Morningside High School Site Upgrade Project/1-21-4437-1  
 File: ICU7

Crenshaw Boulevard @ 104th Street  
 Peak hr: AM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

Movement	2022 EXISTING TRAFFIC			2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT			
	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	123	1600	0.077 *	0	123	1600	0.077 *	0	123	1600	0.077 *	4	3	130	1600	0.081 *	0	130	1600	0.081 *
NB Thru	768	4800	0.166	0	768	4800	0.166	0	768	4800	0.166	23	102	893	4800	0.192	0	893	4800	0.192
NB Right	27	0	0.000	0	27	0	0.000	0	27	0	0.000	1	0	28	0	0.000	0	28	0	0.000
SB Left	26	1600	0.016	0	26	1600	0.016	0	26	1600	0.016	1	0	27	1600	0.017	0	27	1600	0.017
SB Thru	770	4800	0.184 *	0	770	4800	0.184 *	0	770	4800	0.184 *	23	61	854	4800	0.204 *	0	854	4800	0.204 *
SB Right	115	0	0.000	0	115	0	0.000	0	115	0	0.000	3	6	124	0	0.000	0	124	0	0.000
EB Left	66	0	0.041 *	0	66	0	0.041 *	0	66	0	0.041 *	2	2	70	0	0.044 *	0	70	0	0.044 *
EB Thru	98	1600	0.137	0	98	1600	0.137	0	98	1600	0.137	3	0	101	1600	0.143	0	101	1600	0.143
EB Right	55	0	0.000	0	55	0	0.000	0	55	0	0.000	2	1	58	0	0.000	0	58	0	0.000
WB Left	23	0	0.014	0	23	0	0.014	0	23	0	0.014	1	0	24	0	0.015	0	24	0	0.015
WB Thru	156	1600	0.147 *	0	156	1600	0.147 *	0	156	1600	0.147 *	5	0	161	1600	0.152 *	0	161	1600	0.152 *
WB Right	56	0	0.000	0	56	0	0.000	0	56	0	0.000	2	0	58	0	0.000	0	58	0	0.000
Yellow Allowance	0.100 *			0.100 *				0.100 *					0.100 *							
ICU LOS	0.549 A			0.549 A				0.549 A					0.581 A							

\* Key conflicting movement as a part of ICU  
 1 Counts conducted by: City Traffic Counters  
 2 Capacity expressed in veh/hour of green

**LINSCOTT, LAW & GREENSPAN, ENGINEERS**  
 600 S. Lake Avenue, Ste 500, Pasadena 91106  
 (626) 796.2322 Fax (626) 792.0941

**INTERSECTION CAPACITY UTILIZATION**

N-S St: Crenshaw Boulevard  
 E-W St: 104th Street  
 Project: Morningside High School Site Upgrade Project/1-21-4437-1  
 File: ICU7

Crenshaw Boulevard @ 104th Street  
 Peak hr: PM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

2022 EXISTING TRAFFIC				2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT			
Movement	1	2	V/C	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
	Volume	Capacity	Ratio																	
NB Left	96	1600	0.060 *	0	96	1600	0.060 *	0	96	1600	0.060 *	3	3	102	1600	0.064 *	0	102	1600	0.064 *
NB Thru	750	4800	0.164	0	750	4800	0.164	0	750	4800	0.164	23	95	868	4800	0.189	0	868	4800	0.189
NB Right	38	0	0.000	0	38	0	0.000	0	38	0	0.000	1	0	39	0	0.000	0	39	0	0.000
SB Left	65	1600	0.041	0	65	1600	0.041	0	65	1600	0.041	2	0	67	1600	0.042	0	67	1600	0.042
SB Thru	1005	4800	0.218 *	0	1005	4800	0.227 *	0	1005	4800	0.227 *	30	79	1114	4800	0.242 *	0	1114	4800	0.251 *
SB Right	39	0	0.000	46	85	0	0.000	0	85	0	0.000	1	7	47	0	0.000	46	93	0	0.000
EB Left	48	0	0.030	39	87	0	0.054	0	87	0	0.054	1	10	59	0	0.037	39	98	0	0.061
EB Thru	193	1600	0.181 *	20	213	1600	0.218 *	0	213	1600	0.218 *	6	0	199	1600	0.196 *	20	219	1600	0.233 *
EB Right	49	0	0.000	0	49	0	0.000	0	49	0	0.000	1	5	55	0	0.000	0	55	0	0.000
WB Left	27	0	0.017 *	0	27	0	0.017 *	0	27	0	0.017 *	1	0	28	0	0.018 *	0	28	0	0.018 *
WB Thru	108	1600	0.103	24	132	1600	0.118	0	132	1600	0.118	3	0	111	1600	0.106	24	135	1600	0.121
WB Right	30	0	0.000	0	30	0	0.000	0	30	0	0.000	1	0	31	0	0.000	0	31	0	0.000
Yellow Allowance	0.100 *			0.100 *				0.100 *					0.100 *							
ICU LOS	0.576 A			0.622 B				0.622 B					0.619 B							

\* Key conflicting movement as a part of ICU  
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**LINSCOTT, LAW & GREENSPAN, ENGINEERS**  
 600 S. Lake Avenue, Ste 500, Pasadena 91106  
 (626) 796.2322 Fax (626) 792.0941

**INTERSECTION CAPACITY UTILIZATION**

N-S St: Crenshaw Boulevard  
 E-W St: 108th Street  
 Project: Morningside High School Site Upgrade Project/1-21-4437-1  
 File: ICU8

Crenshaw Boulevard @ 108th Street  
 Peak hr: AM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

Movement	2022 EXISTING TRAFFIC			2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT			
	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	11	0	0.002	0	11	0	0.002	0	11	0	0.002	0	0	11	0	0.002	0	11	0	0.002
NB Thru	768	4800	0.183 *	0	768	4800	0.183 *	0	768	4800	0.183 *	23	105	896	4800	0.210 *	0	896	4800	0.210 *
NB Right	97	0	0.000	0	97	0	0.000	0	97	0	0.000	3	0	100	0	0.000	0	100	0	0.000
SB Left	106	1600	0.066 *	0	106	1600	0.066 *	0	106	1600	0.066 *	3	0	109	1600	0.068 *	0	109	1600	0.068 *
SB Thru	899	4800	0.188	0	899	4800	0.188	0	899	4800	0.188	27	62	988	4800	0.206	0	988	4800	0.206
SB Right	3	0	0.000	0	3	0	0.000	0	3	0	0.000	0	0	3	0	0.000	0	3	0	0.000
EB Left	2	0	0.001	0	2	0	0.001	0	2	0	0.001	0	0	2	0	0.001	0	2	0	0.001
EB Thru	1	1600	0.003 *	0	1	1600	0.003 *	0	1	1600	0.003 *	0	0	1	1600	0.003 *	0	1	1600	0.003 *
EB Right	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	0	1	0	0.000	0	1	0	0.000
WB Left	230	1600	0.144 *	0	230	1600	0.144 *	0	230	1600	0.144 *	7	0	237	1600	0.148 *	0	237	1600	0.148 *
WB Thru	3	0	0.000	0	3	0	0.000	0	3	0	0.000	0	0	3	0	0.000	0	3	0	0.000
WB Right	141	1600	0.088	0	141	1600	0.088	0	141	1600	0.088	4	0	145	1600	0.091	0	145	1600	0.091
Yellow Allowance	0.100 *			0.100 *				0.100 *					0.100 *							
ICU LOS	0.495 A			0.495 A				0.495 A					0.529 A							

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Crenshaw Boulevard @ 108th Street  
 Peak hr: PM  
 Annual Growth: 1.00%

Date: 6/1/2022  
 Existing Year: 2022  
 Projection Year: 2025

2022 EXISTING TRAFFIC				2022 EXISTING WITH PROJECT				2022 EXISTING W/ PROJECT + MITIGATION				2025 FUTURE PRE-PROJECT					2025 FUTURE WITH PROJECT						
Movement	1	2	V/C	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio			
	Volume	Capacity	Ratio																				
NB Left	6	0	0.001	0	6	0	0.001	0	6	0	0.001	0	0	6	0	0.001	0	6	0	0.001			
NB Thru	835	4800	0.229 *	0	835	4800	0.232 *	0	835	4800	0.232 *	25	98	958	4800	0.256 *	0	958	4800	0.260 *			
NB Right	257	0	0.000	17	274	0	0.000	0	274	0	0.000	8	0	265	0	0.000	17	282	0	0.000			
SB Left	199	1600	0.124 *	0	199	1600	0.124 *	0	199	1600	0.124 *	6	0	205	1600	0.128 *	0	205	1600	0.128 *			
SB Thru	927	4800	0.195	0	927	4800	0.195	0	927	4800	0.195	28	84	1039	4800	0.218	0	1039	4800	0.218			
SB Right	9	0	0.000	0	9	0	0.000	0	9	0	0.000	0	0	9	0	0.000	0	9	0	0.000			
EB Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000			
EB Thru	0	1600	0.001 *	0	0	1600	0.001 *	0	0	1600	0.001 *	0	0	0	1600	0.001 *	0	0	1600	0.001 *			
EB Right	2	0	0.000	0	2	0	0.000	0	2	0	0.000	0	0	2	0	0.000	0	2	0	0.000			
WB Left	98	1600	0.061 *	20	118	1600	0.074 *	0	118	1600	0.074 *	3	0	101	1600	0.063 *	20	121	1600	0.076 *			
WB Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000			
WB Right	72	1600	0.045	0	72	1600	0.045	0	72	1600	0.045	2	0	74	1600	0.046	0	74	1600	0.046			
Yellow Allowance			0.100 *					0.100 *										0.100 *					0.100 *
ICU LOS			0.516 A					0.532 A										0.549 A					0.565 A

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