

MEMORANDUM

From: Frederik Venter, P.E. and Colin Ogilvie, Kimley-Horn and Associates

To: Koosun Kim, P.E., City of Tracy

Date: September 26, 2024

Re: IPC 20 Engineering Review

1 Executive Summary

This memorandum presents the engineering site plan review of IPC 20 (Project). The Project is bounded by Old Schulte Road, Bud Lyons Way, Hopkins Road and Pavilion Parkway (the project boundary is offset from Pavillion Parkway by approximately 1200 feet) with four driveways proposed (two on Bud Lyons Way and two on Hopkins Road). The eastern Hopkins Road driveway will be gated and used for emergency vehicle access only. The Project proposes to construct the following on vacant land:

- High-Cube Warehouse: 1,300,256 square feet

The Project also proposes to construct the following street improvement plans:

- Phase 1K
- Hopkins Road Extension – Private Road to Pavillion Parkway
- Promontory Parkway Extension – Pavillion Parkway to Lammers Road

Any other potential off-site improvements will be identified with the operational analysis in Kimley-Horn's *IPC 20 Transportation Technical Report*.

Figure 1 provides a map of the Project vicinity and Figure 2 provides the IPC 20 site plan.

The following items were reviewed in this report:

- Driveway Access
- Vehicle Turning Templates
- On-Site Circulation
- Project Frontage and Off-Site Improvements
- Truck Gate Entry Queuing

Table 1 provides a summary of the engineering comments for IPC 20.

Table 1 – Summary of IPC 20 Engineering Comments

Section	Driveway #	Comments
Driveway Access	1	• All trucks to use Driveway 1 • Recommend restriping roadway to add two-way left turn lane to allow full access at driveway
	2	• Recommend restriping roadway to add two-way left turn lane to allow full access at driveway
	3	• Recommend restriping roadway to add two-way left turn lane to allow full access at driveway
	4	• Driveway to be gated at all times and used by emergency vehicles only
Vehicle Turning Templates	1	• STAA truck turn templates performed. No design revisions recommended.
	2	• No turn templates performed at these driveways, since they will not be used by STAA trucks.
	3	
	4	
On-Site Circulation	1	• Provide stop line and pavement marking • Install Stop (R1-1) sign • Provide centerline striping at a location consistent with the STAA truck turning templates
	2	• Provide stop line and pavement marking • Install Stop (R1-1) sign • Provide centerline striping
	3	• Provide stop line and pavement marking • Install Stop (R1-1) sign • Provide centerline striping
	4	• Not Applicable – will be gated and only used by emergency vehicles
Project Frontage and Off-Site Improvements	-	The following is recommended for the Project's frontage along Old Schulte Rd: From 500' East of Bud Lyons Wy to East Property line: • Construct per Phase 1K Street Improvement Plans The following is recommended for the Project's frontage along Bud Lyons Wy: • Restripe to add two-way left turn lane • Construct 5-foot sidewalk The following is recommended for the Project's frontage along Hopkins Rd: • From Bud Lyons Rd to Judah Wy - o Restripe to add two-way left turn lane - o Construct 5-foot sidewalk • From Private Street to East Property Line - o Construct roadway, sidewalk, lighting and striping per Hopkins Rd Extension Street Improvement Plans
Truck Gate Entry Queuing	1	None – proposed design has adequate queue storage

2 Introduction

This memorandum presents the engineering site plan review of IPC 20 (Project). The Project is bounded by Old Schulte Road, Bud Lyons Way, Hopkins Road and Pavilion Parkway (the project boundary is offset from Pavillion Parkway by approximately 1200 feet) with four driveways proposed (two on Bud Lyons Way and two on Hopkins Road). The eastern Hopkins Road driveway will be gated and used for emergency vehicle access only. The Project proposes to construct the following on vacant land:

- High-Cube Warehouse: 1,300,256 square feet

The Project also proposes to construct the following street improvement plans:

- Phase 1K
- Hopkins Road Extension – Private Road to Pavillion Parkway
- Promontory Parkway Extension – Pavillion Parkway to Lammers Road

Figure 1 provides a map of the Project vicinity. Figure 2 provides the site plan utilized for IPC 20's engineering review.

3 Engineering Review

This section reviews the on-site and off-site plans for compliance with City of Tracy standards and industry guidelines. The following items were reviewed in this report:

- Driveway Access
- Vehicle Turning Templates
- On-Site Circulation
- Project Frontage and Off-Site Improvements
- Truck Gate Entry Queuing

3.1 *Driveway Access Review*

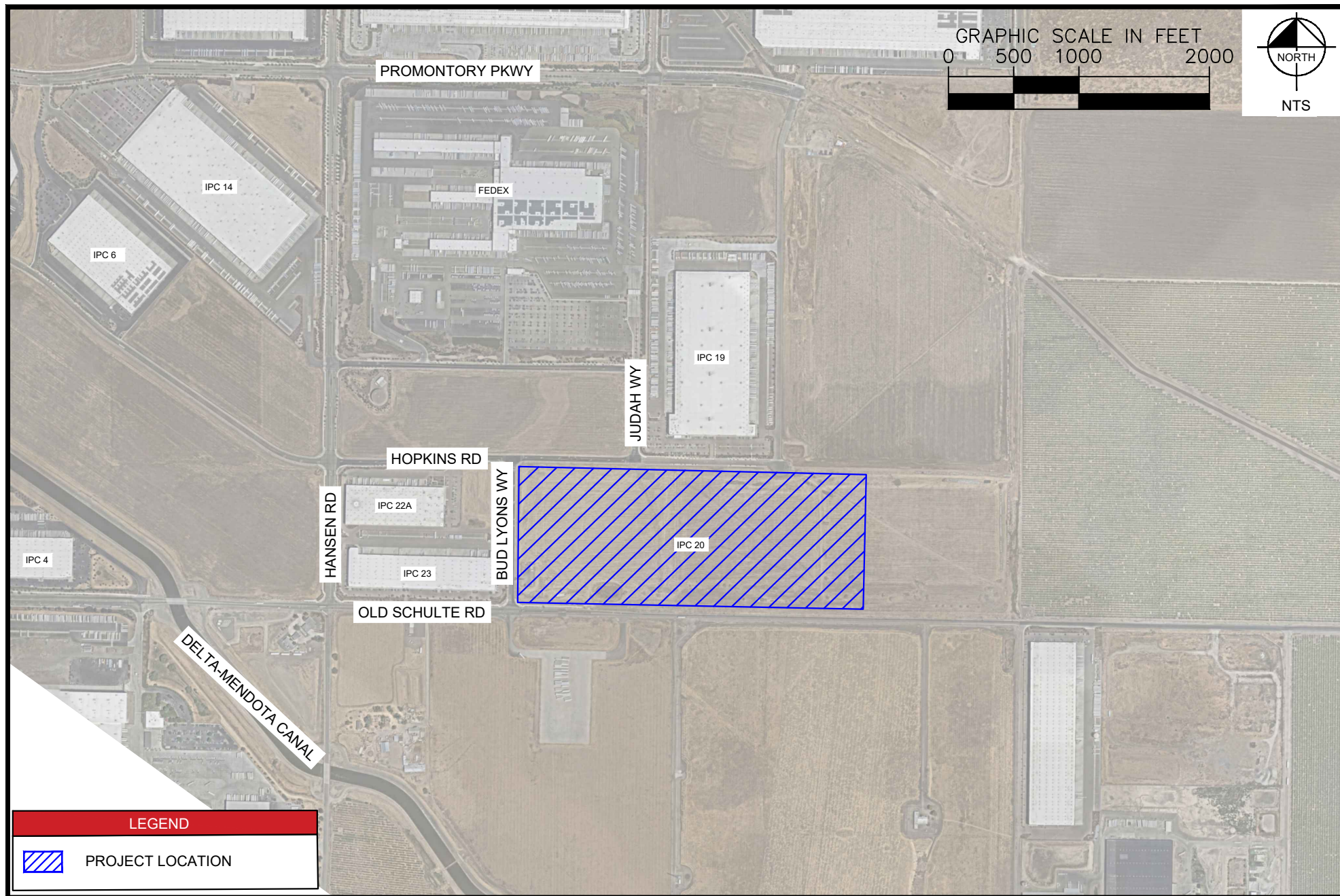
This section reviews the driveway access proposed for IPC 20 in conformance with City of Tracy standards and guidelines. Table 2 provides a summary of the proposed Project driveways including review comments. Figure 3 illustrates the driveway review and recommendations for IPC 20.

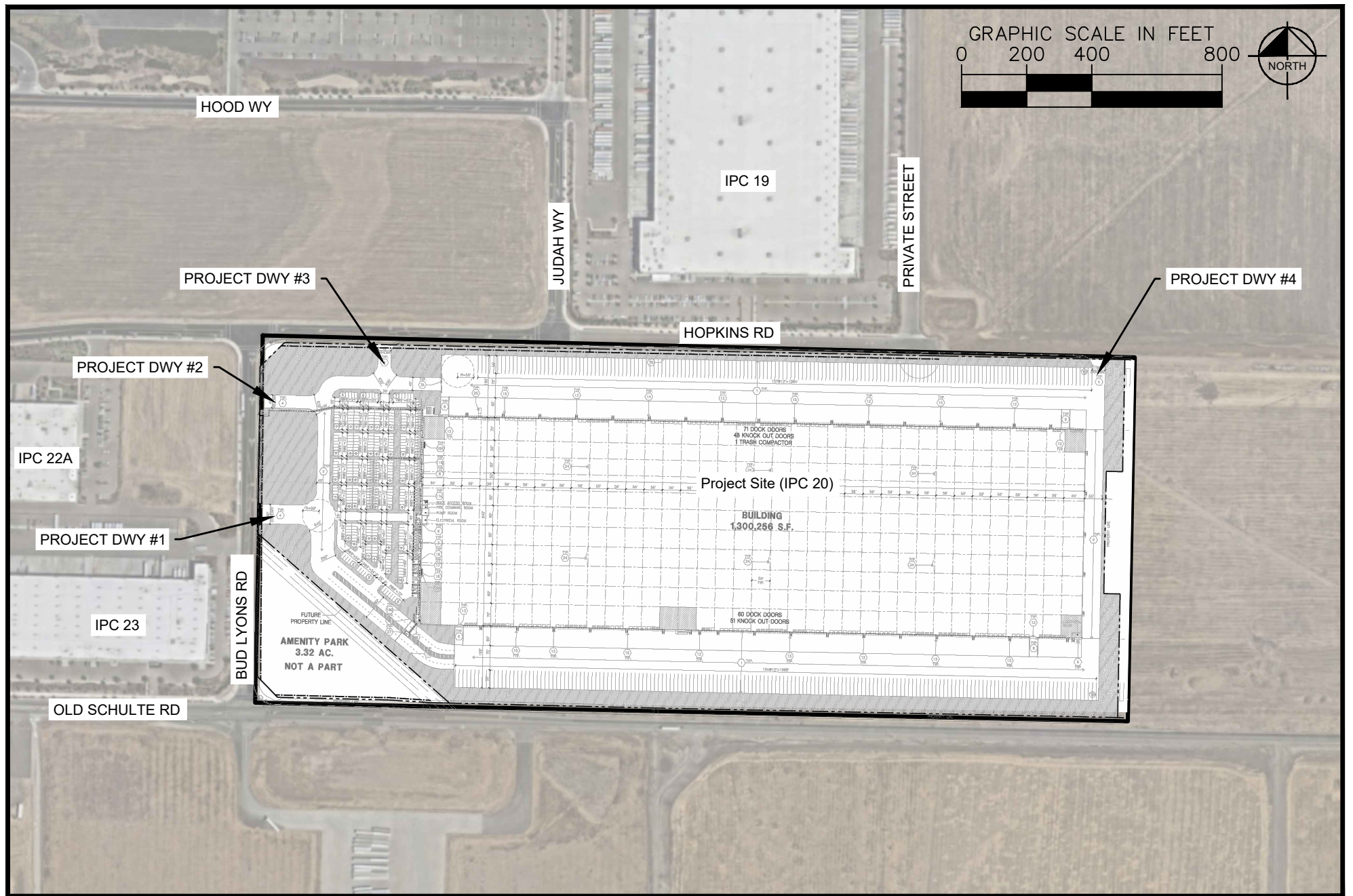
Table 2 – Driveway Access Review

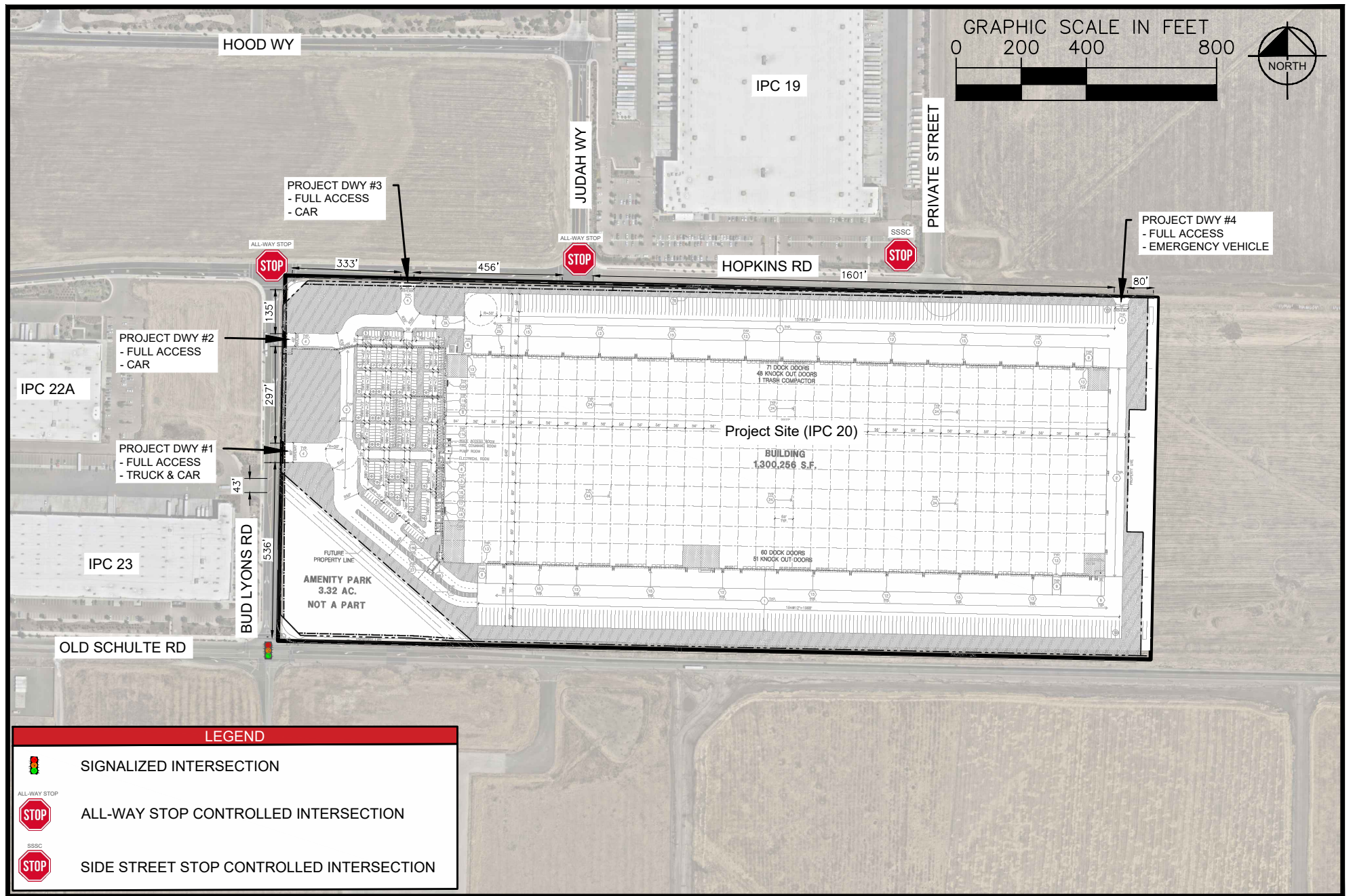
Driveway #	Location	Access	Width	Vehicle Type Usage	Recommendations/Comments
1	Bud Lyons Wy	Full ¹	60'	• Passenger Car • Truck	• None
2	Bud Lyons Wy	Full ¹	40'	• Passenger Car	• None
3	Hopkins Rd	Full ¹	40'	• Passenger Car	• None
4	Hopkins Rd	Gated	40'	• Emergency Vehicle	• Driveway to be gated at all times and not available for general use

Notes:

1. See Section 3.4 - Frontage and Off-Site Review for recommendations on restriping Bud Lyons Way and Hopkins Road to facilitate full access at all driveways.







3.2 Vehicle Turning Templates

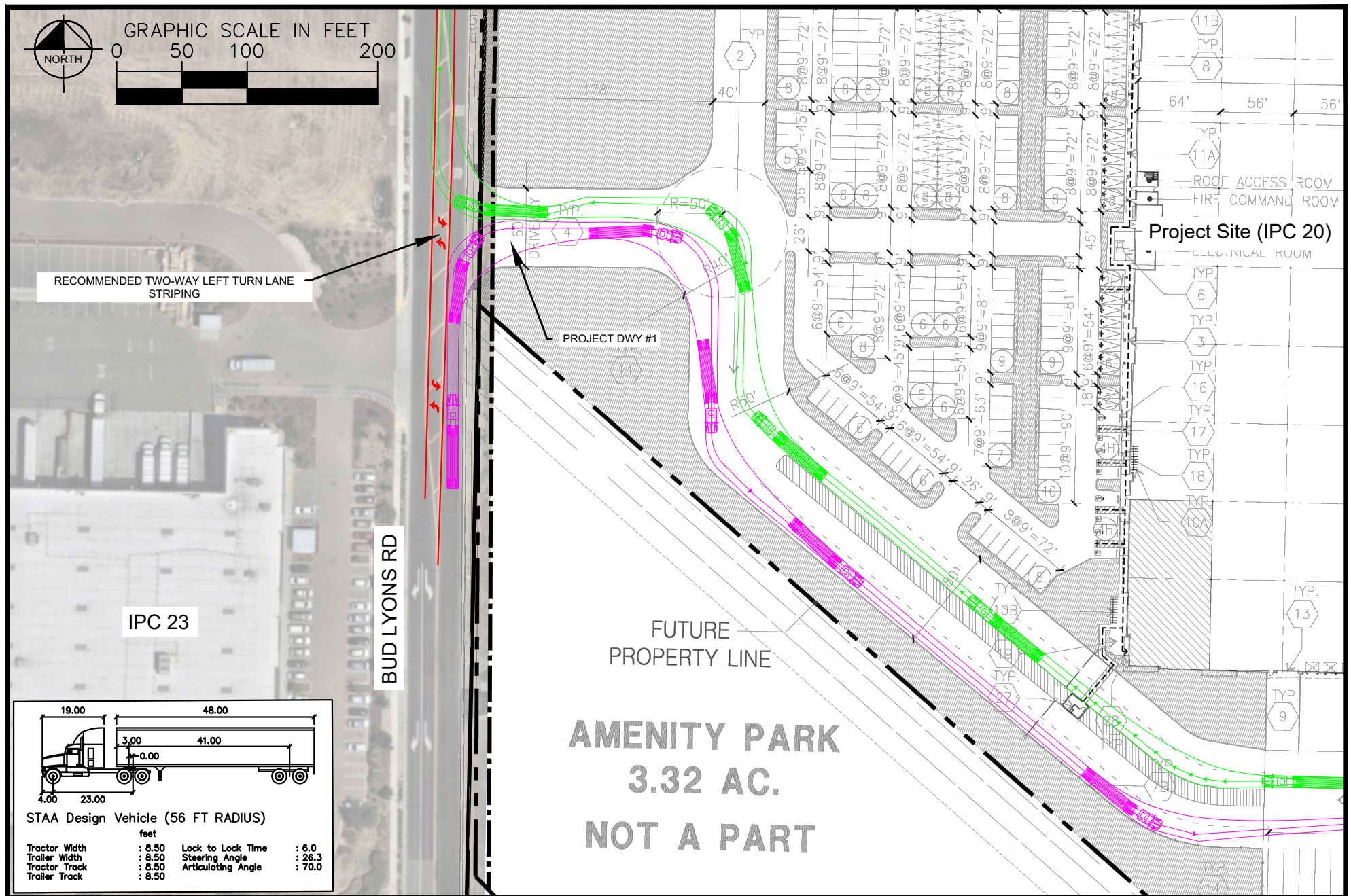
This section reviews the following design vehicle to determine if vehicles can perform the necessary movements to access the site:

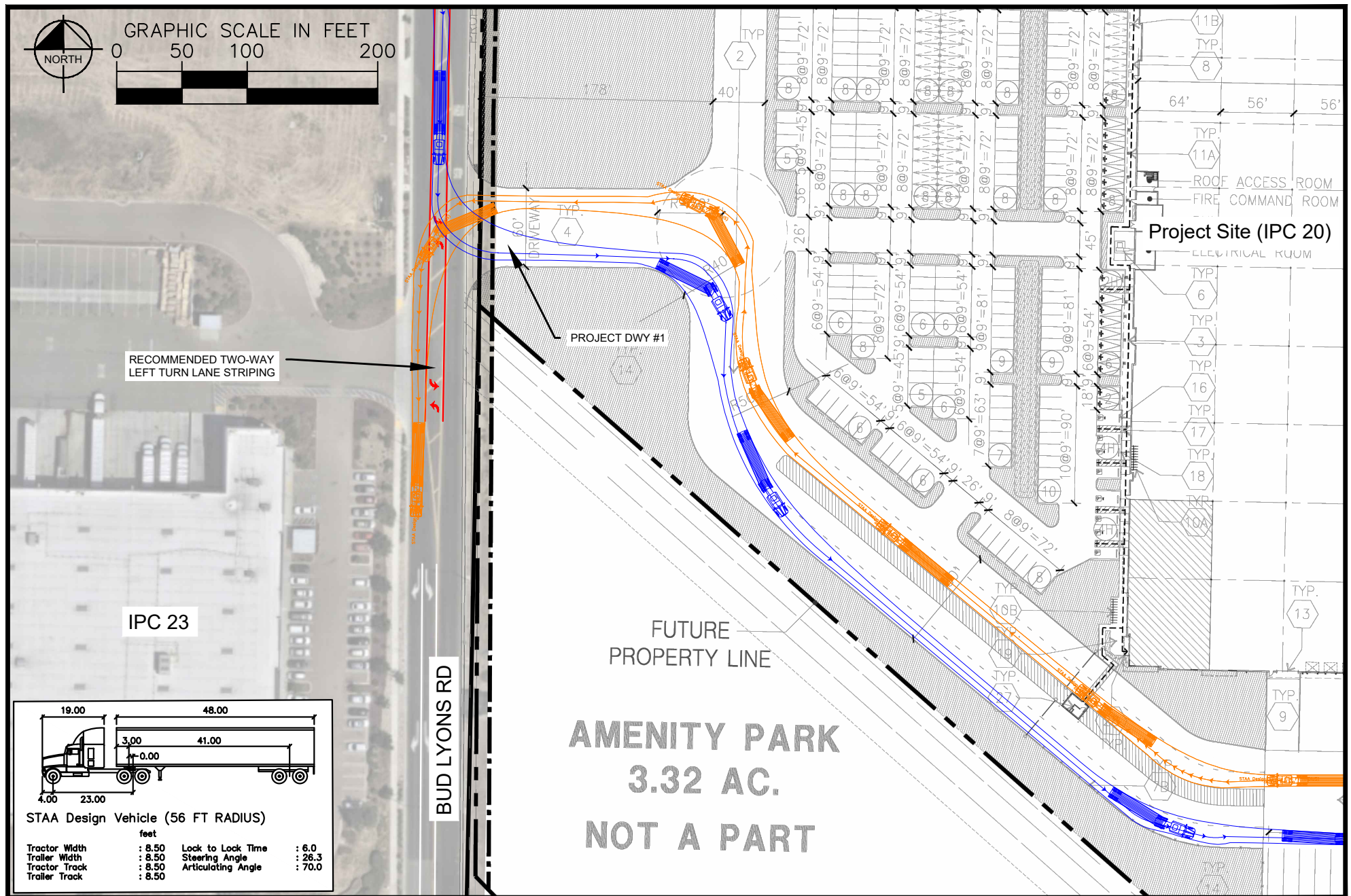
- Caltrans STAA Design Vehicle

Table 3 provides a summary of the turning template review for the Project. Turning templates for IPC 20 are illustrated in Figure 4 and Figure 5.

Table 3 – IPC 20 Truck Turning Template Review

Driveway #	Comments/Recommendations
1	None
2	STAA Design Vehicles will not use this driveway
3	STAA Design Vehicles will not use this driveway
4	STAA Design Vehicles will not use this driveway





3.3 On-Site Circulation Review

This section reviews the overall circulation, signage, and pavement markings to help drivers navigate the Project site. Table 4 provides a summary of the on-site circulation comments.

Table 4 – IPC 20 On-Site Circulation Review

Driveway #	Comments/Recommendations
1	• Provide stop line and pavement marking • Install Stop (R1-1) sign • Provide centerline striping at a location consistent with the STAA truck turning templates • Provide stop-control for the three outbound legs of the internal intersection, inbound leg (see Figure 6)
2	• Provide stop line and pavement marking • Install Stop (R1-1) sign • Provide centerline striping
3	• Provide stop line and pavement marking • Install Stop (R1-1) sign • Provide centerline striping
4	• Not Applicable – will gated and only used by emergency vehicles

3.4 Frontage & Off-Site Review

This section reviews the necessary off-site improvements and conformance with the Cordes Ranch Specific Plan (CRSP) and City of Tracy Transportation Master Plan requirements. For IPC 20, the public frontage is along the Old Schulte Road, Bud Lyons Road, and Hopkins Road. The Project frontage along each roadway has differing levels of completeness. See Table 5 for a summary of the existing Project frontage and proposed recommendations:

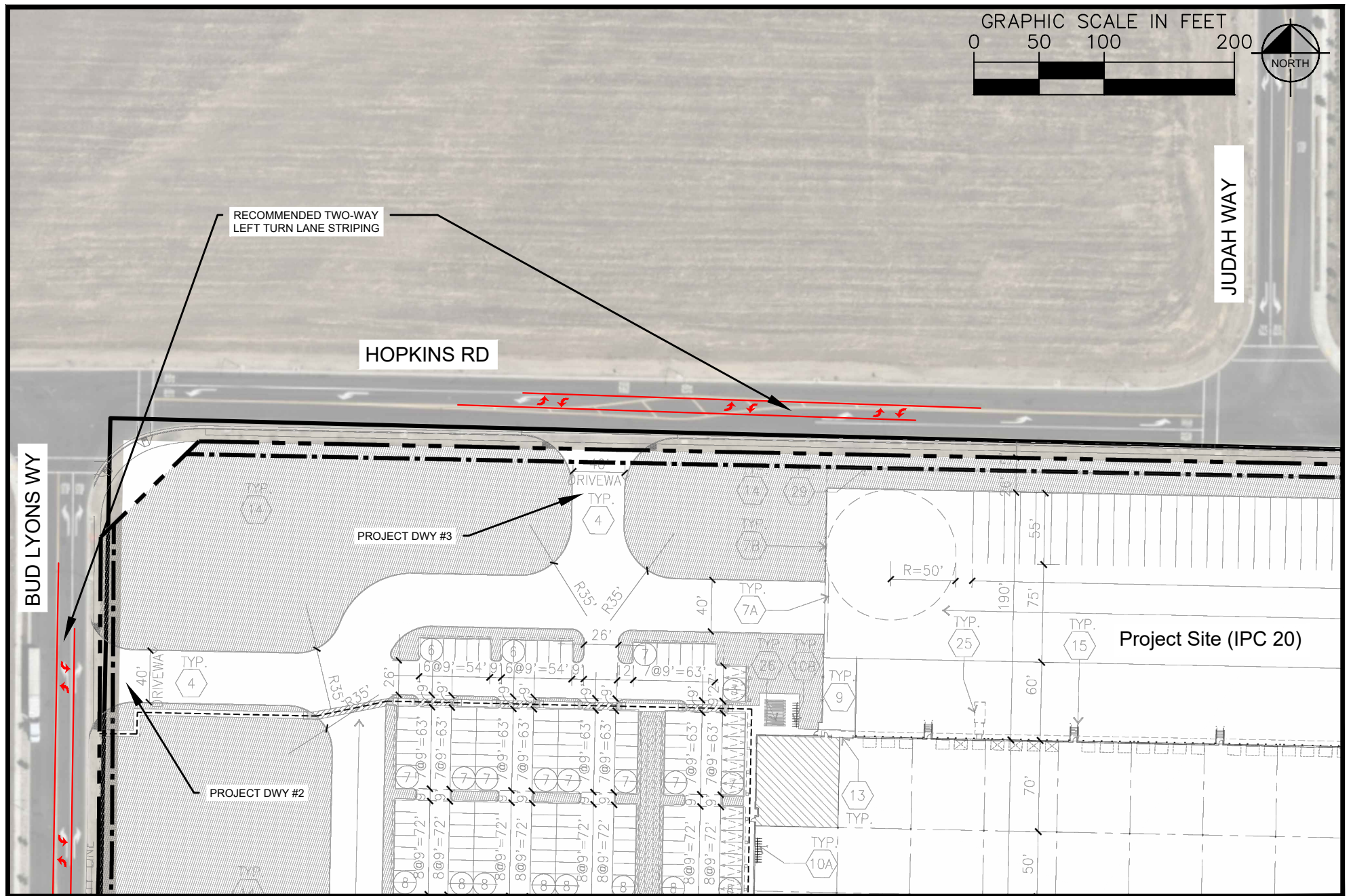
Table 5 - Frontage Review

Street's Name		Existing Project Frontage	Comments/Recommendations
Old Schulte Rd	Bud Lyons Wy to 500' East	10-foot Class I multi-use path - Curb & gutter - Landscape - Lighting	None, ultimate has been constructed
	500' East of Bud Lyons Wy to East Property Line	None	Construct roadway Class I, lighting and striping per Phase 1K Street Improvement Plans
Bud Lyons Wy	Old Schulte Rd to Hopkins Rd	- Curb & gutter - Lighting	- Restripe to add two-way left turn lane - Construct 5-foot sidewalk and add landscaping on south side
Hopkins Rd	Bud Lyons Wy to Judah Wy	- Curb & gutter - Lighting	- Restripe to add two-way left turn lane - Construct 5-foot sidewalk and add landscaping on south side
	Judah Wy to Private Street	- Curb & gutter - Landscape 5-foot sidewalk - Lighting	None
	Private Street to East Property Line	None	Construct roadway, sidewalk, lighting and striping per Hopkins Rd Extension Street Improvement Plans

Figure 6 and Figure 7 illustrate the frontage and off-site review comments for IPC 20.



IPC 20 Engineering Review



3.5 Truck Gate Entry Queuing Review

An internal truck gate queuing analysis was performed to determine if the proposed truck entrance at Project Driveway #1 can adequately accommodate queuing on-site without spilling onto Bud Lyons Road. The Project site proposes two entrance lanes and two exit lanes. All trucks entering the site will enter at Project Driveway #1. Queuing analysis has been completed assuming that both lanes will stop at the security building.

The following assumptions were used to calculate the truck entrance queuing:

- 280 feet per lane of available queue storage
- 1,300,256 square feet - High-Cube Fulfillment Center Warehouse (Land Use Code 155)
- The following steps show how the number of trucks entering the gate during peak hours were determined:
 - o By using ITE's *Trip Generation Manual*, the total weekday truck volume is estimated to be 150
 - o 15 peak hour entering trucks at 11:00am – 12:00pm (9.5% of weekday)
 - o Poisson arrival rate
 - o 3-minute service time per truck stopped at the security building
 - o The expected queue is 3 trucks (225 feet) per lane during peak hours.

See the Appendix for queuing calculations.

The analysis indicates that the truck entering queue storage is adequate.

Time period	60	min
Arrival Rate	15	veh/hr
Service Time	180	sec/veh

λ	mean arrival rate	15.0	veh/per Time period
μ	mean service rate	20.0	veh/per Time period
N	# service channels	2	(toll booths, loading zone, etc.)
ρ	Utilization Factor	0.75	
ρ/N		0.38	
$1-(\rho/N)$		0.63	
P0	Probability no queue	0.45	
Pn>N	Probability of having to wait in a queue	0.13	
n	# cars in queue	3.00	
Pn	Probability of n cars in queue	0.05	

Q	Average queue length	0.12	veh
		3.07	feet
w	Average wait time	0.01	min
		0	sec
t	Average time spent in system	0.06	min
		3	sec

Formulas:

$$\rho = \frac{\lambda}{\mu}$$

$$P_n = \frac{\rho^n P_0}{n!} \text{ for } n \leq N$$

$$P_n = \frac{\rho^n P_0}{N^n - N N!} \text{ for } n \geq N$$

$$P_{n>N} = \frac{P_0 \rho^{N+1}}{N! N (1 - \frac{\rho}{N})}$$

$$Q = \frac{P_0 \rho^{N+1}}{N! N} \left[\frac{1}{(1 - \rho/N)^2} \right]$$

$$w = \frac{\rho + Q}{\lambda} - \frac{1}{\mu}$$

$$t = \frac{\rho + Q}{\lambda}$$

Vehicle Queue Per Service Channel

P(n)	Cumulative
0	0.454545455
1	0.340909091
2	0.127840909
3	0.047940341
4	0.017977628
5	0.00674161
6	0.002528104
7	0.000948039
8	0.000355515
9	0.000133318
10	4.99942E-05
11	1.87478E-05
12	7.03044E-06
13	2.63642E-06
14	9.88656E-07
15	3.70746E-07
16	1.3903E-07
17	5.21361E-08
18	1.95511E-08
19	7.33164E-09
20	2.74937E-09
21	1.03101E-09
22	3.8663E-10
23	1.44986E-10
24	5.43698E-11
25	2.03887E-11
26	7.64575E-12

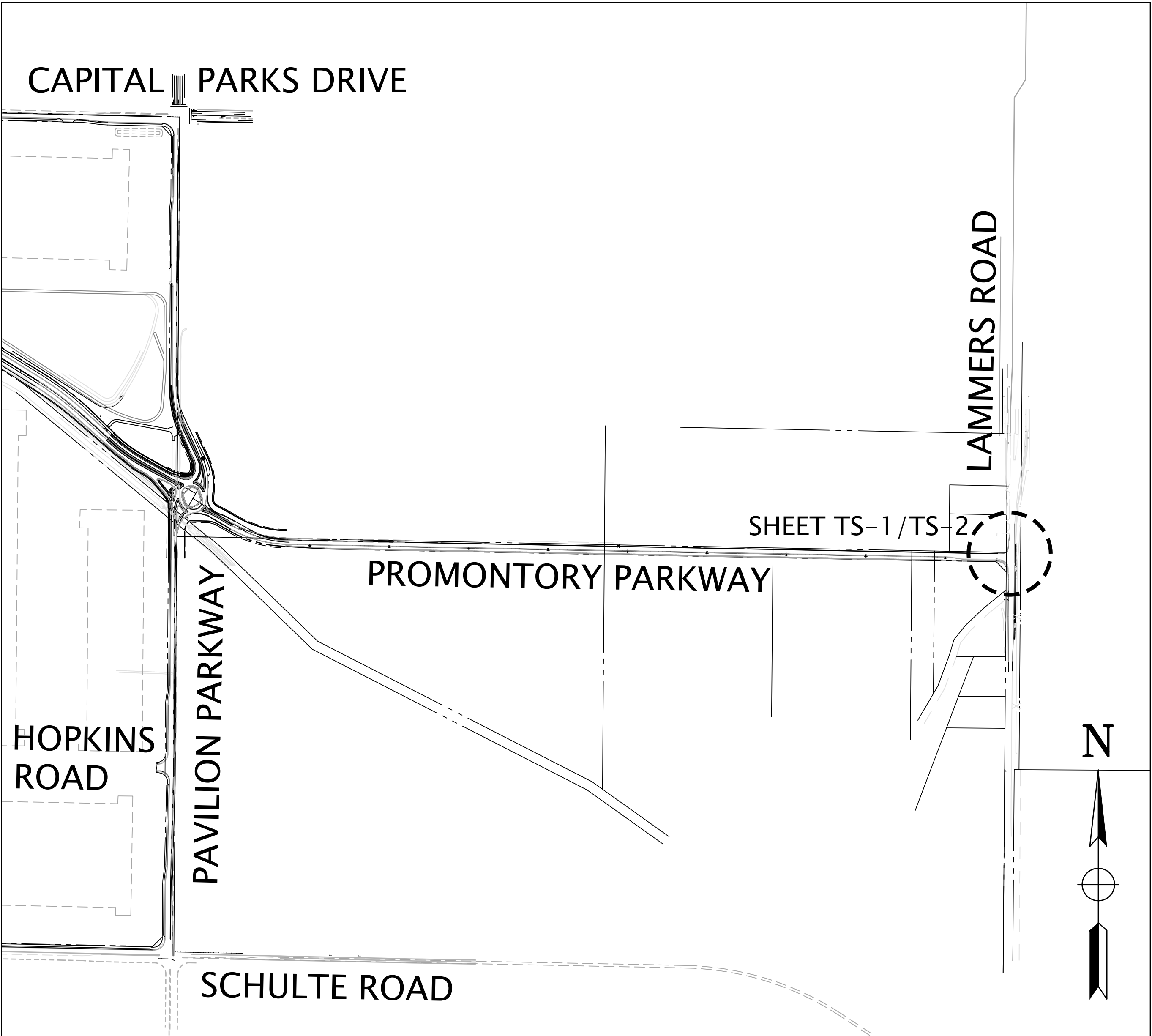
Capacity	
Truck Storage	290 ft
# of Lanes	2
Total	580
STAA Length	75
# of STAA	7

INTERNATIONAL PARK OF COMMERCE PROMONTORY EXTENSION INTERIM

TRAFFIC SIGNAL PLANS FOR THE INTERSECTION OF PROMONTORY PARKWAY & LAMMERS ROAD

SHEET INDEX

No.	DRAWING	DESCRIPTION
1	TS-T	TITLE SHEET, LEGEND, NOTES, AND DETAILS
PROMONTORY PARKWAY AND LAMMERS ROAD		
2	TS-1	TRAFFIC SIGNAL PLANS
3	TS-2	CONDUCTOR AND EQUIPMENT SCHEDULES



VICINITY MAP
NO SCALE

GENERAL NOTES: (FOR ALL TRAFFIC SIGNAL SHEETS)

- ALL WORK SHALL CONFORM TO THE LATEST REVISIONS OF THE 2018 STATE STANDARD PLANS AND STANDARD SPECIFICATIONS AND THE LATEST REVISIONS OF THE 2014 CAMUTCD, CITY OF TRACY STANDARDS AND SPECIFICATIONS, AND THE SPECIAL PROVISIONS.
- SIGNAL AND LIGHTING EQUIPMENT, INCLUDING STANDARDS, PULL BOXES, CABINETS, CONDUIT, VIDEO DETECTION CAMERA UNITS, AND DETECTORS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. FINAL LOCATIONS ARE TO BE VERIFIED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL GIVE TWO FULL WORKING DAYS NOTICE TO THE ENGINEER FOR VERIFICATION.
- LOOP DETECTORS SHALL BE CENTERED IN THEIR EFFECTIVE LANE WIDTHS OR LOCATED THREE FEET FROM ADJACENT LANE. ALL LOOPS SHALL BE INSTALLED PRIOR TO FINAL LIFT.
- ALL VEHICLE HEADS SHALL HAVE 12" LENSES AND LOUVERED METAL BACKPLATES. ALL SIGNAL INDICATIONS AND PEDESTRIAN HEADS SHALL UTILIZE LIGHT EMITTING DIODE (LED) SIGNAL MODULES.
- ALL PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED 42", NO MORE THAN 48" (SEE MUTCD 4E.08, 04, F) FROM GROUND LEVEL, HAVE 2-INCH DIAMETER ACTUATORS, BE AUDIBLE AND BE ADA APPROVED.
- ALL PEDESTRIAN PUSH BUTTONS SHALL BE NO FURTHER THAN 10" FROM THE FACE OF RETAINING CURB PER ADA STANDARDS.
- ALL PEDESTRIAN SIGNAL HEADS SHALL BE COUNT-DOWN TYPE, PER CITY STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UTILITIES WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CONTACT USA, (800) 642-2444, AT LEAST TWO FULL WORKING DAYS BEFORE BEGINNING WORK. WHERE MARKINGS ARE NEAR PROPOSED FOUNDATIONS, THE CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES BY POTHOLING PRIOR TO EXCAVATING.
- ALL PULL BOXES SHALL BE NO. 6, UNLESS OTHERWISE NOTED ON THE PLANS. PULL BOXES SHALL NOT BE INSTALLED IN CURB RAMPS. PULL BOXES SHALL BE INSTALLED IN CONDUIT RUNS AT A MAXIMUM 200' SPACING. ALL PULL BOXES INSTALLED IN DIRT AREAS SHALL HAVE CONCRETE COLLAR INSTALLED AROUND THEM.
- THE CONTRACTOR SHALL PROVIDE ALL SIGNAL HEADS, CABLES/CONDUCTORS, DETECTORS AND OTHER EQUIPMENT NECESSARY FOR THE SIGNAL TO OPERATE AS SHOWN ON THE PHASE DIAGRAM.
- ALL STREET NAME SIGNS INSTALLED ON THE SIGNALS SHALL BE PER THE CITY STANDARD PLANS.
- CONTRACTOR SHALL CONFIRM OVERHEAD UTILITY CLEARANCE PRIOR TO ORDERING POLES.

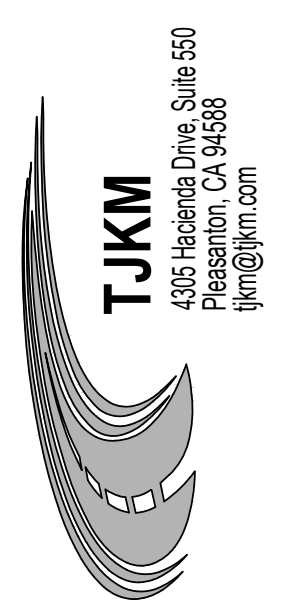
LEGEND: (FOR ALL TRAFFIC SIGNAL SHEETS)

- CT TYPE E LOOP TO BE INSTALLED FOR TRAFFIC COUNT PURPOSES
- TYPE E LOOP DETECTOR CONFIGURATION PER STATE STANDARD PLAN RSP ES-5B. LOOP SEALANT SHALL BE STATE APPROVED ELASTOMERIC SEALANT OR HOT MELT RUBBERIZED
- ⊗ TYPE F LOOP DETECTOR CONFIGURATION SEE CALTRANS RSP ES-5B. LOOP SEALANT SHALL BE STATE APPROVED ELASTOMERIC SEALANT OR HOT MELT RUBBERIZED.
- EXISTING DETECTOR HANDHOLE
- NEW DETECTOR HANDHOLE
- ➔ EMERGENCY VEHICLE UNIT DETECTION (EVUD) UNIT EVUDA DENOTES CHANNEL "A"
- CCTV CAMERA
- (T) TRAFFIC RATED PULL BOX

CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELEASE THE DEVELOPER OF THE RESPONSIBILITY FOR CORRECTION OF MISTAKES, ERRORS, OR OMISSIONS CONTAINED HEREIN. IT IS THE DEVELOPER'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF TRACY. THE CITY OF TRACY IS NOT RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OR MAINTENANCE OF THE PROJECT. THE CITY OF TRACY IS NOT RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OR MAINTENANCE OF THE PROJECT. THE CITY OF TRACY IS NOT RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OR MAINTENANCE OF THE PROJECT.

ROBERT ARMUJO, P.E. CITY ENGINEER DATE:



TJKM PROJECT NUMBER: 163-177 PROMONTORY EXTENSION

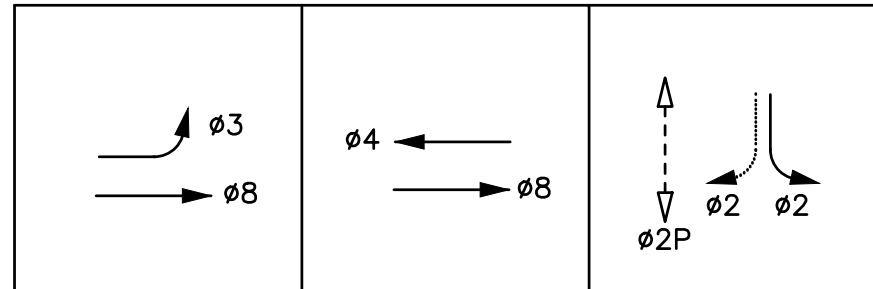
SYMBOL	DATE	REVISIONS	DESCRIPTION	APPROVED

DESIGNED BY: ESB	DRAWN BY: AM	CHECKED BY: ESB	SCALE: AS SHOWN
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TRAFFIC SIGNAL TITLE SHEET,
LEGEND, NOTES AND DETAILS
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS
PROMONTORY EXTENSION

SHEET
TS-T
OF 4 SHEETS

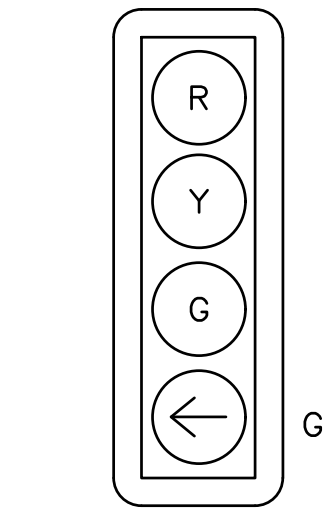
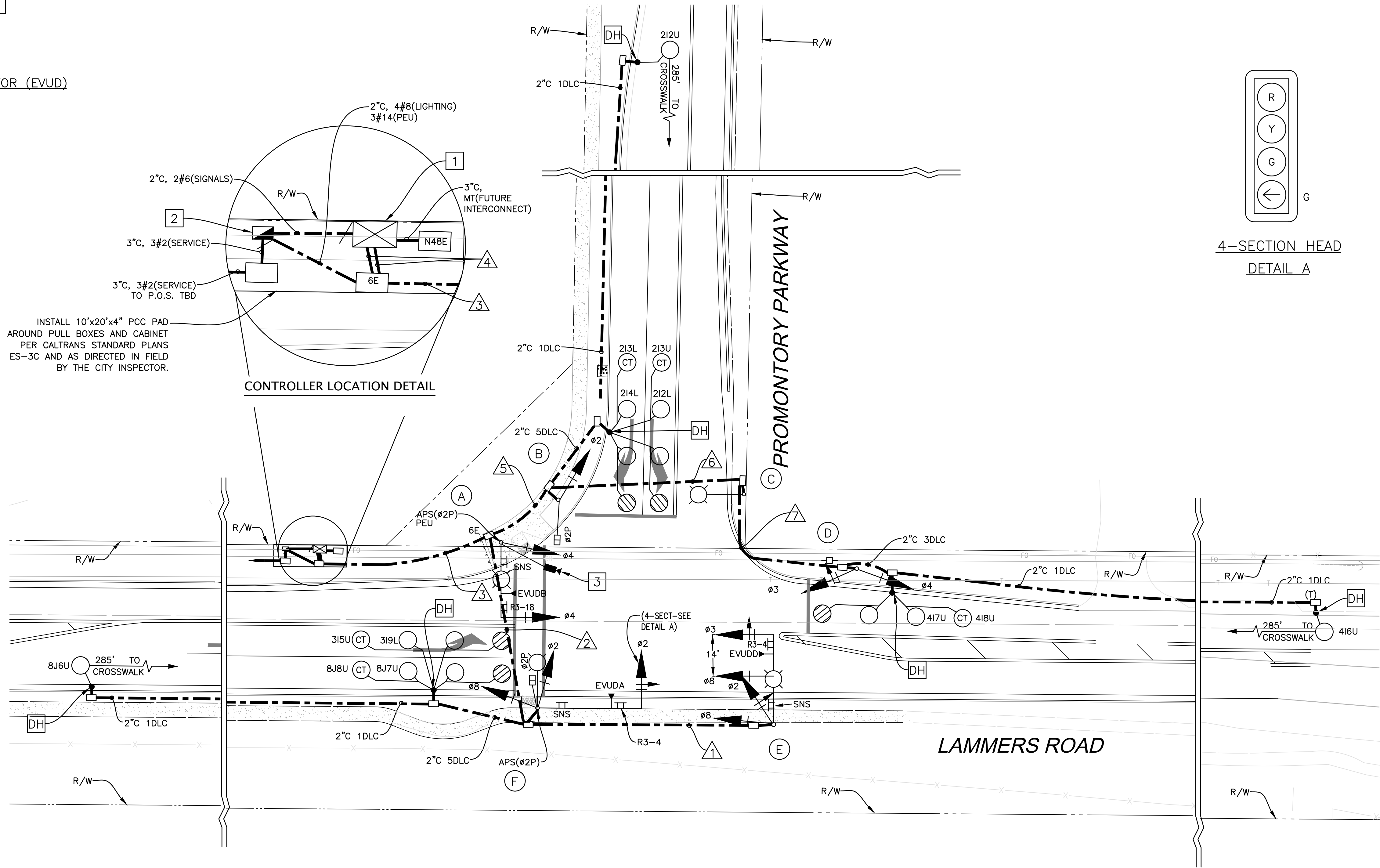
STEADY DEMAND SEQUENCE



PROPOSED PHASE DIAGRAM

EMERGENCY VEHICLE UNIT DETECTOR (EVUD)

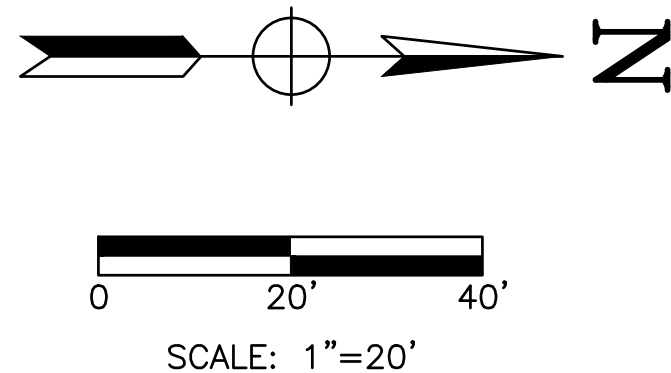
CHANNEL A = ø2
CHANNEL B = ø4
CHANNEL D = ø8 + ø3



4-SECTION HEAD
DETAIL A

PROJECT NOTES (THIS SHEET ONLY):

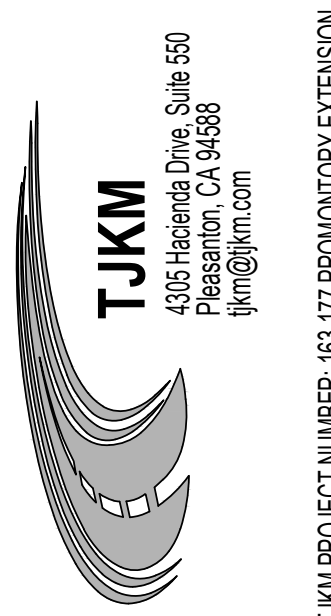
- FURNISH AND INSTALL TYPE 2070 CONTROLLER IN PROPOSED TYPE 332 CABINET. FRONT DOOR OF CABINET SHALL FACE SOUTH. CABINET SHALL BE 10' MINIMUM FROM SERVICE ENCLOSURE. FURNISH AND INSTALL FIBER DISTRIBUTION UNIT AND FIBER/ETHERNET SWITCH FOR SIGNAL INTERCONNECT. LOCATE CABINETS AS DIRECTED BY THE ENGINEER.
- FURNISH AND INSTALL TYPE III-AF SERVICE EQUIPMENT ENCLOSURE PER DETAILS ON STATE STANDARD PLANS ES-2C AND ES-2D. FURNISH AND INSTALL BACK-UP BATTERY SYSTEM (BBS). ATTACH BBS TO THE BACK OF THE SERVICE ENCLOSURE. DOOR SHALL FACE EAST.
- FURNISH AND INSTALL CCTV CAMERA (MODEL AXIS Q6034-E), SEE MOUNTING DETAIL ON SHEET TS-2.



CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELEASE THE ENGINEER OF THE RESPONSIBILITY FOR CORRECTION OF MATERIALS, ERRORS, OR OMISSIONS CONTAINED HEREIN. IF DURING THE COURSE OF THE PROJECT, THE ENGINEER DISCOVERS A MATERIAL ERROR OR OMISSION, HE OR SHE SHALL BE RESPONSIBLE FOR THE CORRECTION OF THE SAME. THE CITY OF TRACY OR THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CORRECTION OF THE SAME. THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CORRECTION OF THE SAME. THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CORRECTION OF THE SAME.

ROBERT ARMSTRONG, P.E. CITY ENGINEER



REVISIONS	DATE	DESCRIPTION	APPROVED

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TRAFFIC SIGNAL PLANS
PROMOTORY PARKWAY AND
LAMMERS ROAD
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS
PROMOTORY EXTENSION

INTERNATIONAL PARK OF COMMERCE PROMONTORY EXTENSION INTERIM

SIGNING AND STRIPING PLANS

SHEET INDEX

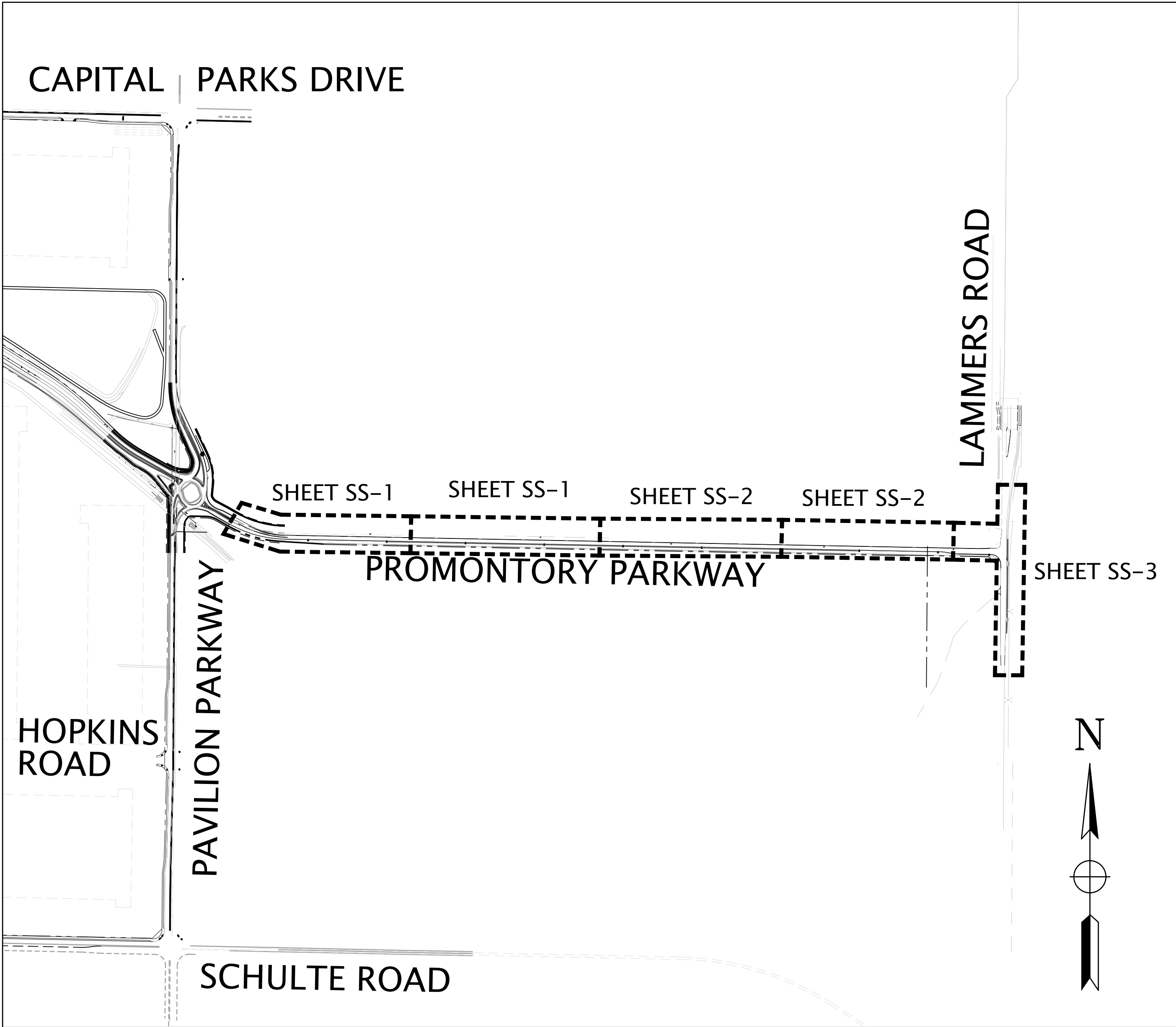
No.	DRAWING	DESCRIPTION
1	SS-T	TITLE SHEET, LEGEND, NOTES, AND DETAILS

PROMONTORY PARKWAY

2	SS-1	SIGNING AND STRIPING PLANS
3	SS-2	SIGNING AND STRIPING PLANS

PROMONTORY PARKWAY AND LAMMERS ROAD

4	SS-3	SIGNING AND STRIPING PLANS
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VICINITY MAP

NO SCALE

STRIPING NOTES (ALL STRIPING SHEETS)

- SIGNING AND STRIPING SHALL CONFORM TO THE APPLICABLE DETAILS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) 2018 STANDARD PLANS, STANDARD SPECIFICATIONS, LATEST CALIFORNIA MUTCD, SIGN SPECIFICATIONS SHEETS, AND THE SPECIAL PROVISIONS.
- EXISTING STRIPING TO BE REMOVED SHALL BE DONE BY GRINDING. AFTER GRINDING, SLURRY SEAL SHALL BE APPLIED TO THE AREA.
- ALL STRIPING SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED. ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS SHALL BE APPLIED AT A THICKNESS OF 0.150 INCH.
- ANY EXISTING STRIPING THAT CONFLICTS WITH THE PROPOSED STRIPING SHALL BE REMOVED AT THE APPROVAL OF THE CITY ENGINEER.
- ALL CROSSWALKS SHALL BE INSTALLED WITH AN INSIDE WIDTH OF 10 FEET.
- ALL SIGNS AND POSTS SHALL BE INSTALLED PER CITY STANDARD 151 AND MUST MEET MUTCD STANDARDS.
- REMOVE SIGN POST IF ALL SIGNS ON THE POST ARE TO BE REMOVED.
- INSTALL NEW POST WITH ALL RELOCATED SIGNS.
- INSTALL REFLECTIVE BLUE MARKERS AT EVERY FIRE HYDRANT.
- ALL SIGNS INSTALLED ON PROMONTORY PARKWAY SHALL BE EXPRESSWAY SIZED SIGNS
- ALL STAA SIGNS INSTALLED SHALL BE EXPRESSWAY SIZED SIGNS (BIGGER SIZE)
- ALL SIGN LOCATIONS SHALL BE VERIFIED BY FIELD INSPECTOR BEFORE INSTALLATION

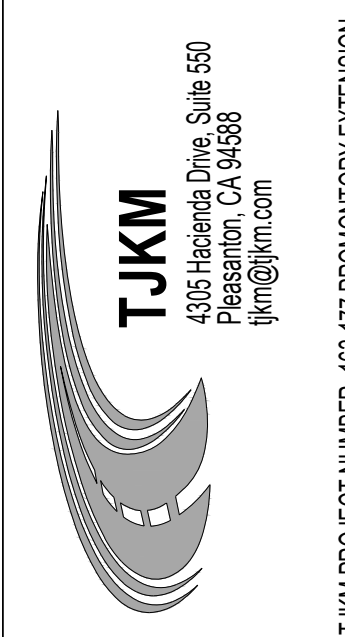
LEGEND (ALL STRIPING SHEETS)

- INSTALL NEW SIGN
- EXISTING SIGN TO REMAIN UNLESS OTHERWISE NOTED
- INSTALL NEW TYPE III PAVEMENT MARKING (THERMOPLASTIC)
- INSTALL NEW STRIPING PER DETAIL NUMBER
- CHANGE OF DETAIL NUMBERS
- EXISTING STRIPING TO REMAIN
- EXISTING STRIPING TO BE REMOVED

CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELEASE THE ENGINEER OF THE RESPONSIBILITY FOR CORRECTION OF MATERIALS, ERRORS, OR OMISSIONS CONTAINED HEREIN. IF DURING THE COURSE OF PERFORMANCE OF THESE PLANS, THE ENGINEER DISCOVERS ANY MATERIALS, ERRORS, OR OMISSIONS, HE SHALL IMMEDIATELY NOTIFY THE CITY OF TRACY AND THE CITY ENGINEER. THE CITY OF TRACY SHALL BE RESPONSIBLE FOR THE COST OF CORRECTION. THE CITY OF TRACY SHALL BE RESPONSIBLE FOR THE COST OF CORRECTION. THE CITY OF TRACY SHALL BE RESPONSIBLE FOR THE COST OF CORRECTION.

ROBERT ARMJAO, P.E. CITY ENGINEER DATE:



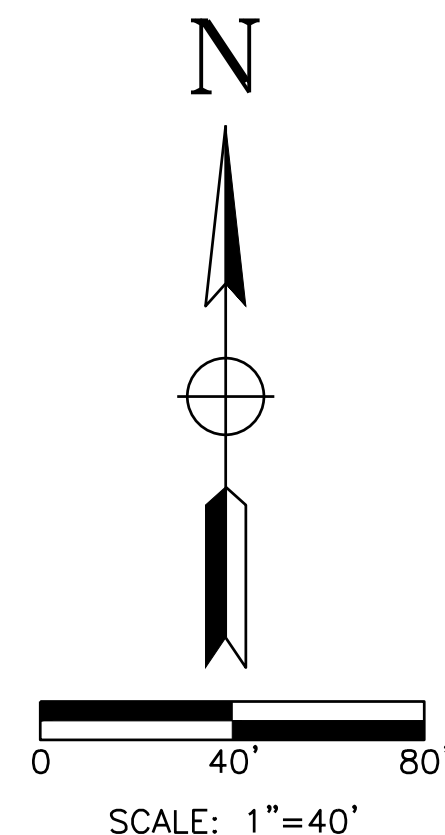
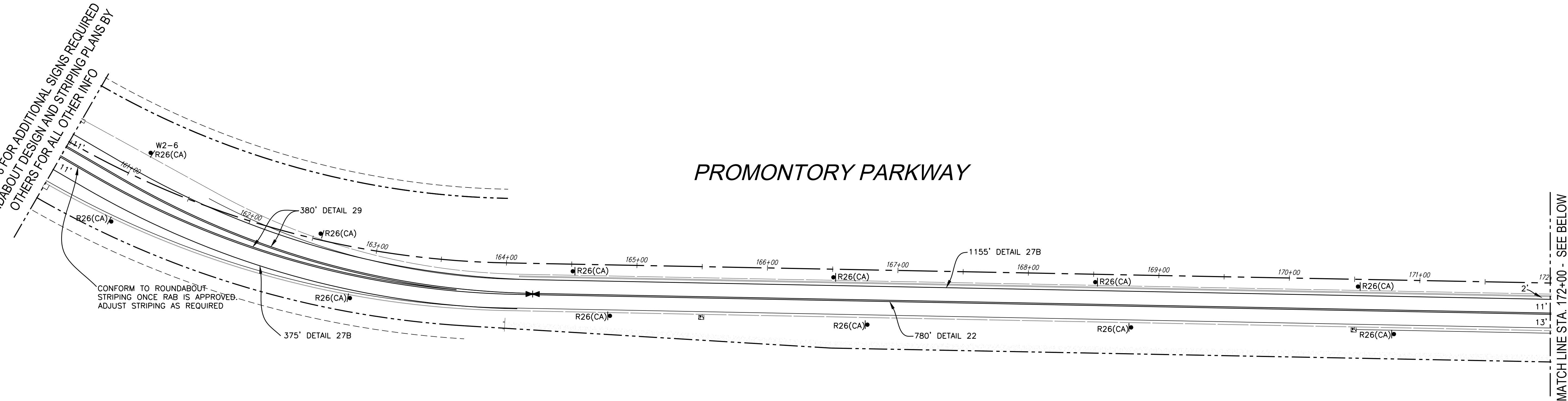
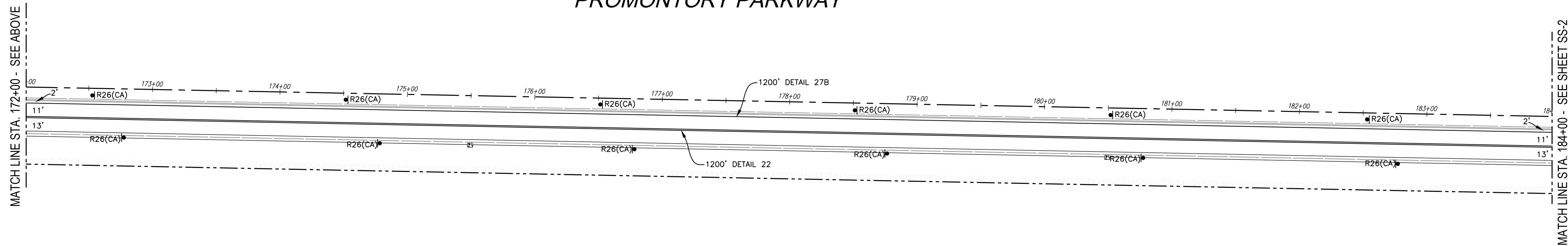
REVISIONS	DATE	DESCRIPTION	APPROVED

DESIGNED BY: ESB	DRAWN BY: AM	CHECKED BY: ESB	SCALE: AS SHOWN
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SIGNING AND STRIPING TITLE SHEET,
LEGEND, NOTES, AND DETAILS
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS
PROMONTORY EXTENSION

SHEET
SS-T

OF 4 SHEETS



DESIGNED BY: ESB	DRAWN BY: AM	CHECKED BY: ESB	SCALE: 1" = 40'
SIGNING AND STRIPING PLANS PROMONTORY PARKWAY			
INTERNATIONAL PARK OF COMMERCE STREET IMPROVEMENT PLANS PROMONTORY EXTENSION			
SHEET SS-1			
OF 4 SHEETS			

[illegible]

TJKM
4305 Hacienda Drive, Suite 550
Pleasanton, CA 94688
tjkm@tjkm.com

TJKM PROJECT NUMBER: 463-177 PROMONTORY EXTENSION



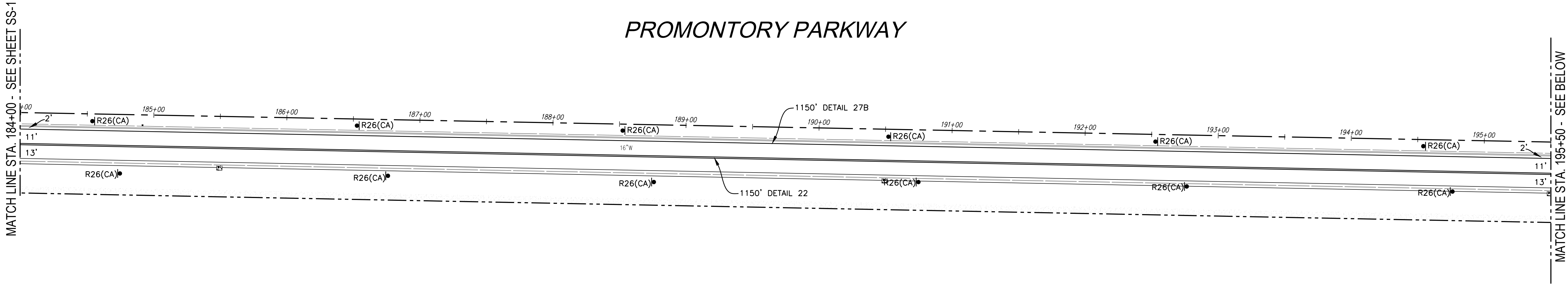
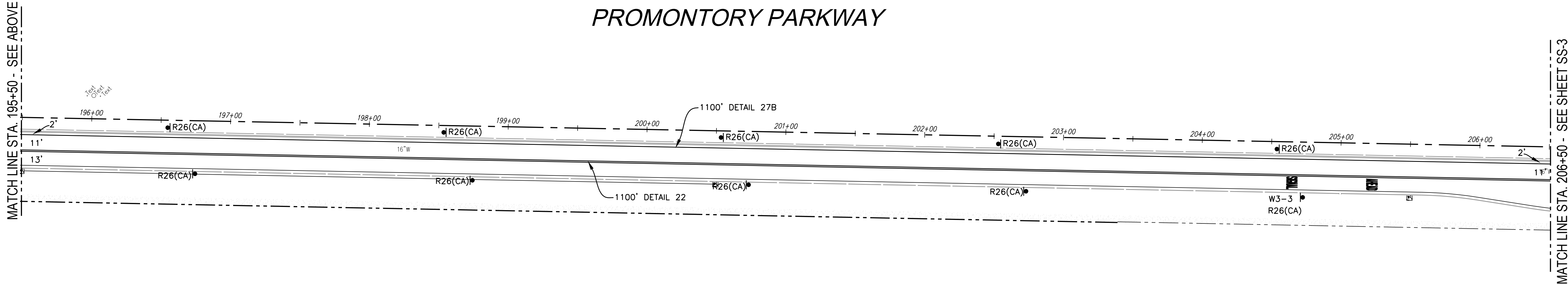
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 ROBERT ARMUJO, P.E. CITY ENGINEER

 DATE:

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SIGNING AND STRIPING PLANS
PROMONTORY PARKWAY
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS
PROMONTORY EXTENSION

SHEET
SS-2
OF 4 SHEETS

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CHECKED BY:	ESB
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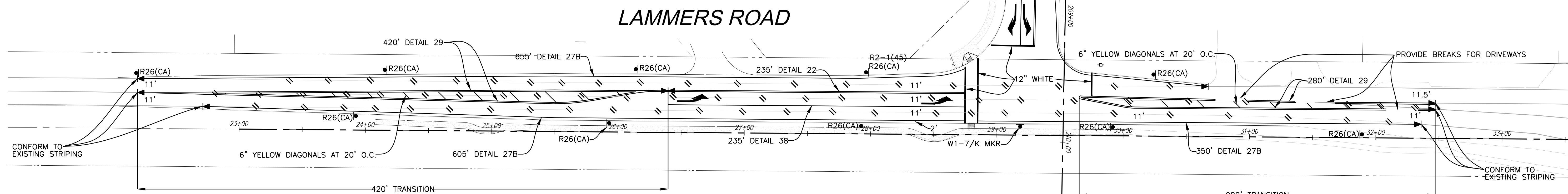
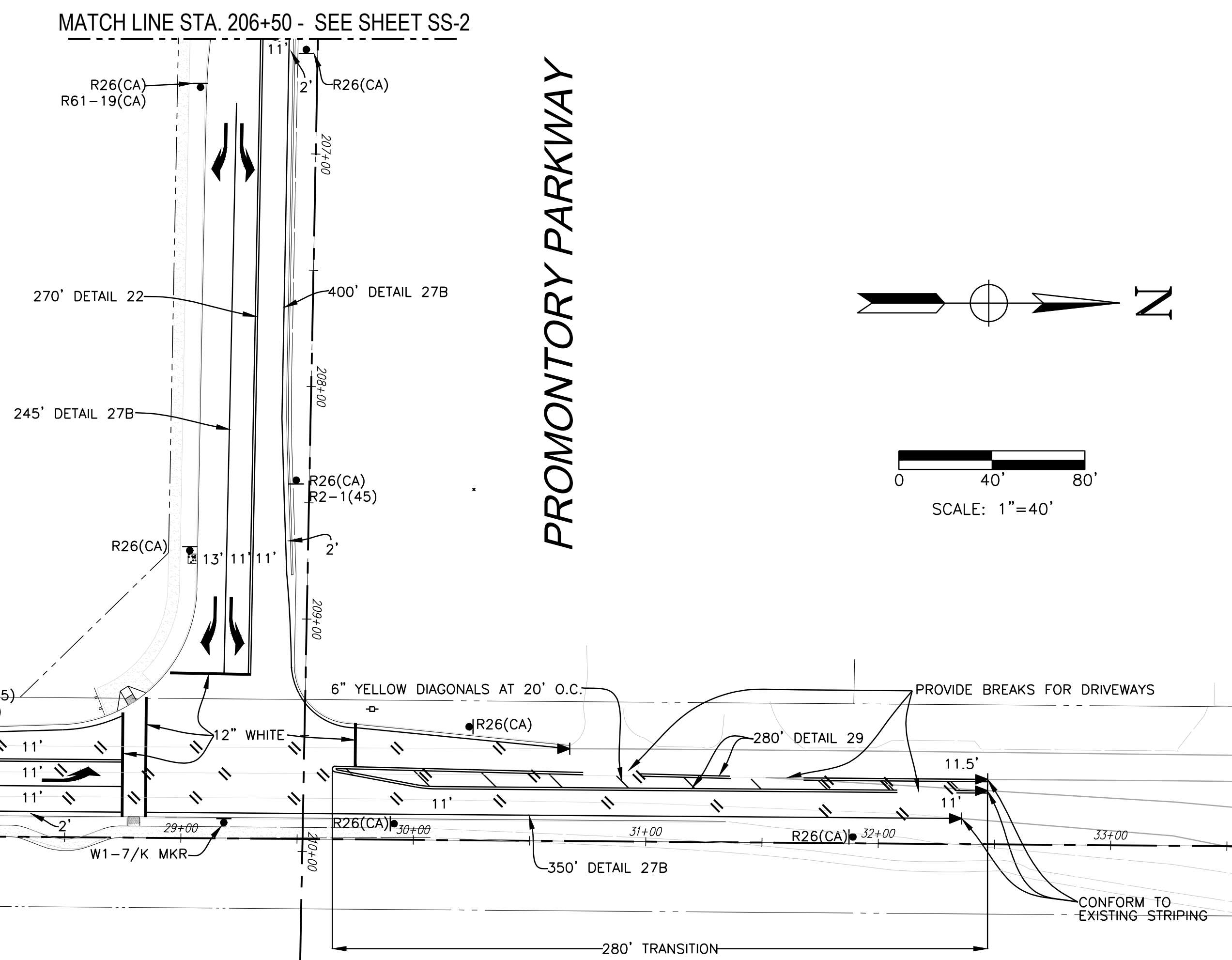
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INTERNATIONAL PARK OF COMMERCE

PHASE – 1K

INTERIM

SIGNING AND STRIPING PLANS

SHEET INDEX

No.	DRAWING	DESCRIPTION
1	SS-T	TITLE SHEET, LEGEND, NOTES, AND DETAILS

CAPITAL PARKS DRIVE

2	SS-1	SIGNING AND STRIPING PLANS
3	SS-2	SIGNING AND STRIPING PLANS

PROMONTORY PARKWAY

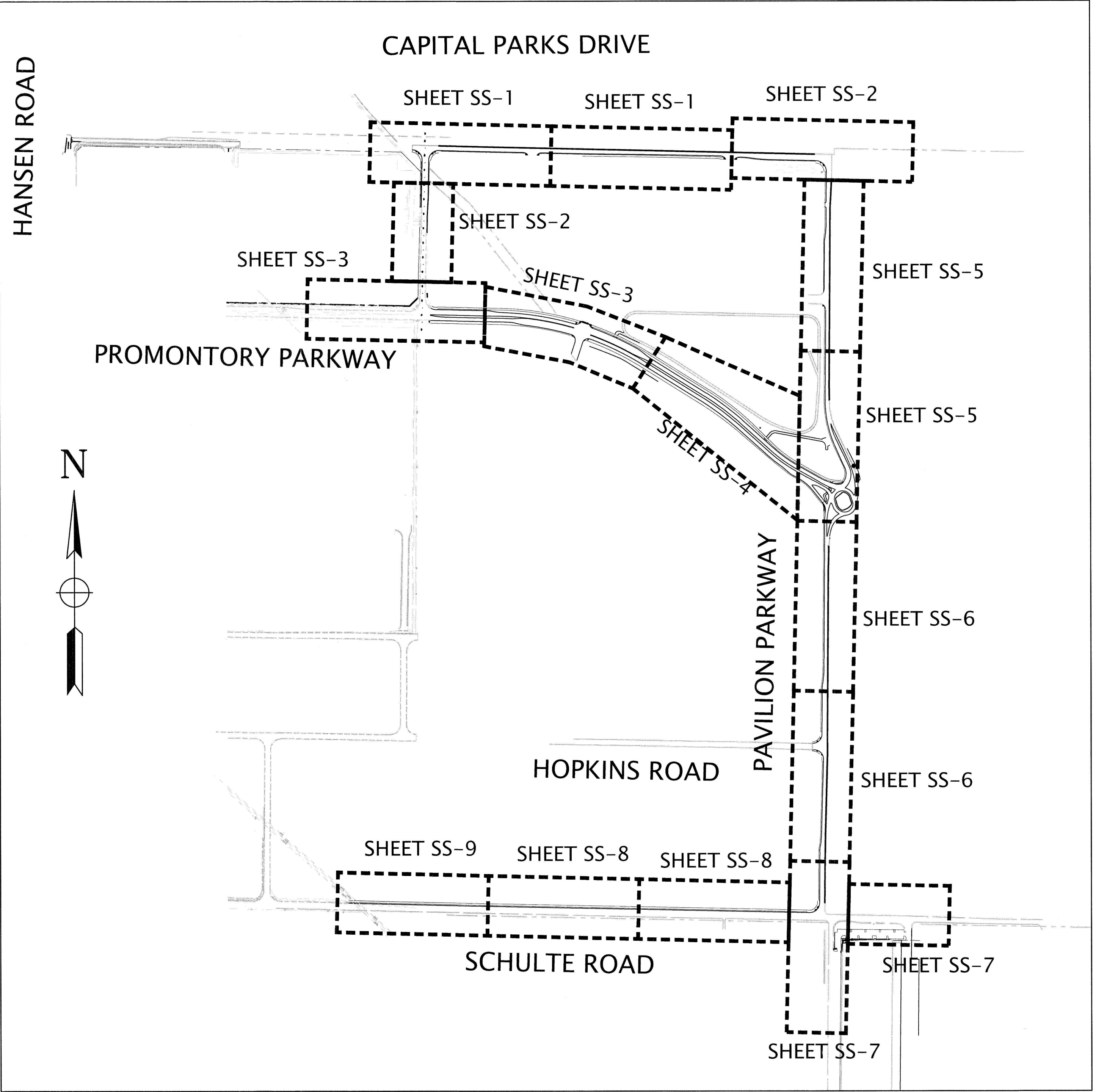
4	SS-3	SIGNING AND STRIPING PLANS
5	SS-4	SIGNING AND STRIPING PLANS

PAVILLION PARKWAY

6	SS-5	SIGNING AND STRIPING PLANS
7	SS-6	SIGNING AND STRIPING PLANS
8	SS-7	SIGNING AND STRIPING PLANS

SCHULTE ROAD

9	SS-8	SIGNING AND STRIPING PLANS
10	SS-9	SIGNING AND STRIPING PLANS



VICINITY MAP

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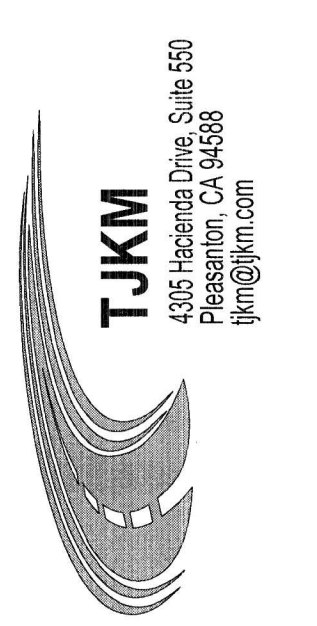
STRIPING NOTES (ALL STRIPING SHEETS)

1. SIGNING AND STRIPING SHALL CONFORM TO THE APPLICABLE DETAILS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) 2018 STANDARD PLANS, STANDARD SPECIFICATIONS, LATEST CALIFORNIA MUTCD, SIGN SPECIFICATIONS SHEETS, AND THE SPECIAL PROVISIONS.
2. EXISTING STRIPING TO BE REMOVED SHALL BE DONE BY GRINDING. AFTER GRINDING, SLURRY SEAL SHALL BE APPLIED TO THE AREA.
3. ALL STRIPING SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED. ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS SHALL BE APPLIED AT A THICKNESS OF 0.150 INCH.
4. ANY EXISTING STRIPING THAT CONFLICTS WITH THE PROPOSED STRIPING SHALL BE REMOVED AT THE APPROVAL OF THE CITY ENGINEER.
5. ALL CROSSWALKS SHALL BE INSTALLED WITH AN INSIDE WIDTH OF 10 FEET.
6. ALL SIGNS AND POSTS SHALL BE INSTALLED PER CITY STANDARD 151 AND MUST MEET MUTCD STANDARDS.
7. REMOVE SIGN POST IF ALL SIGNS ON THE POST ARE TO BE REMOVED.
8. INSTALL NEW POST WITH ALL RELOCATED SIGNS.
9. INSTALL REFLECTIVE BLUE MARKERS AT EVERY FIRE HYDRANT.
10. ALL SIGNS INSTALLED ON PROMONTORY PARKWAY, CAPITAL PARKS DRIVE, PAVILLION PARKWAY AND SCHULTE ROAD SHALL BE EXPRESSWAY SIZED SIGNS.
11. ALL STAA SIGNS INSTALLED SHALL BE EXPRESSWAY SIZED SIGNS (BIGGER SIZE). ALL ARROW PLAQUES ARE SPECIAL AND INTEGRATED WITH A BLUE BACKGROUND.
12. ALL SIGN LOCATIONS SHALL BE VERIFIED BY FIELD INSPECTOR BEFORE INSTALLATION.

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- EXISTING PAVEMENT MARKING TO REMAIN
- INSTALL NEW TYPE III PAVEMENT MARKING (THERMOPLASTIC)
- INSTALL NEW TYPE II (R) PAVEMENT MARKING (THERMOPLASTIC)
- INSTALL NEW TYPE III (B) PAVEMENT MARKING (THERMOPLASTIC)
- INSTALL NEW STRIPING PER DETAIL NUMBER
- CHANGE OF DETAIL NUMBERS
- EXISTING STRIPING TO REMAIN
- EXISTING STRIPING TO BE REMOVED
- EXISTING STOP PAVEMENT MARKING

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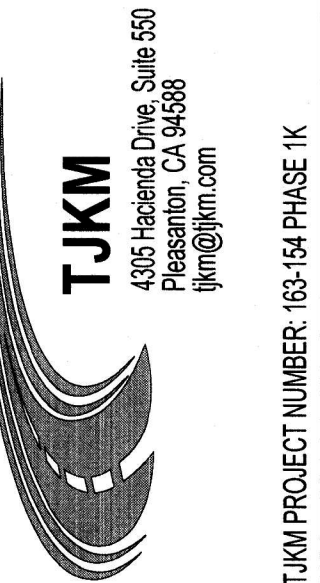
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SIGNING AND STRIPING TITLE SHEET,
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INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS – PHASE 1K

SHEET
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OF 173 SHEETS

INTERIM PHASE 1K

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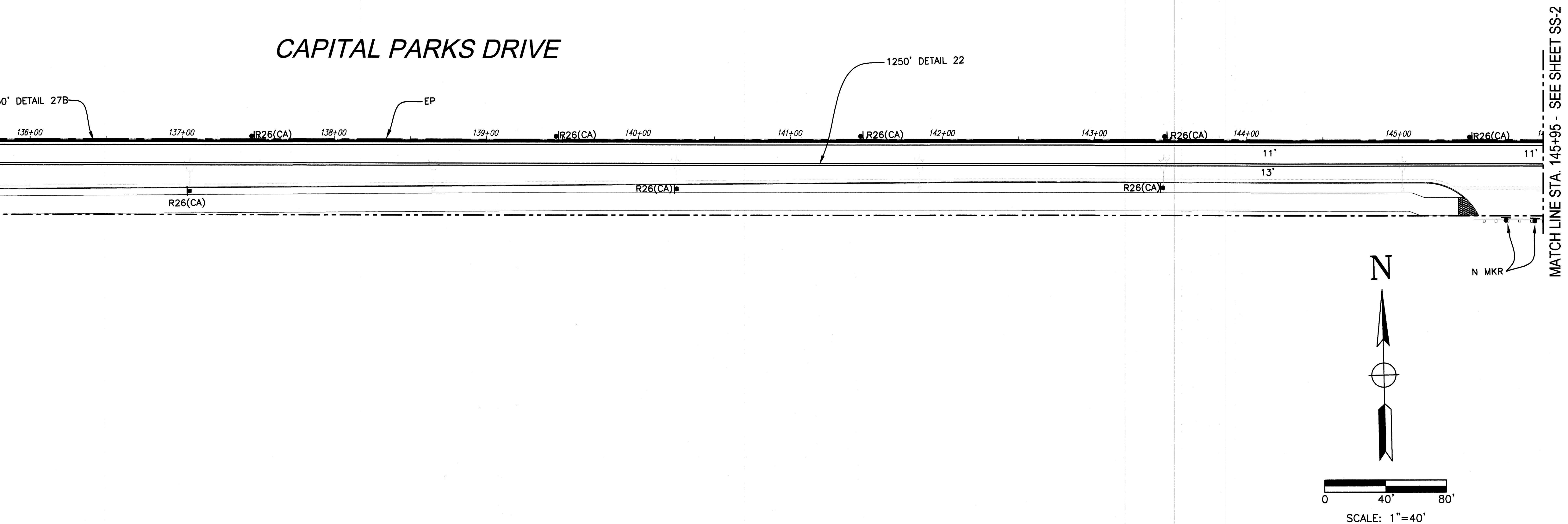
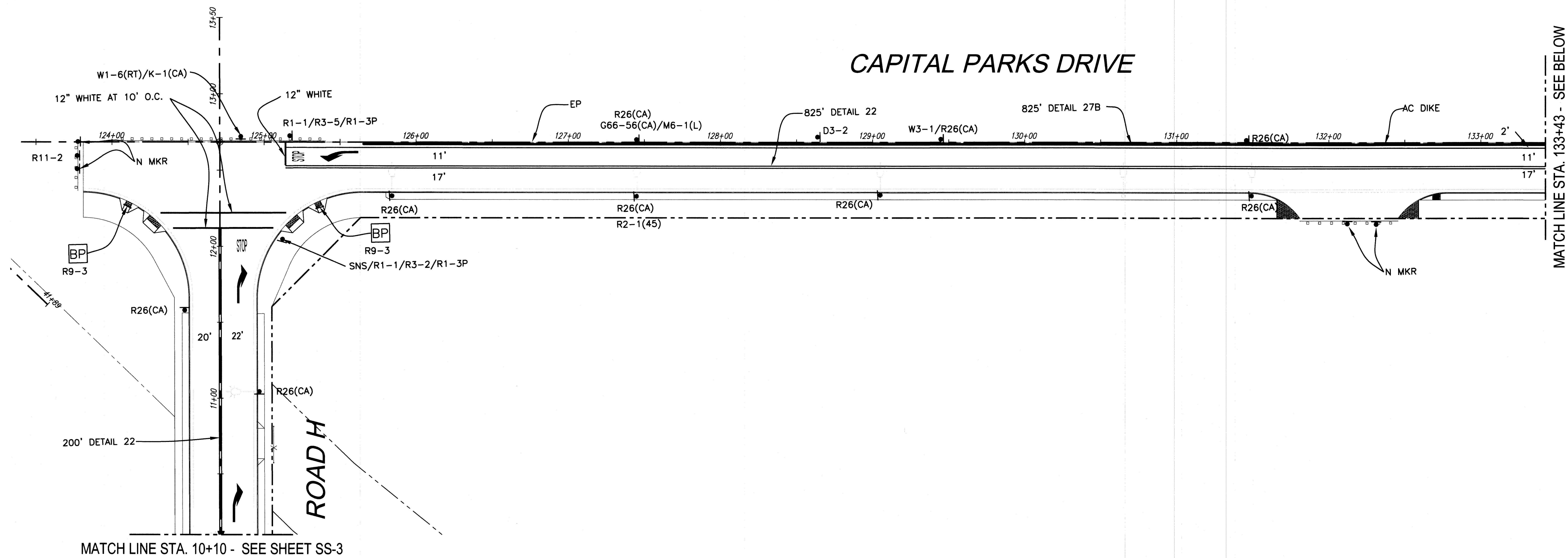
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INTERNATIONAL PARK OF COMMERCE

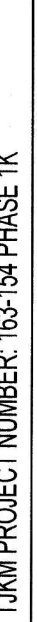
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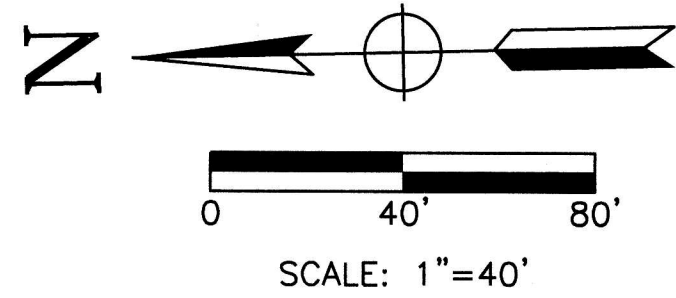
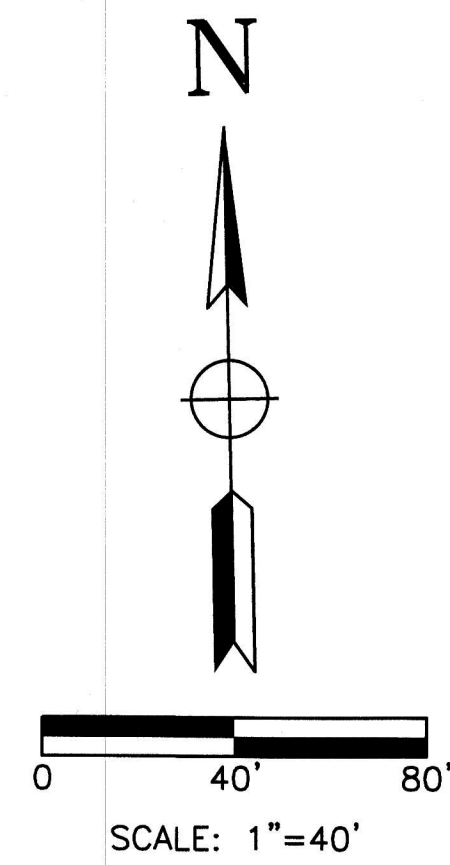


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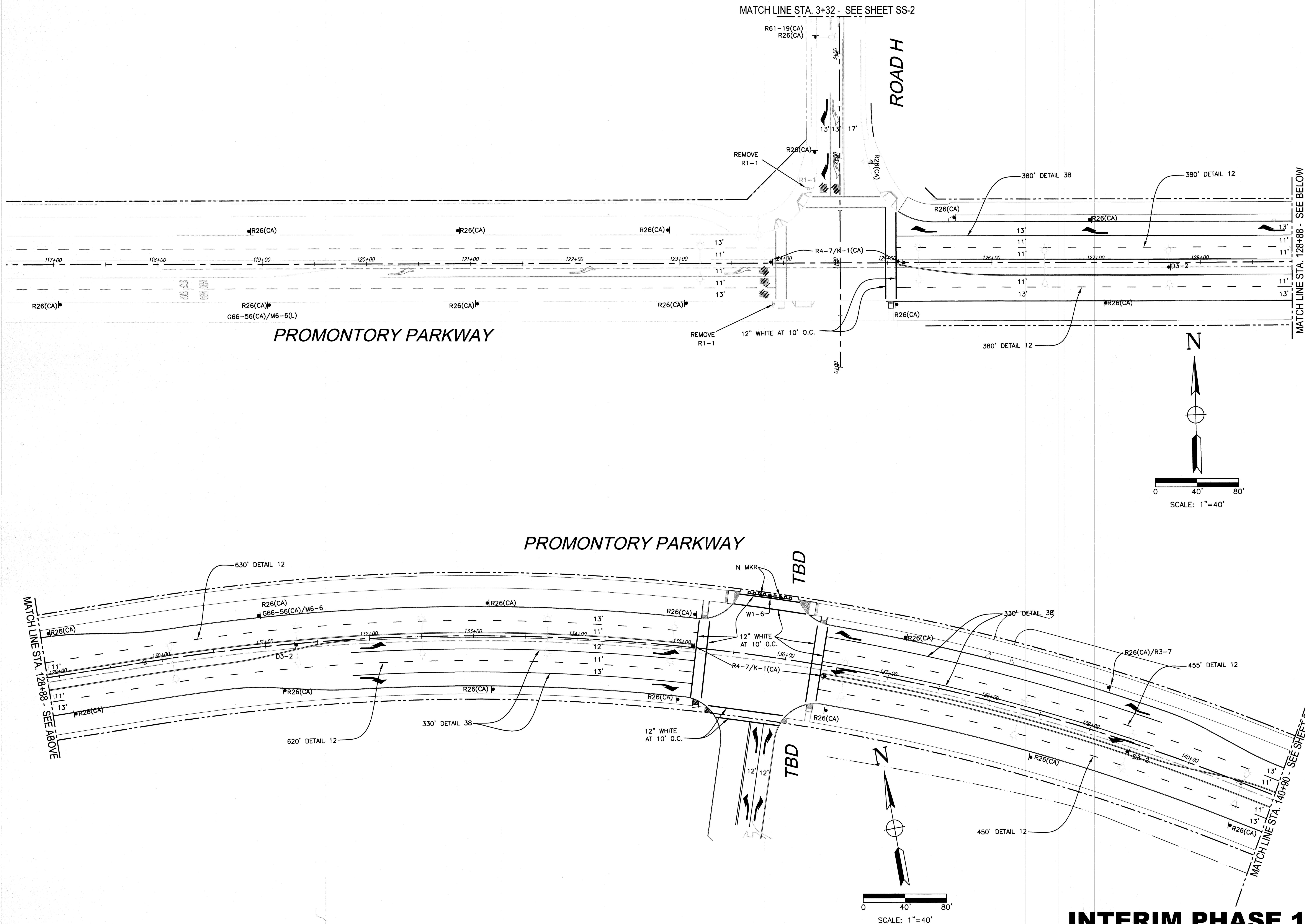
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PROMONTORY PARKWAY

INTERNATIONAL PARK OF COMMERCE

STREET IMPROVEMENT PLANS - PHASE 1K

SHEET

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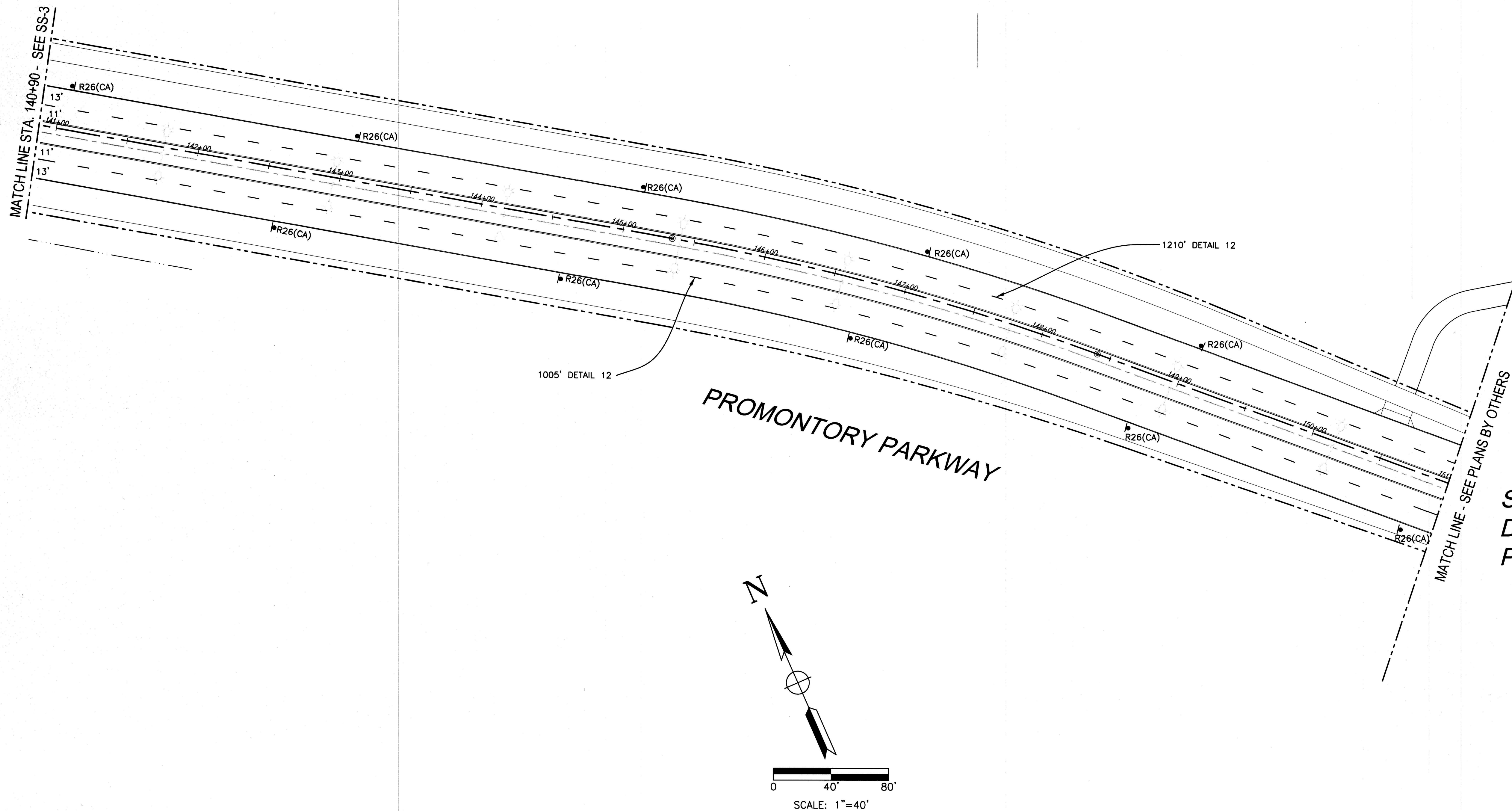
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ROBERT ARMILIO, PE

DATE: 2/24/21

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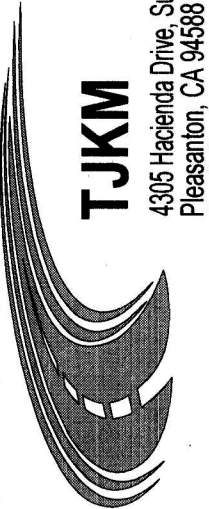
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PROMONTORY PARKWAY
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS - PHASE 1K

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OF 173 SHEETS

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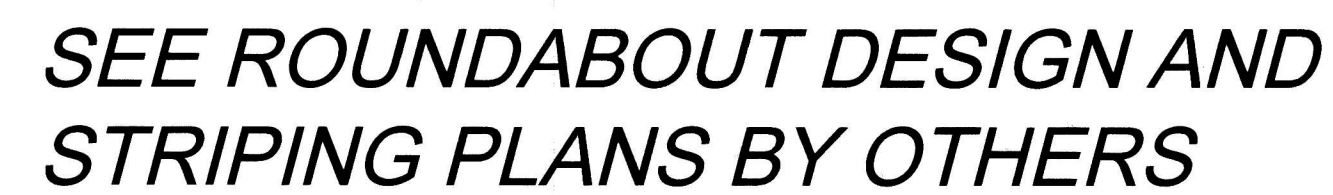
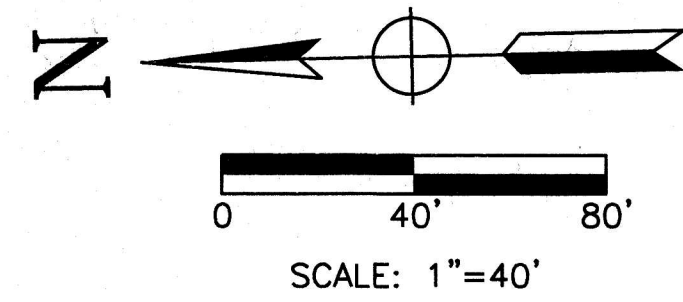


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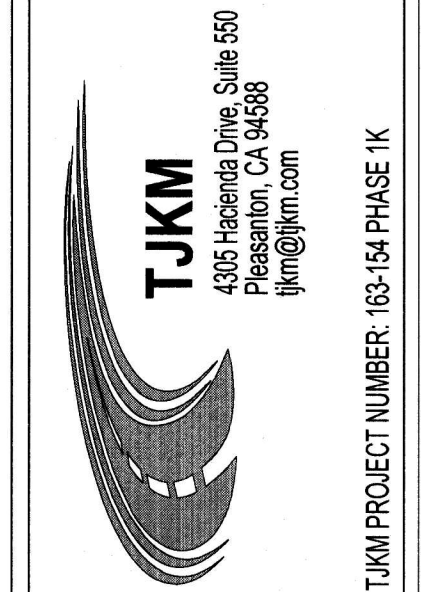
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BY: 
ROBERT ARMILLO, P.E. CITY ENGINEER

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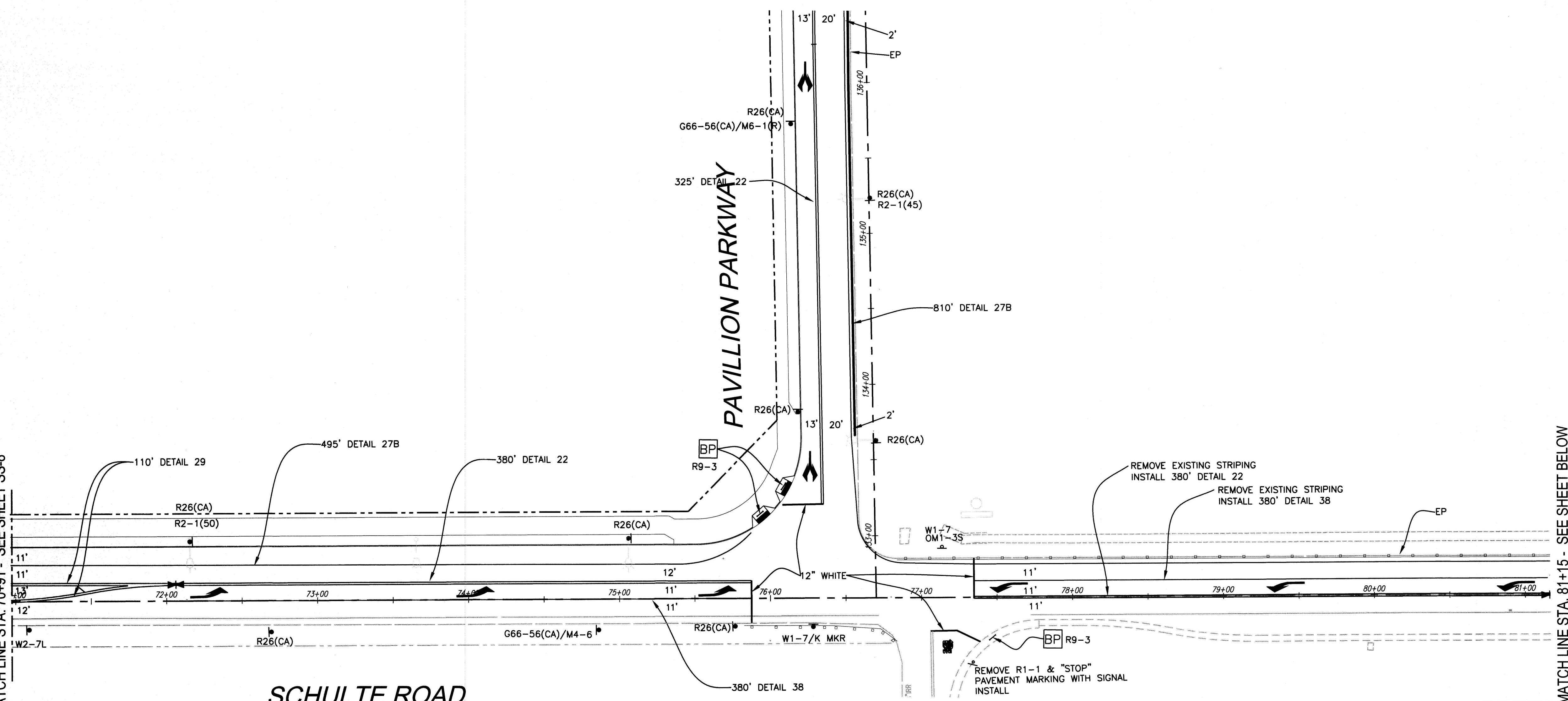
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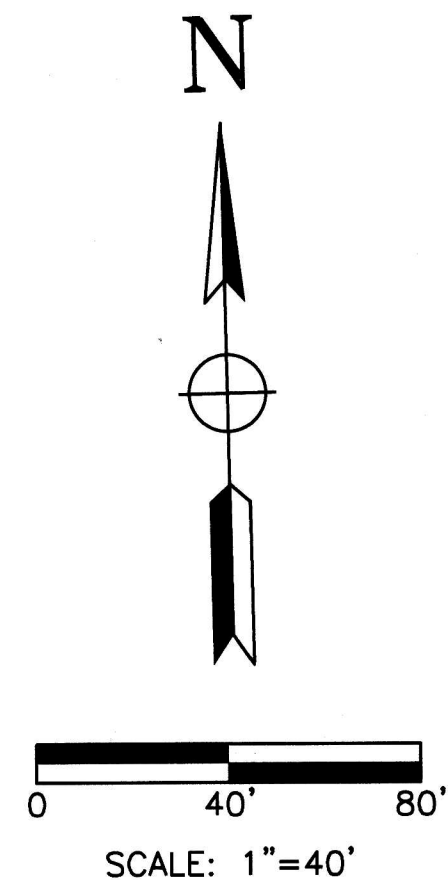
Robert Armijo

ROBERT ARMILJO, P.E. CITY ENGINEER

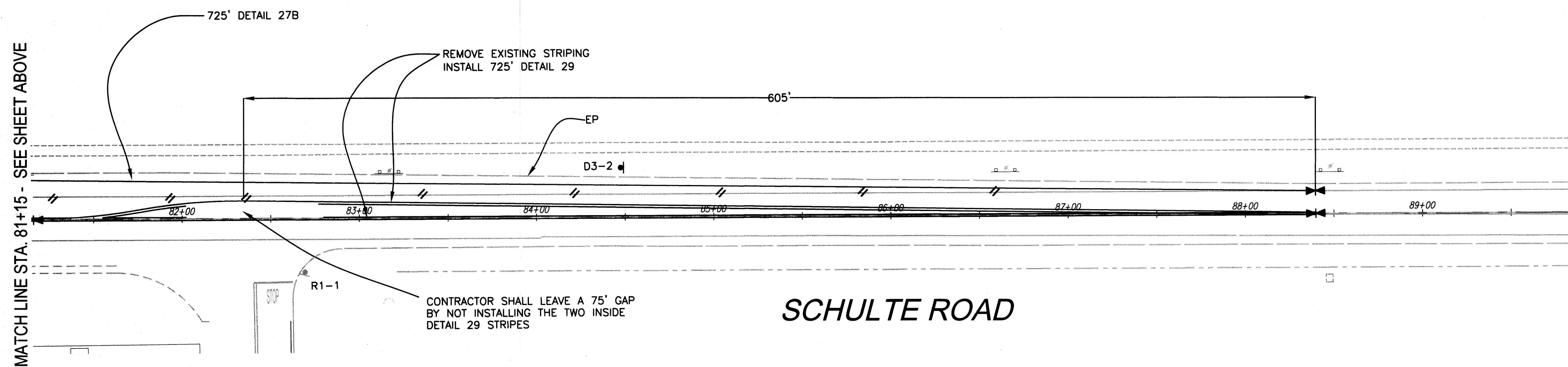
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PAVILLION PARKWAY
325' DETAIL 2

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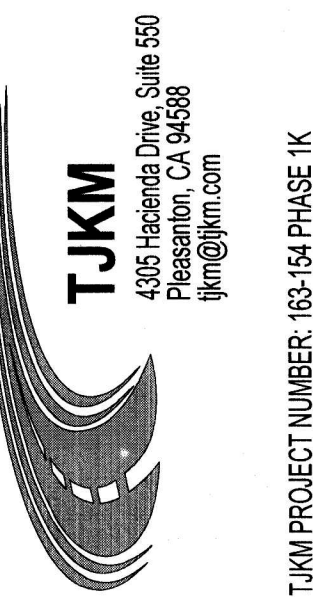
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SCHULTE ROAD

INTERIM PHASE 1K

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PAVILLION PARKWAY
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS - PHASE 1K

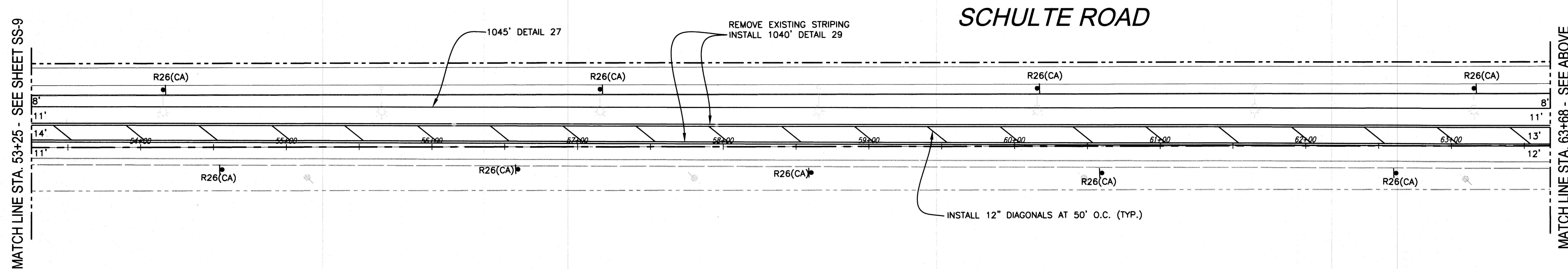
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OF 173 SHEETS

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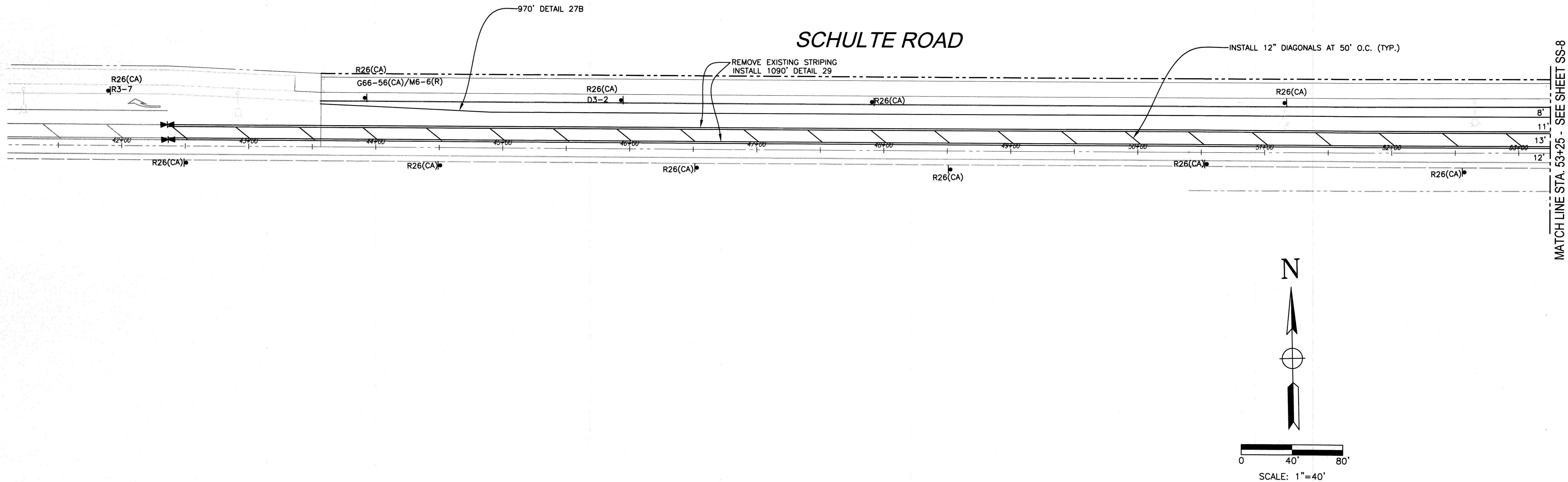
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OF 173 SHEETS

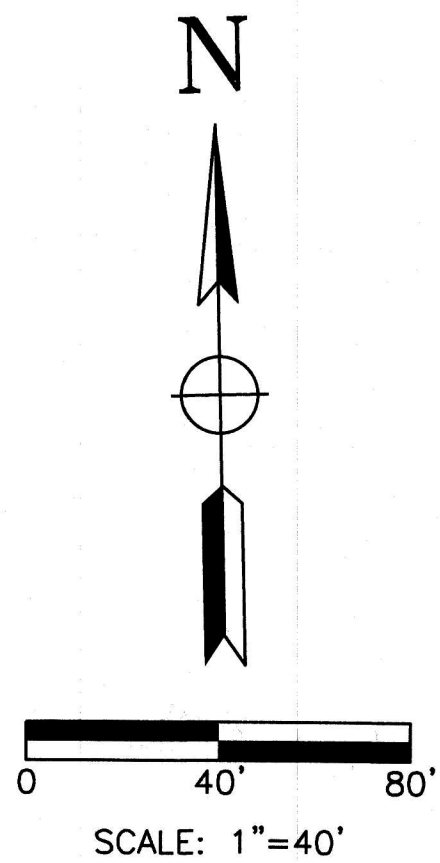


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21 MAY 21

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SCHULTE ROAD
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS - PHASE 1K



SS-1

ROBERT ARMIJO, P.E. CITY ENGINEER

**SEE INTERIM PHASE
1K PLANS FOR ALL
THE STRIPING ALONG
PAVILLION PARKWAY**

International Park of Commerce Building 20

Transportation Technical Report

September 30, 2024

Prepared For:



City of Tracy
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Tracy, CA 95376

Prepared By:

Kimley»Horn

10 S Almaden Blvd, Suite 1250
San Jose, CA 95113

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1 EXECUTIVE SUMMARY

1.1 CEQA ANALYSIS SUMMARY OF TRANSPORTATION IMPROVEMENTS

The following improvements are required to be implemented by IPC 20 based on the CEQA Analysis:

- **Intersection #4: International Parkway & Promontory Parkway**
 - Prohibit southbound U-turn movements
 - Install signal modifications and adjust signal timing to allow a protected westbound right turn overlap with the protected southbound left movement.
- **Roadway Network Signal Retiming**
 - Due to the rerouting of traffic, IPC shall update the signal timing for all intersections that are anticipated to experience changes in traffic where signal timings and phasing are critical to acceptable LOS operations and minimizing queue lengths, especially in left turn pockets. The Promontory Parkway, International Parkway and Old Schulte Road corridors have interconnected signals due to close spacings. Therefore, all signals along Promontory Parkway and Old Schulte Road between International Parkway and Lammers Road, including the end points, and International Parkway and Berkeley Road are required to be retimed.

1.2 GENERAL PLAN ANALYSIS SUMMARY OF TRANSPORTATION IMPROVEMENTS

The following improvements are required to be implemented by IPC 20 based on the General Plan Analysis:

- **Intersection #4 - International Parkway & Promontory Parkway**
 - Prohibit southbound U-turn movements
 - Install signal modifications and adjust signal timing to allow a protected westbound right turn overlap with the protected southbound left movement.
- **Intersection #17 - Lammers Road & Old Schulte Road**
 - Retime the intersection and phasing plan to accommodate the rerouted volumes.
- **Intersection #18 – Lammers Road & Valpico**
 - Install previously identified improvements at this intersection:
 - Signal with northbound left turn lane, southbound left turn lane, westbound right turn lane with overlap signal phasing
- **Roadway Network Signal Retiming**
 - Due to the rerouting of traffic, IPC shall update the signal timing for all intersections that are anticipated to experience changes in traffic where signal timings and phasing are critical to acceptable LOS operations and minimizing queue lengths, especially in left turn pockets. The Promontory Parkway, International Parkway and Old Schulte Road corridors have interconnected signals due to close spacings. Therefore, all signals along Promontory Parkway and Old Schulte between International Parkway and Lammers Road, including the end points, and International Parkway and Berkeley Road are required to be retimed.

The applicant shall prepare a monthly monitoring program to observe truck violations and, if deemed necessary by the City Engineer, install additional measures to discourage/prohibit IPC truck traffic from using the Promontory Parkway Extension to Lammers Road. These measures may include addition traffic signs, curb and median measures or other traffic calming measures to discourage/prevent truck traffic on Promontory Parkway east of Pavillion Parkway.

2 INTRODUCTION

This report documents the traffic analysis performed for the proposed International Park of Commerce Building #20 (IPC 20) Industrial Warehouse development (the “Project”) which is located within the Cordes Ranch Specific Plan Area in the City of Tracy, California. This analysis includes evaluation of the Project’s consistency as a development within the previously certified Cordes Ranch Specific Plan EIR (CRSP EIR), September 2013. In addition, the analysis also evaluates the Project for consistency with the City of Tracy General Plan.

As a result of significant growth in the City of Tracy since the approval of the CRSP EIR over a decade ago, the General Plan analysis supplements and provides context to the EIR CEQA analysis. This allows both the City of Tracy (the “City”) and the Project Developer (Prologis) to understand which approval conditions may be triggered with the introduction of the Project to the CRSP EIR assumptions as well as whether those conditions are still relevant today under the changing conditions with growth in the City.

Analysis related to the CRSP EIR (“CEQA” Analysis or Methodology) to determine consistency and development triggers uses a 2011 base year, consistent with in the CRSP EIR. Analysis related to the City of Tracy General Plan (“General Plan” Analysis or Methodology) uses an August 2024 base year to provide a current evaluation of roadway operations that is consistent with City General Plan requirements.

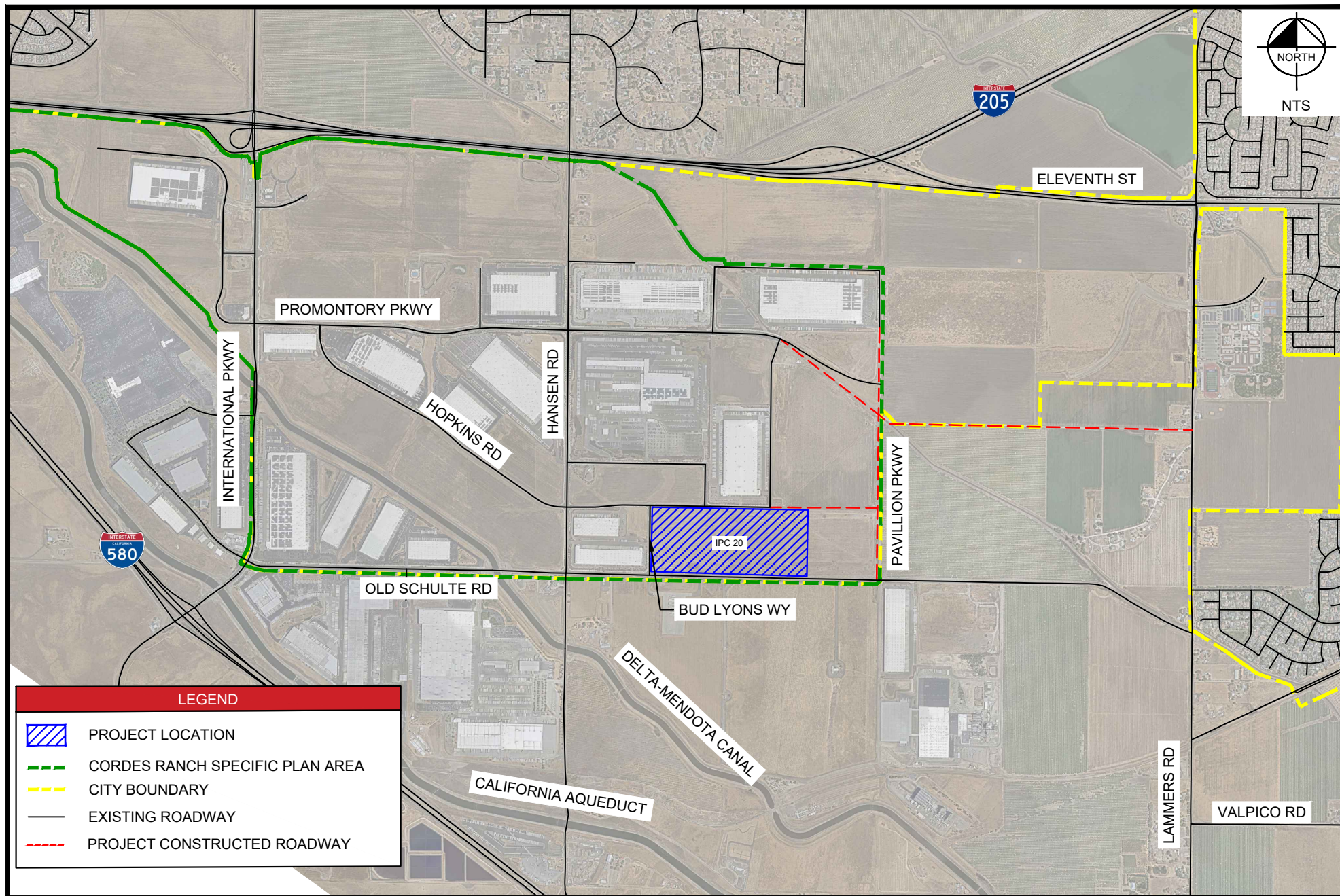
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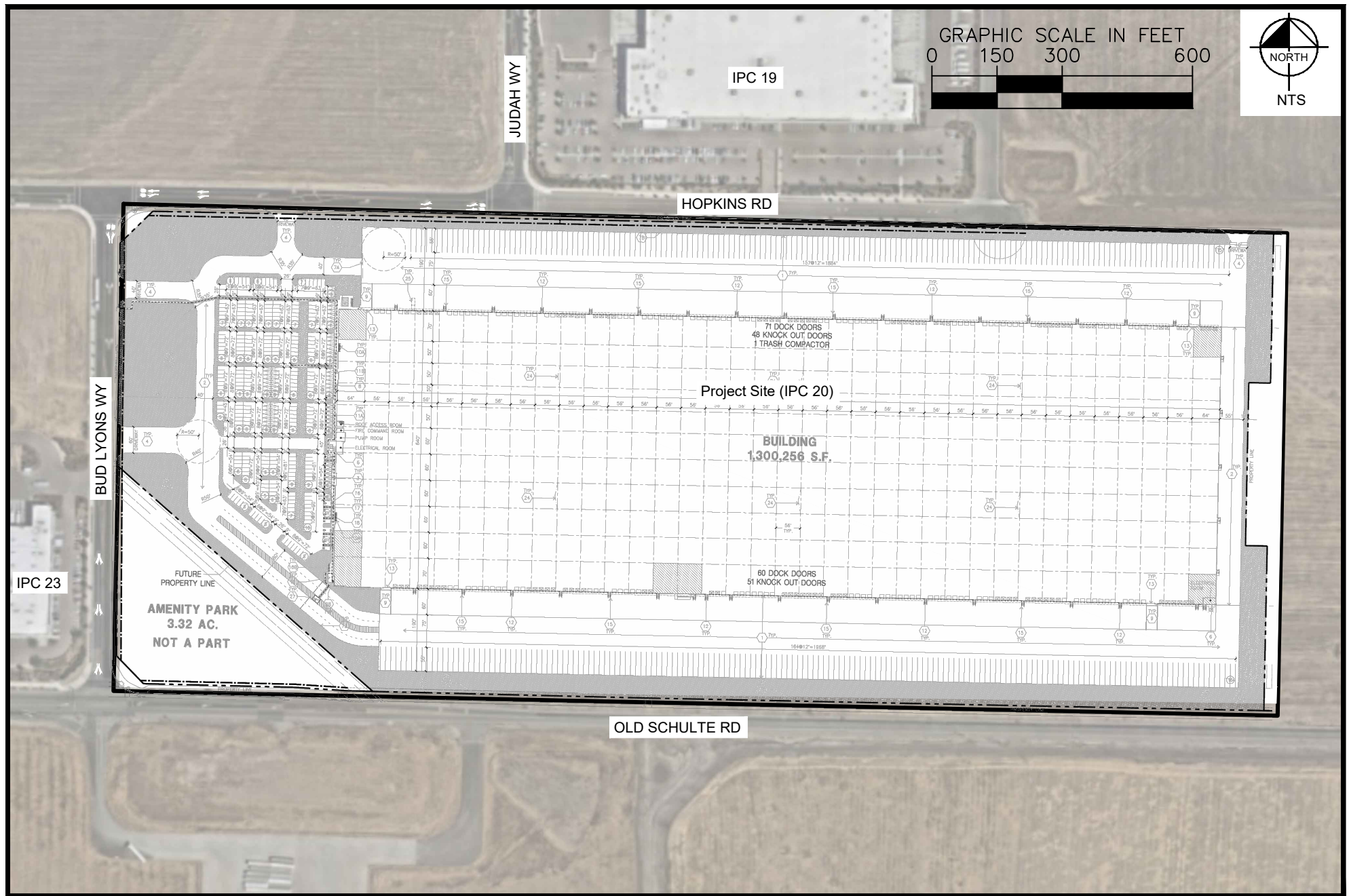
The Project proposes to construct a 1,300,256 square foot high cube warehouse on a currently undeveloped parcel within the CRSP area. The project parcel is bounded by Old Schulte Road, Bud Lyons Way, Hopkins Road and Pavilion Parkway (the project boundary is offset from Pavillion Parkway by approximately 1200 feet) with four driveways proposed (two on Bud Lyons Way and two on Hopkins Road). The eastern Hopkins Road driveway will be gated and used for emergency vehicle access only. The southern Bud Lyons Way driveway will be the exclusive heavy vehicle access for the site.

In addition to onsite, driveway, and frontage improvements, the Project proposes to construct the following off-site street improvement plans which are included in the **Appendix**:

- Phase 1K
- Hopkins Road Extension – Private Road to Pavillion Parkway
- Promontory Parkway Extension – Pavillion Parkway to Lammers Road

Figure 1 shows the Project vicinity within the City of Tracy and the Cordes Ranch Specific Plan area. **Figure 2** shows the site plan for the proposed Project.





3 ANALYSIS METHODOLOGY

An operational analysis of the Project was conducted to assess compliance with the CRSP EIR (CEQA Methodology) and the City of Tracy General Plan (General Plan Methodology) which includes:

- CEQA Methodology – 2011 Base Year
- General Plan Methodology – August 2024 Base Year

3.1 STUDY INTERSECTIONS

Study intersections were selected based on the following criteria: IPC current road network construction and the proposed IPC 20 road network construction, the CEQA study intersections, and the City General Plan requirements. New roads and intersections inside and surrounding IPC include the addition of frontage improvements on Bud Lyons Road, Hopkins Road, and Old Schulte Road. The Project will also install the following off-site improvements irrespective of the findings of this traffic study: Hopkins Road extension from the private road to Pavillion Parkway, Pavillion Parkway from Old Schulte Road north to IPC 16 and Promontory Parkway extension eastwards to intersect Lammers Road. The expansion of the IPC road network will result in a shift in traffic volumes at intersections surrounding, and inside IPC. The reassignment of traffic is discussed in the Existing Plus Approved Plus Project Conditions section of the report for each analysis methodology.

Table 1 lists the study intersections analyzed under the CEQA and General Plan scenarios. Inclusion of the International Parkway interchanges (Intersection #s 1,2,5,6) under CEQA analysis mirrors the study intersections of the CRSP EI; however, improvements at these interchanges are already programmed and planned such that further analysis of these locations would not materially change the planned improvements and are, thus, excluded from the General Plan Analysis. In addition, Project driveways are only evaluated under plus Project scenarios.

Table 1: Study Intersections by Analysis Methodology

Intersection Name		CEQA			General Plan		
#	Name	Existing	Approved	Project	Existing	Approved	Project
1	International Parkway & I-205 WB Ramps	•	•	•			
2	International Parkway & I-205 EB Ramps	•	•	•			
3	International Parkway & Daylight Road		•	•	•	•	•
4	International Parkway & Promontory Parkway		•	•	•	•	•
5	International Parkway & Old Schulte Road	•	•	•	•	•	•
6	International Parkway & I-580 WB Ramps	•	•	•			
7	International Parkway & I-580 EB Ramps	•	•	•			
8	Hopkins Road & Promontory Parkway		•	•	•	•	•
9	Hansen Road & Promontory Parkway		•	•	•	•	•
10	Hansen Road & Hopkins Road		•	•	•	•	•
11	Hansen Road & Old Schulte Road	•	•	•	•	•	•
12	Bud Lyons Way & Hopkins Road		•	•	•	•	•
13	Bud Lyons Way & Old Schulte Road		•	•	•	•	•
14	Pavillion Parkway & Hopkins Road			•			•
15	Pavillion Parkway & Old Schulte Road			•	•	•	•
16	Lammers Road & Eleventh Street	•	•	•	•	•	•
17	Lammers Road & Old Schulte Road	•	•	•	•	•	•
18	Lammers Road & Valpico Road	•	•	•	•	•	•
19	Project Driveway 1 & Bud Lyons Way			•			•
20	Project Driveway 2 & Bud Lyons Way			•			•
21	Project Driveway 3 & Hopkins Road			•			•
22	Lammers Road & Promontory Parkway			•			•

3.2 CEQA ANALYSIS METHODOLOGY

The CEQA analysis methodology determines Project impacts consistent with the CRSP EIR, which uses 2011 traffic volumes for a base year analysis. This analysis assumes that the growth on study facilities from 2011 to present will come from all constructed and all approved (but not yet constructed) IPC buildings since adoption of the CRSP EIR. This analysis determines whether IPC 20 roadway improvement requirements are triggered based on the CRSP EIR development thresholds.

Study Scenarios

The analysis for CEQA methodology is based upon the following development conditions:

Existing (2011) Conditions

- To be consistent with the CRSP EIR, a common base year of 2011 for Existing Conditions was utilized for IPC 20.

Existing (2011) Plus Approved CRSP Projects Conditions

- Existing (2011) traffic volumes from the CRSP EIR
- CRSP traffic generated by buildings constructed or approved prior to the Project
- Current (2024) roadway geometry

Existing (2011) Plus Approved CRSP Projects Plus Project Conditions

- Existing (2011) traffic volumes from the CRSP EIR
- CRSP traffic generated by buildings constructed or approved prior to the Project
- Traffic generated by IPC 20 (Project)
- Current (2024) roadway geometry plus roadway improvements proposed as a part of the Project (i.e. Hopkins Road Extension, Pavillion Parkway and Promontory Parkway Extension)

3.3 GENERAL PLAN METHODOLOGY

The General Plan analysis methodology evaluates the Project assuming a current base year of 2024, and therefore reflects prevailing traffic patterns and City growth based on current count data. Current traffic flow patterns and volumes in the IPC area differ from the estimated CRSP EIR conditions, mainly, due to different land use buildout (i.e. areas of development and internal roadway network construction) occurring in IPC compared to the CRSP EIR and different regional and local traffic patterns. The study network area sees “cut-through” traffic, trips that do not have an origin or destination within the local area, along International Parkway between I-205 and I-580 (regional traffic trying to avoid freeway congestion) and along Old Schulte Drive between Tracy proper and the I-580/I-205 (local traffic trying to avoid freeway congestion). This analysis includes approved and occupied buildings as well as growth from background traffic.

Study Scenarios

The analysis for General Plan methodology is based upon the following development conditions:

Existing Conditions

- Existing traffic counts collected in August 2024
- Existing traffic control and lane geometry as of August 2024

Existing Plus Approved Projects Conditions

- Existing traffic counts collected in August 2024
- Traffic generated by the vacant portion of partially occupied/leased or vacant CRSP buildings
- CRSP traffic generated by buildings approved but not yet constructed
- Traffic generated by other approved or pending approval projects near the study area
- Frontage and driveway improvements of unbuilt approved or pending approval projects

Existing Plus Approved Projects Plus Project Conditions

- Existing traffic counts collected in August 2024
- Traffic generated by partially occupied/leased or vacant CRSP buildings
- Traffic generated by other approved or pending approval projects near the study area
- Traffic generated by the IPC 20 (Project)
- Frontage road and driveway improvements of unbuilt approved or pending approval projects
- Street improvement plans
 - Phase 1K Roadway Improvement Plan

- Hopkins Road Extension Roadway Improvement Plan – Private Road to Pavillion Parkway
- Promontory Parkway Extension Roadway Improvement Plan – Pavillion Parkway to Lammers Road
- Redistribution of traffic volumes to account for assumed roadway improvements

3.4 OPERATING CONDITIONS AND CRITERIA FOR INTERSECTIONS

Analysis of potential deficiencies caused by the Project at roadway intersections is based on the concept of Level of Service (LOS) per the City General Plan. The LOS of an intersection is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Levels of Service for this study were determined using methods defined in the *Highway Capacity Manual, 7th Edition*, (HCM) and Synchro 12 traffic analysis software.

HCM methodologies include procedures for analyzing side-street stop-controlled (SSSC), all-way stop-controlled (AWSC), and signalized intersections. The SSSC procedure defines LOS as a function of average control delay for each minor street approach movement. Conversely, the AWSC and signalized intersection procedures define LOS as a function of average control delay for the overall intersection. **Table 2** relates the operational characteristics associated with each LOS category for signalized and unsignalized intersections.

Table 2: Intersection Level of Service Definitions

Level of Service	Description	Signalized (Avg. control delay per vehicle sec/veh.)	Unsignalized (Avg. control delay per vehicle sec/veh.)
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream	Less than 10	less than 10
B	Stable traffic. Traffic flows smoothly with few delays.	less than or equal to 10 to 20	less than or equal to 10 to 15
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	less than or equal to 20 to 35	less than or equal to 15 to 25
D	Approaching unstable flow. Operation of individual users become significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	less than or equal to 35 to 55	less than or equal to 25 to 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	less than or equal to 55 to 80	less than or equal to 35 to 50
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	greater than or equal to 80	greater than or equal to 50

Sources: Transportation Research Board, *Highway Capacity Manual 7th Edition*, National Research Council.

Project related deficiencies are determined by comparing conditions without the proposed Project to those with the proposed Project. Project related deficiencies at study intersections are created when traffic from the proposed Project causes the LOS to fall below the maintaining agency's LOS threshold or causes deficient intersections to deteriorate further to a certain level.

Facilities evaluated in this study are located in and maintained by the City of Tracy, the County of San Joaquin, and the California Department of Transportation (District 10). For intersections that are in the County, City standards are applied. Each agency has developed unique level of service standards, which are summarized below:

3.4.1 CITY OF TRACY

The City of Tracy has established a minimum LOS D traffic operation standard. For intersections within $\frac{1}{4}$ mile of a freeway, the City of Tracy has established a minimum LOS E standard. A development is identified as causing a LOS deficiency, and may be required to make improvements, if either of the following conditions occur:

1. If an intersection LOS goes from adequate to deficient with the addition of the Project.
2. If an intersection is deficient prior to the addition of the Project and with the addition of the Project, the overall intersection delay increases more than 5.0 seconds.

3.4.2 CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

Caltrans has identified a level of service objective of C/D (i.e., on the “cusp” between levels of service C and D) as the acceptable service level for signalized intersections. For the CEQA analysis approach, the LOS criteria below is used for consistency. For the purposes of this analysis, Project related deficiencies at study intersections are defined to occur when the addition of Project traffic:

1. Causes operations to deteriorate from an acceptable level (LOS C) to an unacceptable level (LOS D or worse).
2. Causes the existing measure of effectiveness (average delay) to deteriorate at a State-operated intersection operating at worse than LOS C.

The LOS thresholds for Caltrans are taken from the December 2002 *Guide for the Preparation of Traffic Impact Studies*. Under some circumstances, Caltrans will work with local agencies to determine an acceptable LOS standard on a case-by-case basis when the study roadway facility is constrained, and the LOS C objective is infeasible.

As of May 20, 2020, Caltrans has updated their guidelines (Vehicle Miles Traveled - Focused Transportation Impact Study Guidelines); however, no LOS thresholds are stated. In July 2020, Senate Bill 743 (SB 743) changed how the state of California evaluates environmental impacts related to transportation under CEQA from vehicle delay and LOS to vehicle miles traveled (VMT). However, for specific plans and their accompanying EIRs that are ratified prior to July 2020, the prior transportation impact measure of vehicle delay and LOS remains in effect. The proposed Project is developing in accordance to the CRSP and thus no change, update or amendment to the CRSP to include VMT analysis is required as a part of the proposed Project.

4 CEQA ANALYSIS

The CEQA analysis methodology determines Project impacts consistent with the original CRSP EIR which uses 2011 traffic volumes for a base year analysis. This analysis assumes that growth on study facilities between 2011 and plus Project conditions is a result of development of the CRSP.

The following scenarios were analyzed for the CEQA methodology:

- Existing (2011) Conditions
- Existing (2011) Plus Approved CRSP Projects Conditions
- Existing (2011) Plus Approved CRSP Projects Plus Project Conditions

4.1 EXISTING (2011) CONDITIONS

Table 3 presents the level of service (LOS) analysis of the existing study intersections.

All study intersections operate at an acceptable LOS for the base year. Analysis output sheets are provided in the **Appendix**.

Figure 3 illustrates the intersections studied for this scenario. **Figure 4** illustrates the volumes, intersection control type and lane geometry for this scenario.

Table 3: Existing (2011) Conditions LOS Results

Intersection	LOS Standard	Existing (2011) Conditions						
		Control Type	AM Peak Hour			PM Peak Hour		
			MVMT	Delay	LOS	MVMT	Delay	LOS
1 International Parkway & I-205 WB Ramps	C/D	Signal	-	13.90	B	-	10.20	B
2 International Parkway & I-205 EB Ramps	C/D	Signal	-	4.70	A	-	10.20	B
3 International Parkway & Daylight Road		Intersection Does Not Exist Under This Condition						
4 International Parkway & Promontory Parkway		Intersection Does Not Exist Under This Condition						
5 International Parkway & Old Schulte Road	E	Signal	-	36.60	D	-	36.10	D
6 International Parkway & I-580 WB Ramps	C/D	SSSC	NB	10.40	B	NB	12.40	B
7 International Parkway & I-580 EB Ramps	C/D	SSSC	SB	12.80	B	SB	24.80	C
8 Hopkins Road & Promontory Parkway		Intersection Does Not Exist Under This Condition						
9 Hansen Road & Promontory Parkway		Intersection Does Not Exist Under This Condition						
10 Hansen Road & Hopkins Road		Intersection Does Not Exist Under This Condition						
11 Hansen Road & Old Schulte Road	D	AWSC	-	10.90	A	-	12.50	B
12 Bud Lyons Way & Hopkins Road		Future Intersection						
13 Bud Lyons Way & Old Schulte Road		Future Intersection						
14 Pavillion Parkway & Hopkins Road		Future Intersection						
15 Pavillion Parkway & Old Schulte Road		Future Intersection						
16 Lammers Road & Eleventh Street	D	Signal	-	10.30	B	-	15.70	B
17 Lammers Road & Old Schulte Road	D	AWSC	-	31.80	D	-	13.10	B
18 Lammers Road & Valpico Road	D	SSSC	WB	11.30	B	WB	10.40	B
19 Project Driveway 1 & Bud Lyons Way		Project Driveway						
20 Project Driveway 2 & Bud Lyons Way		Project Driveway						
21 Project Driveway 3 & Hopkins Road		Project Driveway						
22 Lammers Road & Promontory Parkway		Future Intersection						

Notes:

1. Analysis performed using HCM 2000 Edition methodology, consistent with the DEIR
2. Overall level of service (LOS) standard for the City is D. For intersections within 1/4-mile of an interchange, overall LOS standard is E
3. SSSC - Side Street Stop Control, Signal - Signalized Intersection, AWSC - All Way Stop Controlled
4. Delay indicated in seconds/vehicle

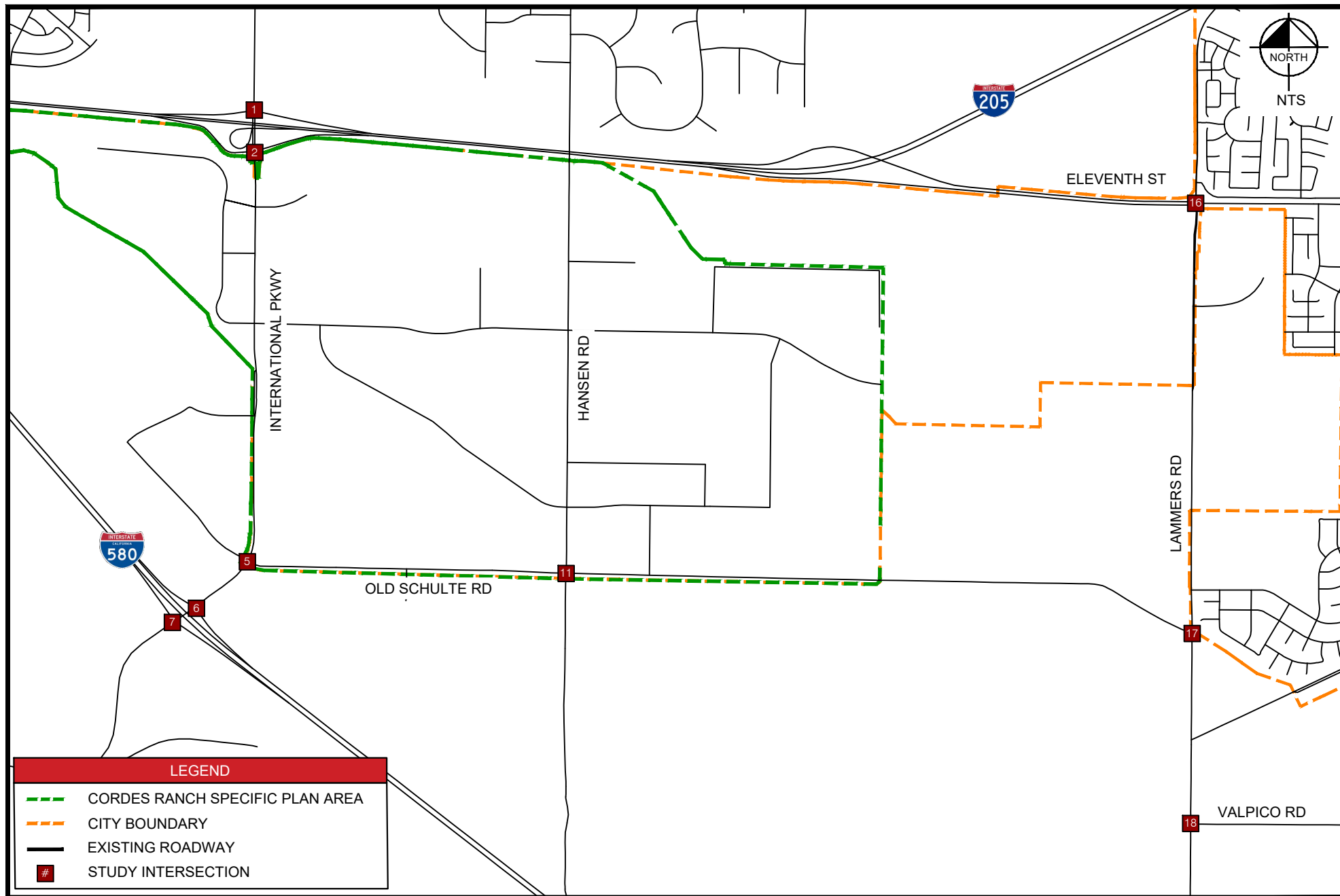
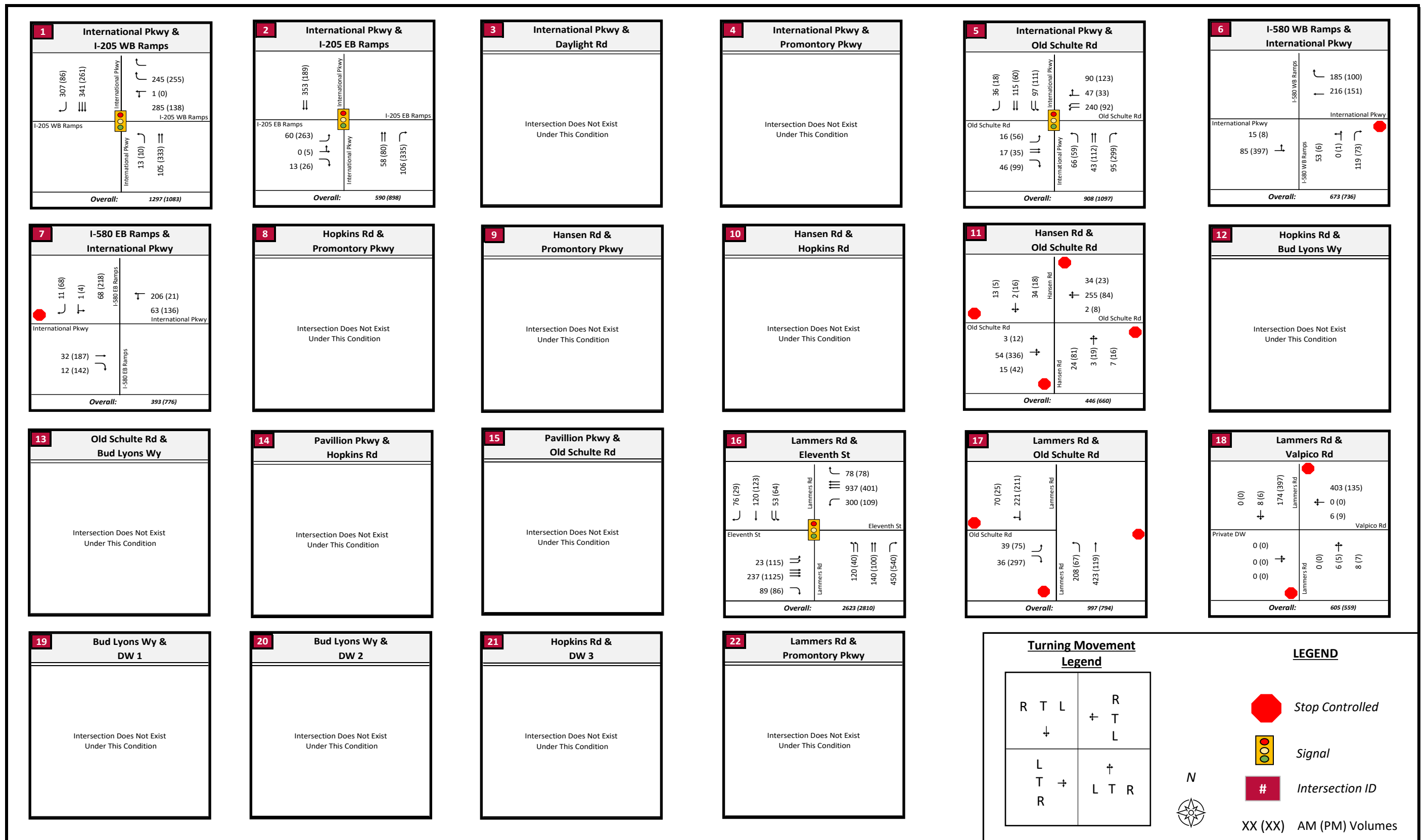


Figure 3

Existing (2011) Conditions

CEQA Analysis



4.2 EXISTING PLUS APPROVED CRSP PROJECTS CONDITIONS

Traffic operations were evaluated at the study intersections under Existing (2011) Plus Approved CRSP Projects Conditions. The following Projects are included as built and/or approved Cordes Ranch projects:

- IPC 2
- IPC 3
- IPC 4
- IPC 6
- IPC 8
- IPC 9
- IPC 10
- IPC 12
- IPC 14
- IPC 16
- IPC 19
- IPC 22A
- IPC 23
- IPC 25
- Amazon
- Fedex
- Medline
- Prologis Office
- Promontory Station
- West Parkway Village
- Gas Station
- Shopping Center (Parcel 8)
- Taco Bell

4.2.1 TRIP GENERATION, DISTRIBUTION, AND ASSIGNMENT OF APPROVED CRSP PROJECTS

Trip Generation

Table 4 shows the trip generation for all previously Approved CRSP Projects.

The approved project trips are estimated to generate 2,289 AM Peak Hour trips (1,421 IN / 868 OUT) and 2,936 PM Peak Hour trips (961 IN / 1,975 OUT).

Table 4: Approved CRSP Projects Trip Generation

Land Uses	Project Size		AM Peak Hour				PM Peak Hour			
			Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Approved CRSP Project Uses and Trip Generation ¹										
IPC 2 (High-Cube Warehouse)	350.92	KSF	39	27	/	12	42	13	/	29
IPC 3 (High-Cube Warehouse)	323.99	KSF	39	27	/	12	45	14	/	31
IPC 4 (High-Cube Warehouse)	210.94	KSF	25	17	/	8	30	9	/	21
IPC 6 (High-Cube Warehouse)	403.56	KSF	44	30	/	14	48	14	/	34
IPC 8 (Light Industrial)	1,202.40	KSF	204	161	/	43	397	99	/	298
IPC 9 (High-Cube Warehouse)	503.20	KSF	60	41	/	19	70	22	/	48
IPC 10 (High-Cube Warehouse)	235.82	KSF	28	19	/	9	33	10	/	23
IPC 12 (High-Cube Warehouse)	664.00	KSF	80	55	/	25	93	29	/	64
IPC 14 (High-Cube Warehouse)	1,019.31	KSF	122	84	/	38	143	44	/	99
IPC 16 (High-Cube Warehouse)	1,181.31	KSF	142	98	/	44	166	52	/	114
IPC 19 (High-Cube Warehouse)	726.63	KSF	87	60	/	27	102	32	/	70
IPC 22A (Light Industrial)	225.00	KSF	38	30	/	8	74	19	/	55
IPC 23 (High-Cube Warehouse)	270.88	KSF	33	23	/	10	38	12	/	26
IPC 25 (High-Cube Warehouse)	708.08	KSF	85	59	/	26	99	31	/	68
IPC 28 (High-Cube Warehouse)	524.08	KSF	63	49	/	14	73	20	/	53
Amazon (High-Cube Warehouse)	1,001.38	KSF	110	76	/	34	120	37	/	83
FedEx (Parcel Hub)	385.00	KSF	195	34	/	161	392	52	/	340
Medline	1,005.50	KSF	211	130	/	81	210	81	/	129
Prologis Office (Office)	139.58	KSF	218	157	/	61	208	82	/	126
Promontory Station (Retail, Restaurant, Gas Station, and Charging Station)	-		309	160	/	149	347	181	/	166
West Parkway Village (Commercial Mixed-Use) ²	-		157	84	/	73	206	108	/	98
Approved Total			2,289	1,421	/	868	2,936	961	/	1,975

Notes:

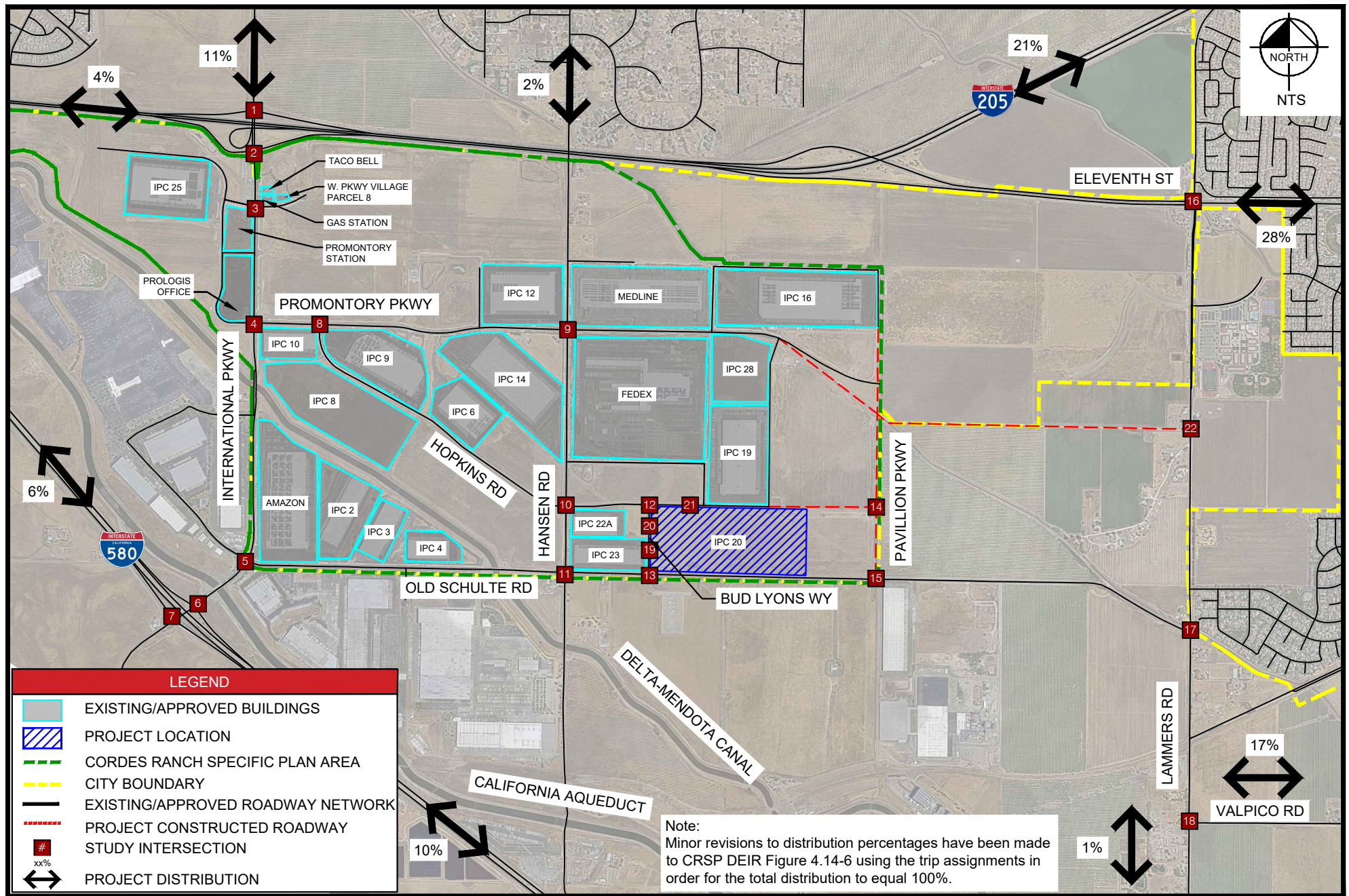
1. Trip generation values match those from each individual Approved Project's traffic study.
2. West Parkway Village Parcels: Chevron Gas Station, Shopping Center (Parcel 8), Taco Bell

Trip Distribution and Assignment

The following lists the distribution assumptions used in the CRSP EIR that were applied to Approved projects.

- I-205 West of International Parkway: 4%
- Mountain House North of I-205: 11%
- I-205 East of Eleventh Street: 21%
- Eleventh Street East of Lammers Road: 28%
- Valpico Road East of Lammers Road: 17%
- Lammers Road South of Valpico: 1%
- I-580 East of International Parkway: 10%
- I-580 West of International Parkway: 6%
- Hansen Road North of I-205: 2%

Figure 5 provides the trip distribution for approved CRSP projects.



4.2.2 EXISTING (2011) PLUS APPROVED CRSP PROJECTS CONDITIONS

Figure 6 illustrates the intersections studied for this scenario. **Figure 7** illustrates the volumes, intersection control type and lane geometry for this scenario.

The results of the Existing (2011) Plus Approved CRSP Projects Conditions LOS analysis are presented in **Table 5**.

The following study intersections operate at an unacceptable LOS:

- Intersection #5 – International Parkway & Old Schulte Road
 - AM Peak Hour – LOS F
 - PM Peak Hour – LOS F

Analysis output sheets are provided in the **Appendix**.

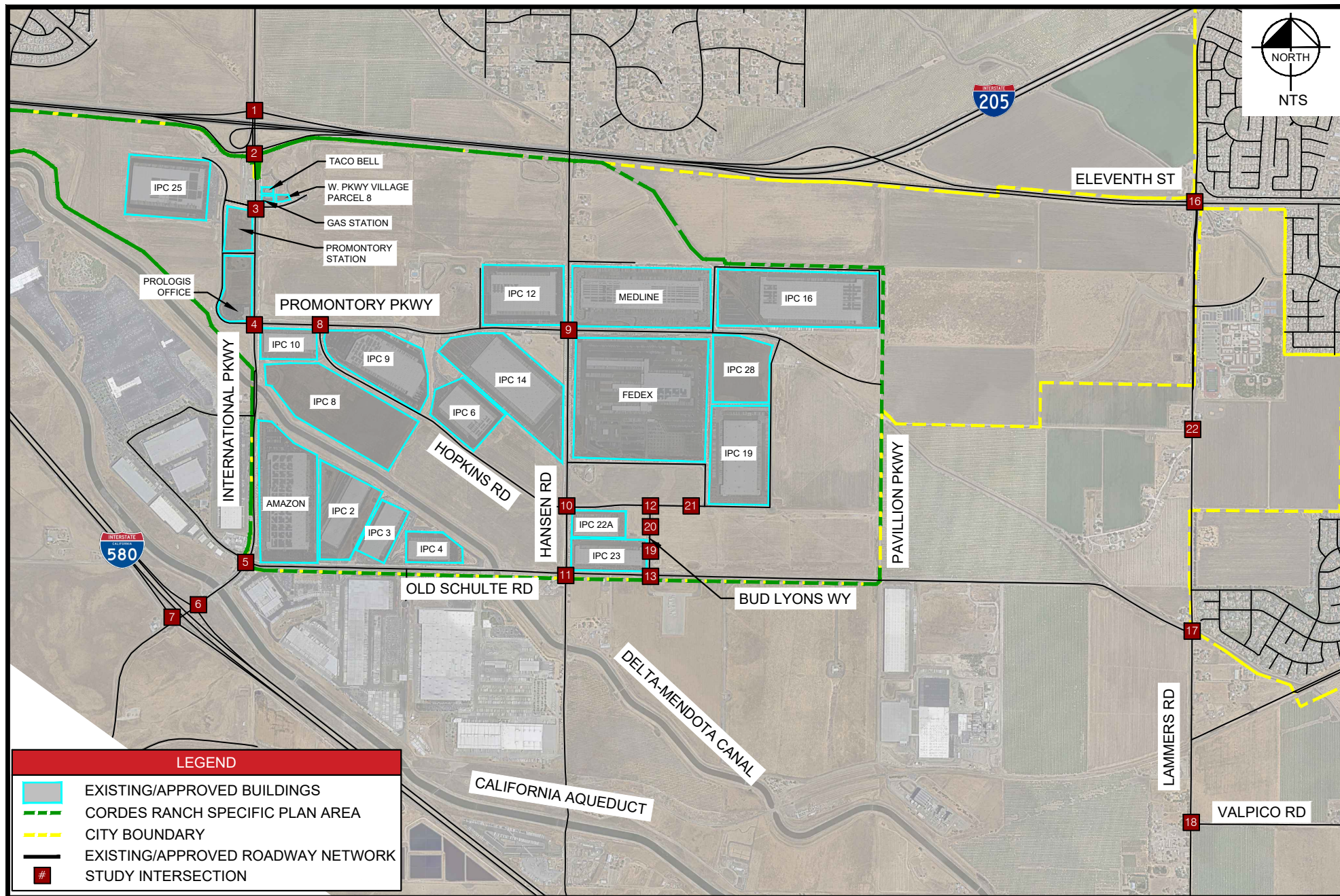
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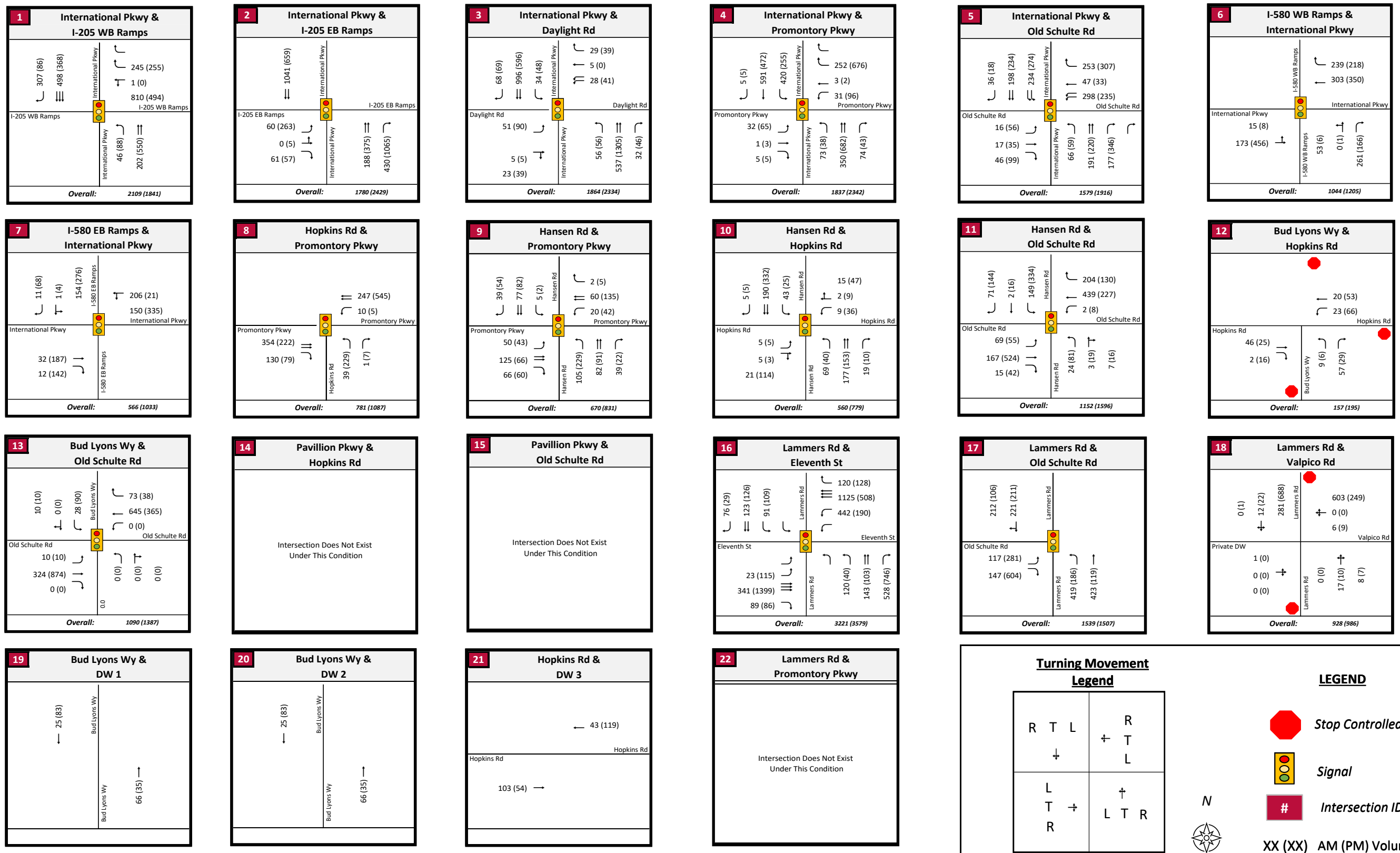
Table 5: Existing (2011) Plus Approved CRSP Projects Conditions LOS Results

Intersection		LOS Standard	Existing (2011) Plus Approved Project CRSP Projects Conditions						
			Control Type	AM Peak Hour			PM Peak Hour		
				MVMT	Delay	LOS	MVMT	Delay	LOS
1	International Parkway & I-205 WB Ramps	C/D	Signal	-	27.70	C	-	18.20	B
2	International Parkway & I-205 EB Ramps	C/D	Signal	-	4.20	A	-	23.20	C
3	International Parkway & Daylight Road	E	Signal	-	14.80	B	-	16.90	B
4	International Parkway & Promontory Parkway	D	Signal	-	40.30	D	-	51.10	D
5	International Parkway & Old Schulte Road	E	Signal	-	108.90	F	-	129.00	F
6	International Parkway & I-580 WB Ramps	C/D	Signal	-	27.50	C	-	35.60	D
7	International Parkway & I-580 EB Ramps	C/D	Signal	-	26.20	C	-	25.30	C
8	Hopkins Road & Promontory Parkway	D	Signal	-	15.80	B	-	13.10	B
9	Hansen Road & Promontory Parkway	D	Signal	-	16.50	B	-	21.60	C
10	Hansen Road & Hopkins Road	D	Signal	-	27.20	C	-	24.70	C
11	Hansen Road & Old Schulte Road	D	Signal	-	27.40	C	-	44.20	D
12	Bud Lyons Way & Hopkins Road	D	AWSC	-	7.70	A	-	8.00	A
13	Bud Lyons Way & Old Schulte Road	D	Signal	-	6.20	A	-	9.00	A
14	Pavillion Parkway & Hopkins Road	Intersection Does Not Exist							
15	Pavillion Parkway & Old Schulte Road	Intersection Does Not Exist							
16	Lammers Road & Eleventh Street	D	Signal	-	61.00	E	-	42.90	D
17	Lammers Road & Old Schulte Road	D	Signal	-	23.30	C	-	48.20	D
18	Lammers Road & Valpico Road	D	SSSC	WB	15.87	C	WB	17.92	C
19	Project Driveway 1 & Bud Lyons Way	Intersection Does Not Exist							
20	Project Driveway 2 & Bud Lyons Way	Intersection Does Not Exist							
21	Project Driveway 3 & Hopkins Road	Intersection Does Not Exist							
22	Lammers Road & Promontory Parkway	Intersection Does Not Exist							

Notes:

1. Analysis performed using HCM 7th Edition methodology
2. Overall level of service (LOS) standard for the City is D. For intersections within 1/4-mile of an interchange, overall LOS standard is E
3. SSSC - Side Street Stop Control, Signal - Signalized Intersection, AWSC - All Way Stop Controlled
4. Delay indicated in seconds/vehicle
5. Deficient LOS is denoted by bold
6. Project caused LOS deficiency is denoted by bold and gray fill



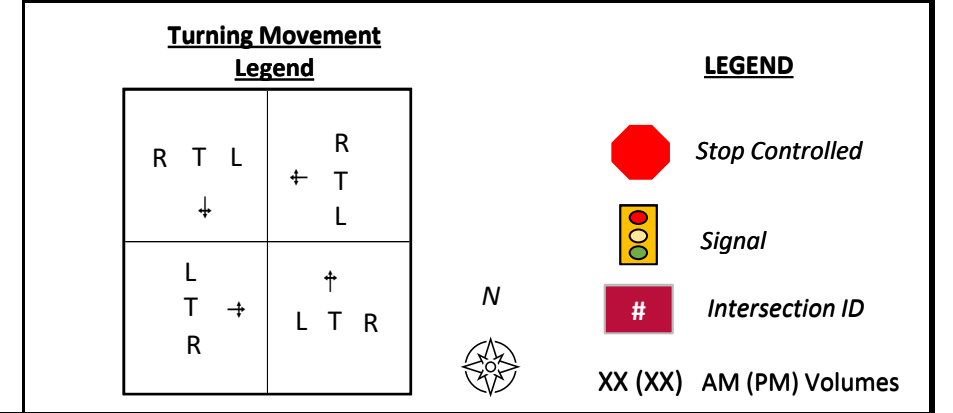
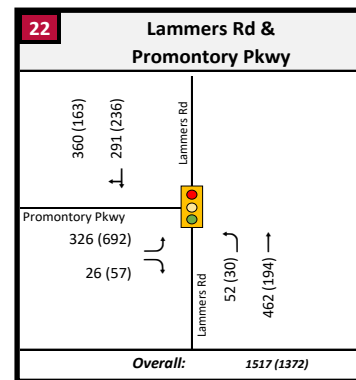
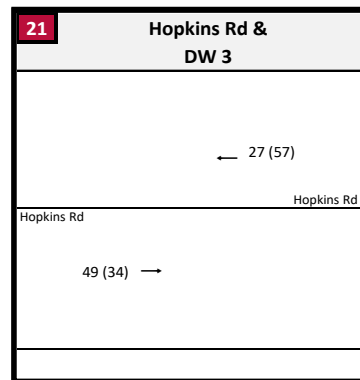
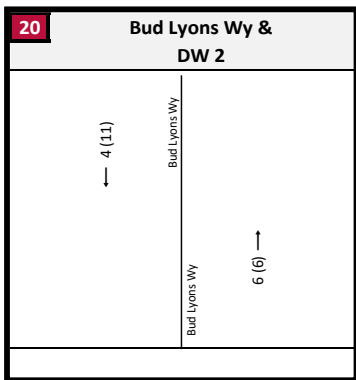
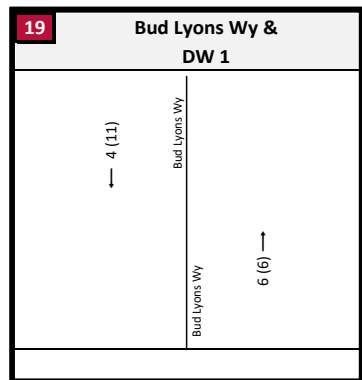
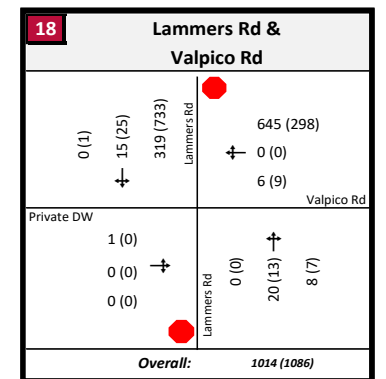
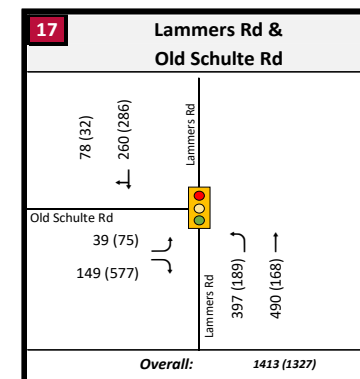
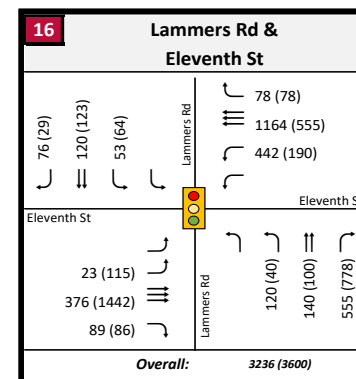
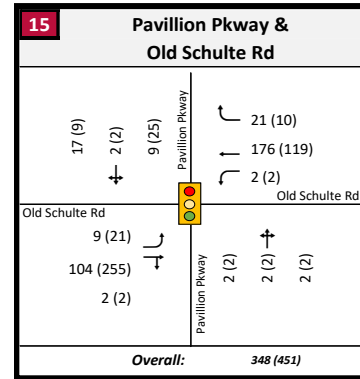
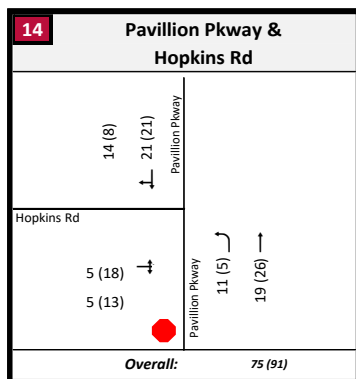
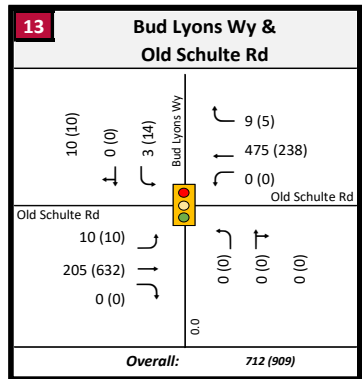
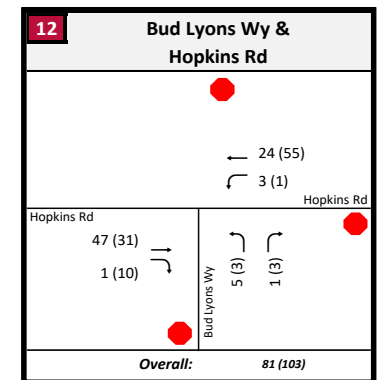
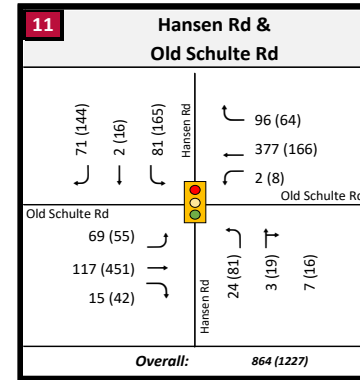
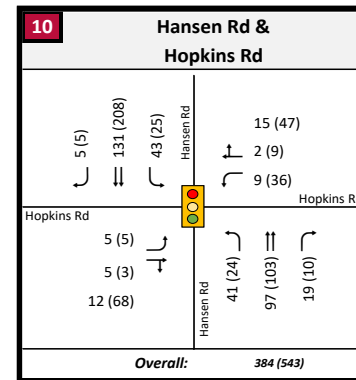
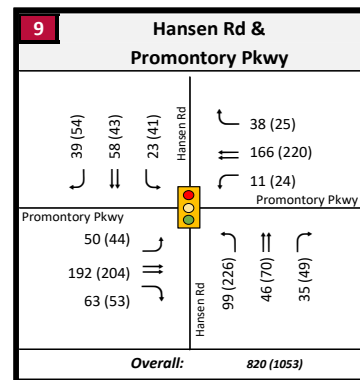
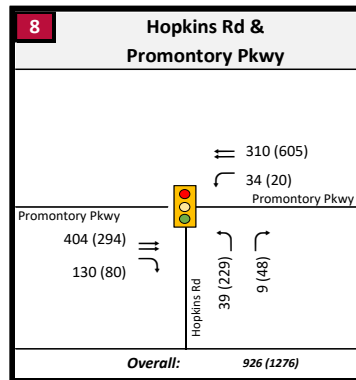
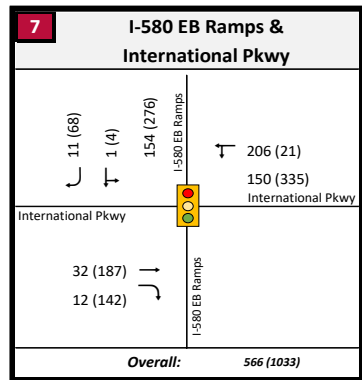
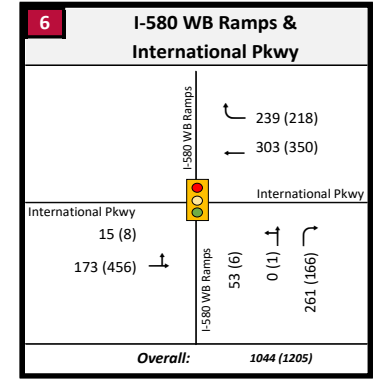
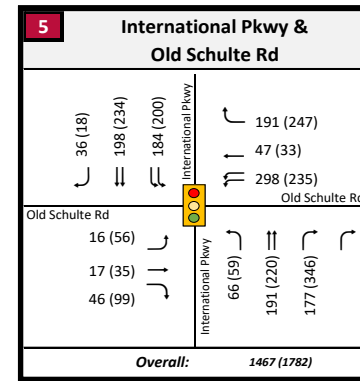
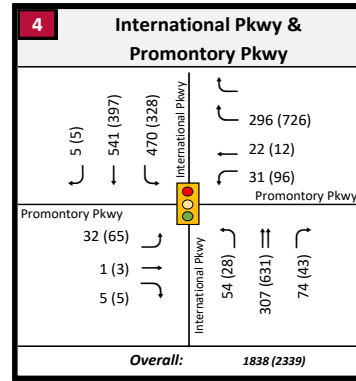
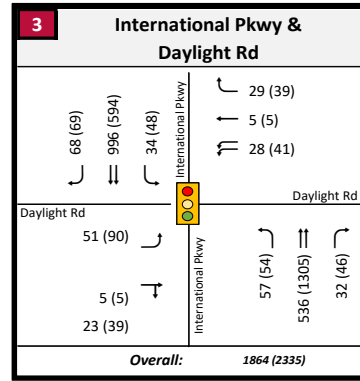
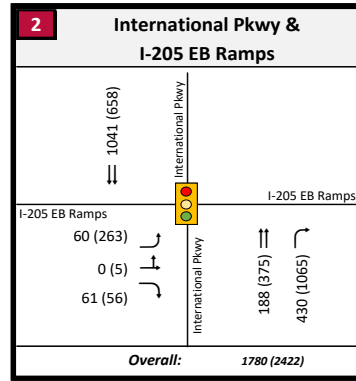
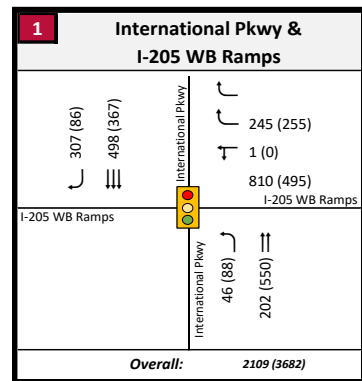


4.3 EXISTING (2011) PLUS APPROVED CRSP PROJECTS PLUS PROJECT CONDITIONS

Existing (2011) Plus Approved CRSP Projects Plus Project Conditions are based on the Existing Conditions traffic volumes plus the traffic generated by the approved CRSP projects, the changes to the road network, and the proposed Project. In addition to onsite development, the Project proposes making frontage improvements and adding to the planned IPC road network, making connections that will result in a shift in traffic volumes. The expansion includes the connection of Promontory Parkway to Lammers Road, Hopkins Road connection to Pavillion Parkway and the Pavillion Parkway connection to Old Schulte Road. The improved road network will distribute traffic in a grid pattern throughout IPC.

The applicant will, as part of the Promontory Parkway Extension project, construct a single -lane roundabout at the intersection on Pavillion parkway/Promontory Parkway as a first phase of a future two-lane roundabout. The traffic volumes at the roundabout will be low on opening day and the intersection will operate at acceptable conditions. The single lane roundabout has a capacity of approximately 20,000 daily vehicles. Based on the peak hour volumes forecasted, the daily volumes with IPC 20 are expected to be about 5,500 vehicles. Therefore, the roundabout is expected to operate acceptably.

Figure 8 shows the volumes for Existing (2011) Plus Approved CRSP projects with the new network.



4.3.1 TRIP GENERATION, DISTRIBUTION, AND ASSIGNMENT OF PROPOSED PROJECT

Table 6 **Table 6** shows the trip generation for the proposed Project.

The Project is estimated to generate 156 AM Peak Hour trips (120 IN / 36 OUT) and 182 PM Peak Hour trips (51 IN / 131 OUT).

Table 6: IPC 20 Project Trip Generation

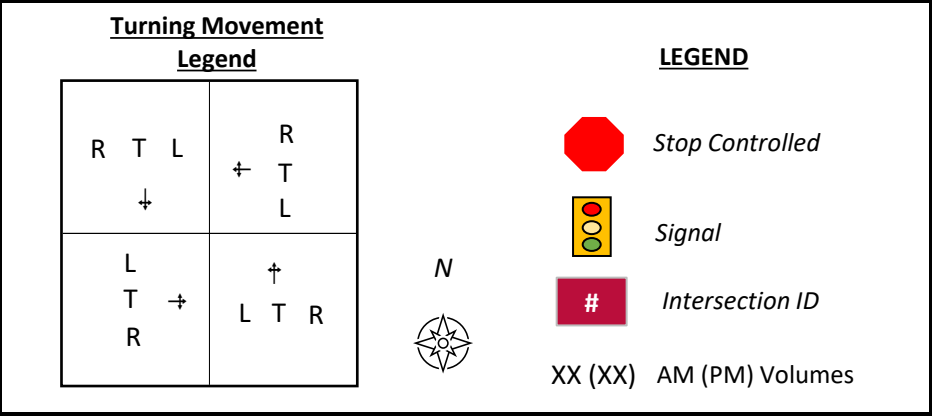
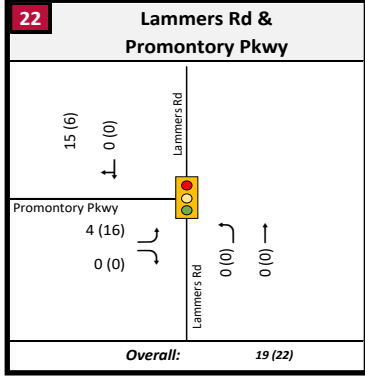
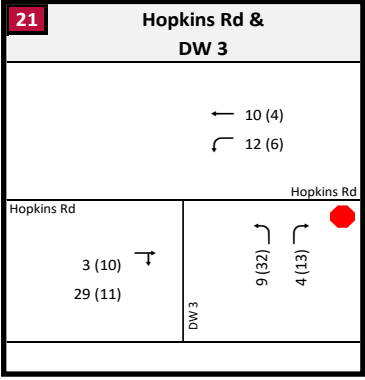
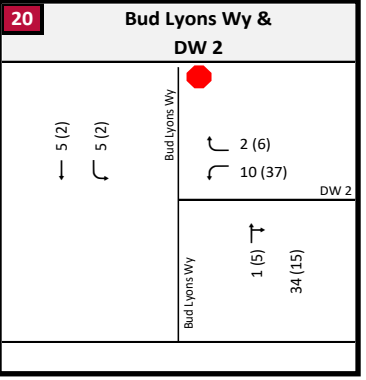
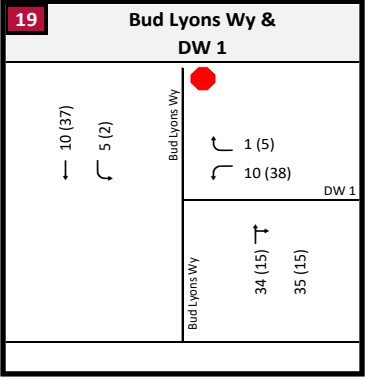
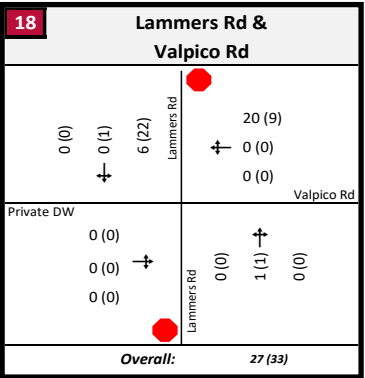
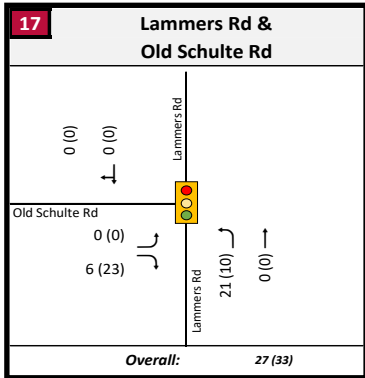
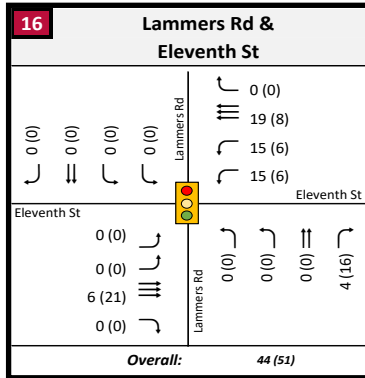
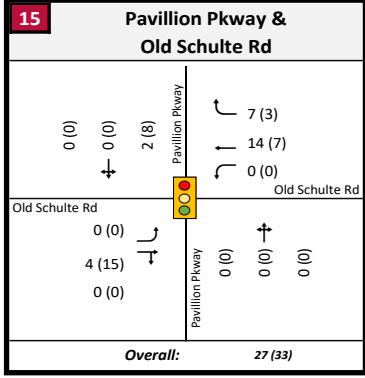
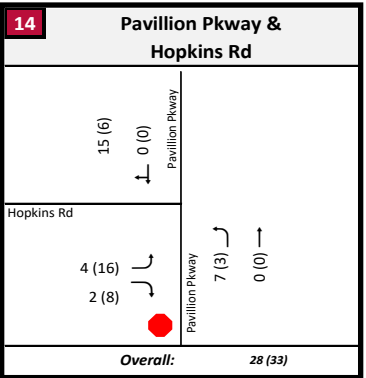
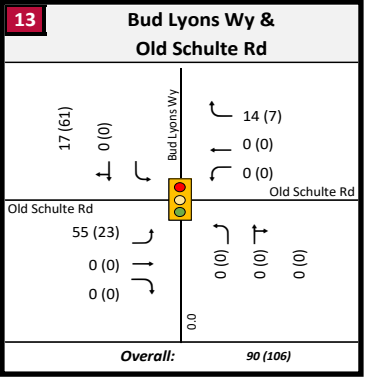
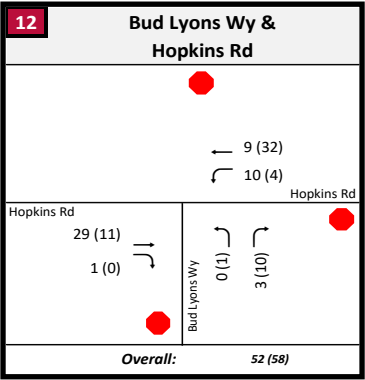
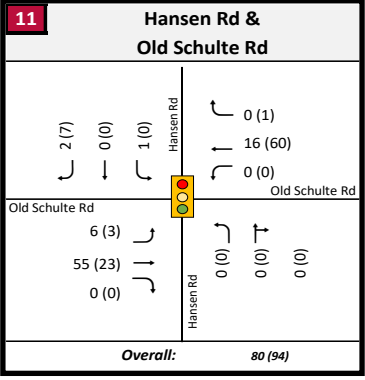
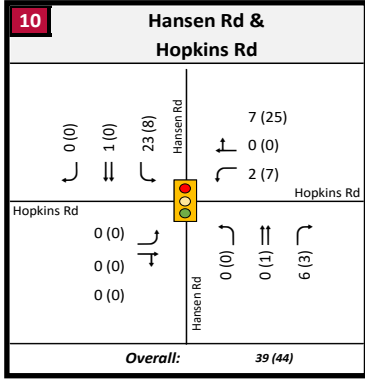
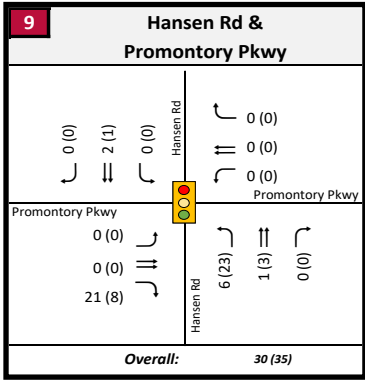
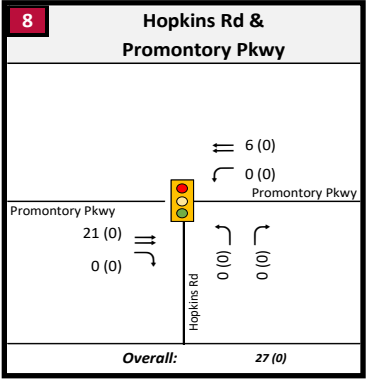
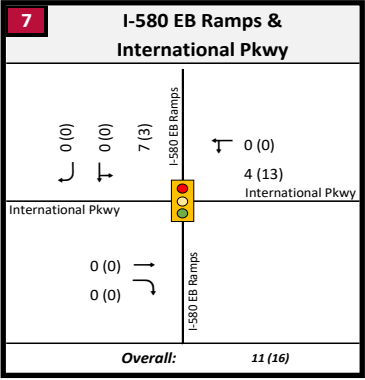
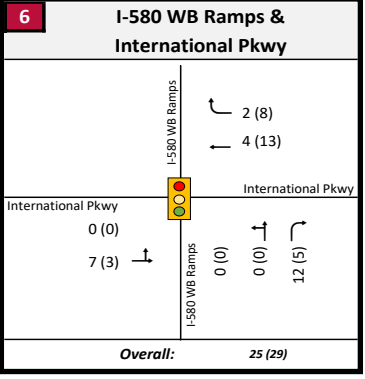
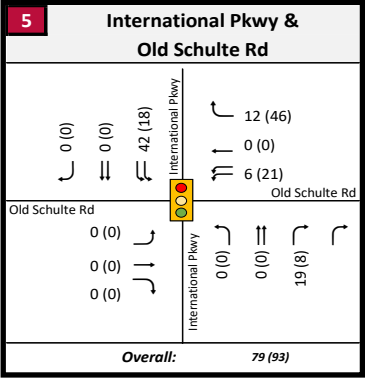
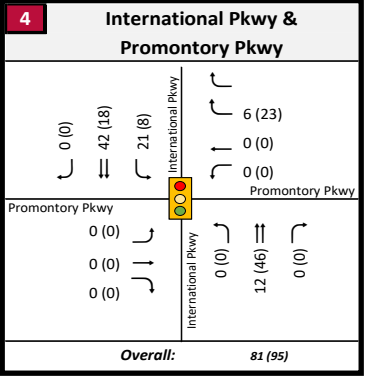
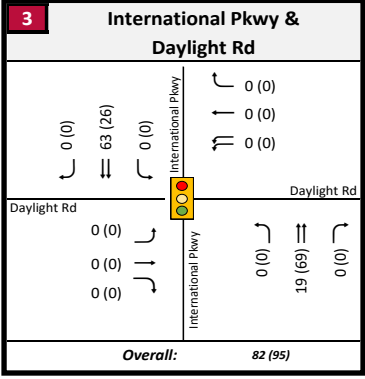
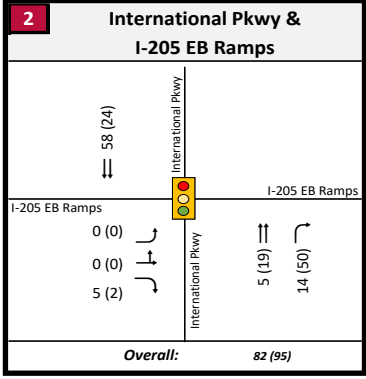
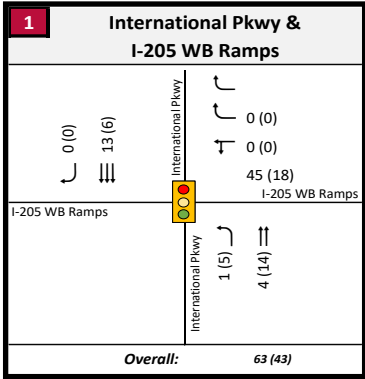
Land Uses	Project Size	AM Peak Hour				PM Peak Hour			
		Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Project Trip Generation									
IPC 20 (High-Cube Warehouse)	1300.256 KSF	156	120	/	36	182	51	/	131
Project Total		156	120	/	36	182	51	/	131

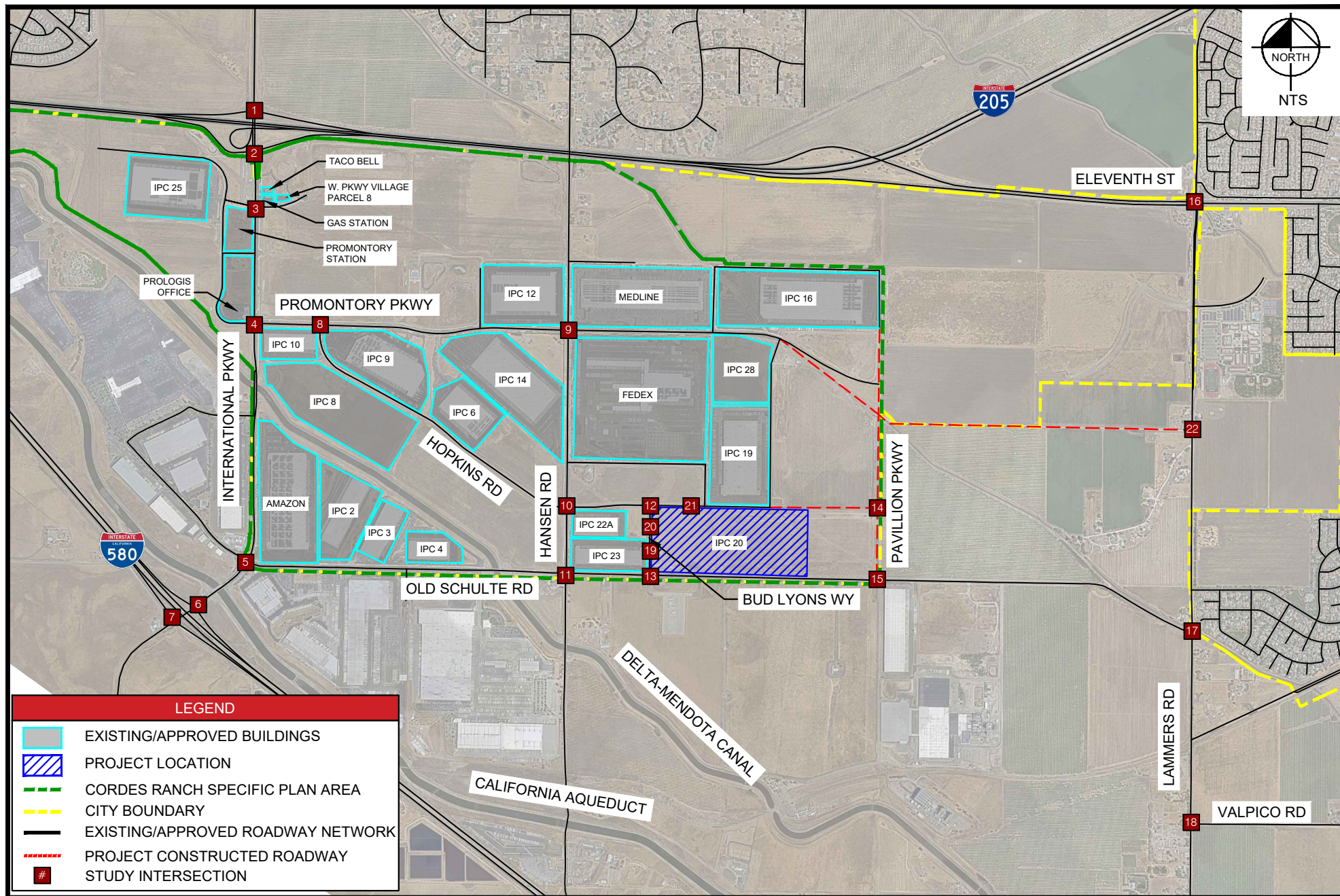
The trip distribution assumptions applied for IPC 20 are the same as those for approved CRSP projects mentioned above. Refer to **Figure 5** for IPC 20 trip distribution and **Figure 9** for IPC 20 trip assignment.

Figure 10 illustrates the intersections studied for this scenario. **Figure 11** illustrates the volumes, intersection control type and lane geometry for this scenario.

The results of the Existing (2011) Plus Approved CRSP Projects Plus Project Conditions LOS analysis are presented in **Table 7**. All intersections operate at acceptable LOS except for the following:

- Intersection #4 – International Parkway & Promontory Parkway
 - **Project Caused Deficiency**
 - PM Peak Hour – LOS E (Project adds an average of 17.2 seconds of delay per vehicle). This deficiency is caused by the rerouting of IPC volumes because of the new road network, and the addition of IPC 20 traffic. The rerouting of IPC traffic occurs from primarily the International Parkway/Old Schulte Road intersection to the International Parkway/Promontory Parkway intersection. The International Parkway/Old Schulte Road intersection delay decreases with the rerouting of traffic.
- Intersection #5 – International Parkway & Old Schulte Road
 - Not a Project Caused Deficiency
 - AM Peak Hour – LOS F (No added delay from Project)
 - PM Peak Hour – LOS F (No added delay from Project)
 - Even though the delay improves at this intersection with the rerouting of traffic, the intersection would continue to operate at a deficient Level of Service F.





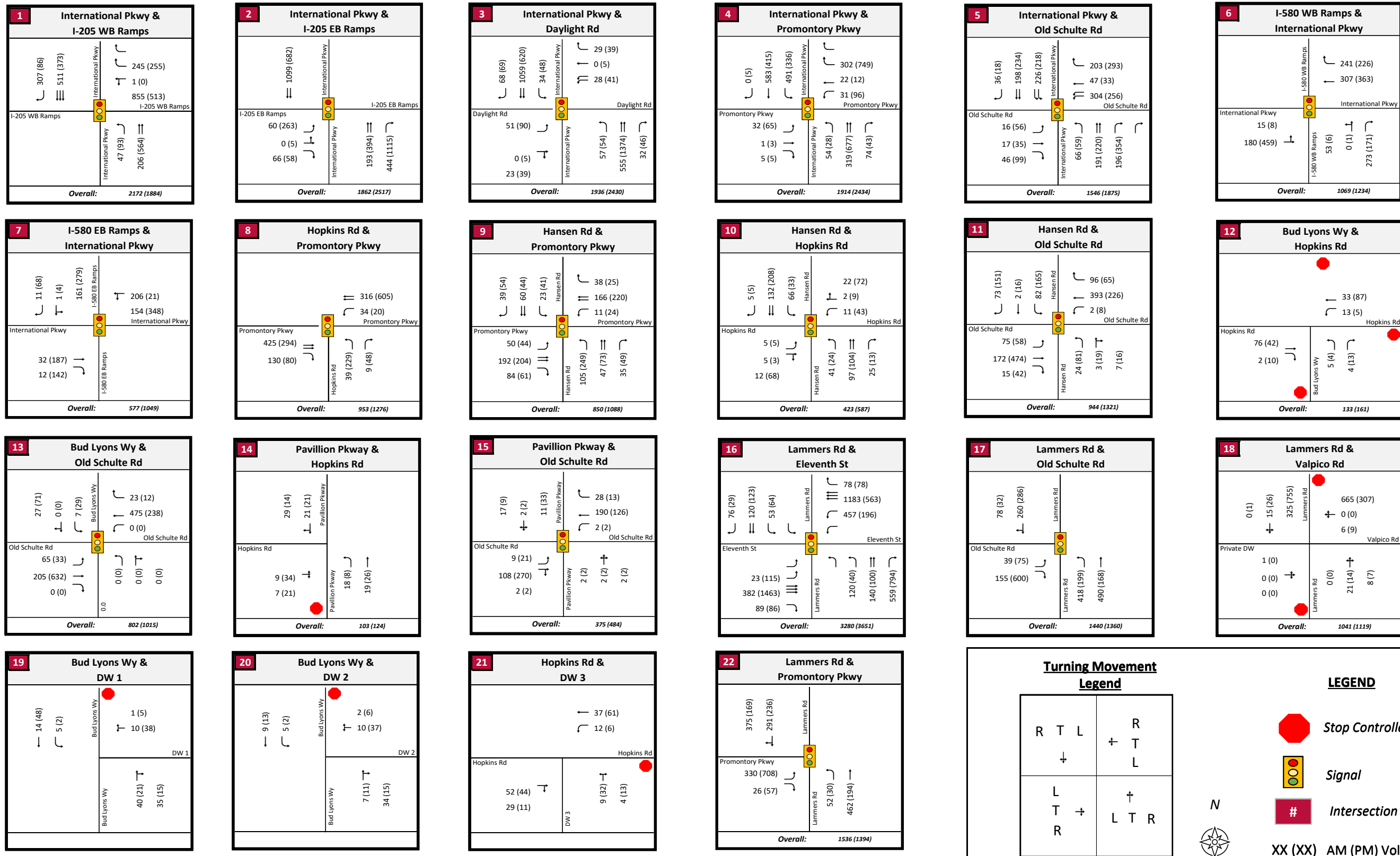


Table 7: Existing (2011) Plus Approved CRSP Projects Plus Project Conditions LOS Results

Intersection		LOS Standard	Existing (2011) Plus Approved Project CRSP Projects Conditions							Existing (2011) Plus Approved CRSP Projects Plus Project Conditions									Project Caused Deficiency Impact? (Y/N)
			Control Type	AM Peak Hour			PM Peak Hour			Control Type	AM Peak Hour				PM Peak Hour				
				MVMT	Delay	LOS	MVMT	Delay	LOS		MVMT	Delay	LOS	Δ Delay ⁷	MVMT	Delay	LOS	Δ Delay ⁷	
1	International Parkway & I-205 WB Ramps	C/D	Signal	-	27.7	C	-	18.2	B	Signal	-	29.50	C	1.8	-	19.20	B	1.0	N
2	International Parkway & I-205 EB Ramps	C/D	Signal	-	4.2	A	-	23.2	C	Signal	-	2.90	A	-1.3	-	28.30	C	5.1	N
3	International Parkway & Daylight Road	E	Signal	-	14.8	B	-	16.9	B	Signal	-	13.50	B	-1.3	-	17.40	B	0.5	N
4	International Parkway & Promontory Parkway	D	Signal	-	40.3	D	-	51.1	D	Signal	-	38.90	D	-1.4	-	68.30	E	17.2	Y
5	International Parkway & Old Schulte Road	E	Signal	-	108.9	F	-	129	F	Signal	-	104.50	F	-4.4	-	89.20	F	-39.8	N
6	International Parkway & I-580 WB Ramps	C/D	Signal	-	27.5	C	-	35.6	D	Signal	-	27.70	C	0.2	-	35.60	D	0.0	N
7	International Parkway & I-580 EB Ramps	C/D	Signal	-	26.2	C	-	25.3	C	Signal	-	26.20	C	0.0	-	26.40	C	1.1	N
8	Hopkins Road & Promontory Parkway	D	Signal	-	15.8	B	-	13.1	B	Signal	-	14.40	B	-1.4	-	12.80	B	-0.3	N
9	Hansen Road & Promontory Parkway	D	Signal	-	16.5	B	-	21.6	C	Signal	-	16.50	B	0.0	-	23.00	C	1.4	N
10	Hansen Road & Hopkins Road	D	Signal	-	27.2	C	-	24.7	C	Signal	-	28.70	C	1.5	-	24.90	C	0.2	N
11	Hansen Road & Old Schulte Road	D	Signal	-	27.4	C	-	44.2	D	Signal	-	24.70	C	-2.7	-	33.30	C	-10.9	N
12	Bud Lyons Way & Hopkins Road	D	AWSC	-	7.7	A	-	8	A	AWSC	-	7.90	A	0.2	-	7.90	A	-0.1	N
13	Bud Lyons Way & Old Schulte Road	D	Signal	-	6.2	A	-	9	A	Signal	-	11.40	B	5.2	-	7.00	A	-2.0	N
14	Pavillion Parkway & Hopkins Road	D	SSSC	Future Intersection						SSSC	EB	8.96	A	-	EB	9.07	A	-	N
15	Pavillion Parkway & Old Schulte Road	D	Signal	Future Intersection						Signal	-	13.30	B	-	-	13.40	B	-	N
16	Lammers Road & Eleventh Street	D	Signal	-	61	E	-	42.9	D	Signal	-	62.60	E	1.6	-	34.10	C	-8.8	N
17	Lammers Road & Old Schulte Road	D	Signal	-	23.3	C	-	48.2	D	Signal	-	18.40	B	-4.9	-	51.20	D	3.0	N
18	Lammers Road & Valpico Road	D	SSSC	WB	15.87	C	WB	17.92	C	SSSC	WB	19.00	C	3.1	WB	26.09	D	8.2	N
19	Project Driveway 1 & Bud Lyons Way	D	SSSC	Project Driveway						SSSC	WB	9.07	A	-	WB	9.19	A	-	N
20	Project Driveway 2 & Bud Lyons Way	D	SSSC	Project Driveway						SSSC	WB	8.83	A	-	WB	8.93	A	-	N
21	Project Driveway 3 & Hopkins Road	D	SSSC	Project Driveway						SSSC	NB	9.22	A	-	NB	9.35	A	-	N
22	Lammers Road & Promontory Parkway	D	Signal	Future Intersection						Signal	-	24.20	C	-	-	33.40	C	-	N

- Notes:
- 1. Analysis performed using HCM 7th Edition methodology
 - 2. Overall level of service (LOS) standard for the City is D. For intersections within 1/4-mile of an interchange, overall LOS standard is E
 - 3. SSSC - Side Street Stop Control, Signal - Signalized Intersection, AWSC - All Way Stop Controlled, MVMT- Improvement
 - 4. Delay indicated in seconds/vehicle
 - 5. Deficient LOS is denoted by bold
 - 6. Project caused LOS deficiency is denoted by bold and gray fill
 - 7. Reduction in delays primarily occurs to expansion of roadway network, i.e. Pavilion Pkwy, Hopkins Rd, Promontory Pkwy

4.3.2 EXISTING (2011) PLUS APPROVED CRSP PROJECTS PLUS PROJECT WITH IMPROVEMENTS

The following improvements are required to be implemented by IPC 20:

- **Intersection #4: International Parkway & Promontory Parkway**
 - IPC 20 shall improve the intersection with the following signal modifications prior to occupancy:
 - WBR Turn: Provide an Overlap signal phase for the westbound right turn vehicles. Southbound U-turns will be prohibited with this signal phasing plan. No vehicles were recorded making a U-turn during the peak hour counts. If a vehicle wants to make a U-turn, the vehicle will either make a southbound right turn or a southbound left turn and use the existing IPC roads to circle back to International Parkway to continue north towards I-205. Once Capital Parks Drive is connected to the east, some IPC traffic at this intersection would divert to Capital Parks Drive and operations at intersection #4 are estimated to improve.
- **Roadway Network Signal Retiming**
 - Due to the rerouting of traffic, IPC shall update the signal timing for all intersections that are anticipated to experience changes in traffic where signal timings and phasing are critical to acceptable LOS operations and minimizing queue lengths, especially in left turn pockets. The Promontory Parkway, International Parkway and Old Schulte Road corridors have interconnected signals due to close spacings. Therefore, all signals along Promontory Parkway and Old Schulte between International Parkway and Lammers Road, including the end points, and International Parkway and Berkeley Road are required to be retimed.

Table 8 provides the LOS summary with the required intersection improvements implemented.

Table 8: Existing (2011) Plus Approved CRSP Projects Plus Project With Improvements LOS Results

Intersection		LOS Standard	Existing (2011) Plus Approved CRSP Projects Plus IPC 20 Conditions							Existing (2011) Plus Approved CRSP Projects Plus Project Conditions with Improvements						Improvements
			Control Type	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			
				MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	
4	International Parkway & Promontory Parkway	D	Signal	-	38.9	D	-	68.3	E	-	47.80	D	-	38.60	D	1. WBR overlap phase

- Notes:
- 1. Analysis performed using HCM 7th Edition methodology
 - 2. Overall level of service (LOS) standard for the City is D. For intersections within 1/4-mile of an interchange, overall LOS standard is E
 - 3. SSSC - Side Street Stop Control, Signal - Signalized Intersection, AWSC - All Way Stop Controlled
 - 4. Delay indicated in seconds/vehicle
 - 5. Deficient LOS is denoted by bold
 - 6. Project caused LOS deficiency is denoted by bold and gray fill

4.4 IPC 20 CEQA MITIGATION MEASURE TRIGGERS REVIEW

The CRSP EIR includes transportation impact mitigation measure trip triggers based on incremental project trip generation as Phase 1 of CRSP builds out. The trip generation indicated in **Table 6** Table 6 was compared to the trip triggers identified in the CRSP EIR as updated, the addition of IPC 20 triggers the implementation of the Promontory Parkway Extension connecting from its existing termini in the west inside IPC to Lammers Road in the east (Intersection #18). The AM trip trigger 2,259 trips and the PM trip triggers 2,913 trips. The addition of IPC 20 would yield a trip generation of 2,289 AM trips and 2,936 PM trips. The implementation of this mitigation measure will include the construction of an interim single lane roundabout (ultimate configuration is a two-lane roundabout) at the intersection with Pavillion Parkway and construction of a signal at the intersection with Lammers Road. The Promontory Parkway extension east of Pavillion Parkway to Lammers Road will be a two-lane facility (one lane in each direction). The Project (IPC 20) proposes to construct this extension of Promontory Road and subsequently the analysis was completed with the extension in place.

CRSP has previously triggered the following CRSP EIR Mitigation Measures:

- TRANS-1
 - Intersection #6 – Mountain House Pkwy/I-580 WB Ramps
 - Intersection #7 – Mountain House Pkwy/I-580 EB Ramps
 - Intersection #10- Old Schulte Rd/Hansen Rd
 - Intersection #19a – Old Schulte Rd/Lammers Rd
 - Intersection #19b – Old Schulte Rd/Lammers Rd (Lengthen Northbound Left from Intersection #19a by 175')
 - Intersection #19c – Old Schulte Rd/Lammers Rd (Lengthen Northbound Left from Intersection 19b by 75')
 - Mountain House Parkway/I-205 Bridge Maintenance
 - Lengthen the northbound Mountain House Parkway right-turn lane to provide additional storage and access to the eastbound I-205 on-ramp
 - Ramp metering, with two mixed-flow and 1 HOV bypass lane for the eastbound I-205 diagonal on-ramp
- TRANS-2
 - Construction of Phase 1 of the Project would cause a significant impact on one freeway segment – I-205 Eastbound between Mountain House Parkway and Tracy Boulevard, which would fall from LOS D to LOS E in the PM peak hour
- TRANS-7
 - Project Buildout would cause over-capacity conditions on the existing roadway and freeway network

IPC 20 triggers the following CRSP EIR mitigation measures:

- TRANS-1
 - Intersection #18: New Schulte Rd/Lammers Rd and New Schulte Road extension

- New Schulte Road Extension to Lammers Road (This improvement is proposed to be constructed with the Project)

The following improvements per CRSP EIR TRANS-1 have yet to be triggered:

- Intersection #1 – Mountain House Pkwy/I-205 WB Ramps (AM peak hour)
- Intersection #2 – Mountain House Pkwy/I-205 EB Ramps (PM peak hour)
- Intersection #20 – Valpico Rd/Lammers Rd (AM peak hour)

Table 9 presents the status of all transportation mitigation measures in the CRSPEIR.

DRAFT

Table 9: CRSP Mitigation Measure Summary

Impact ¹	Peak Period	Percent of Project	Trigger	Triggered by Trip Generation In Table 6? (Y/N)	Mitigation Measure Status
TRANS-1 ²					
Intersection #1 – Mountain House Pkwy/I-205 WB Ramps	AM	90%	3,450	N	Initiated Design and Coordination ³
	PM		4,400		
Intersection #2 – Mountain House Pkwy/I-205 EB Ramps	AM	95%	3640	N	Initiated Design and Coordination ⁴
	PM		4,640		
Intersection #6 – Mountain House Pkwy/I-580 WB Ramps	AM	30%	1,150	Y	Implemented
	PM		1,470		
Intersection #7 – Mountain House Pkwy/I-580 EB Ramps	AM	30%	1,150	Y	Implemented
	PM		1,470		
Intersection #10 – Old Schulte Rd/Hansen Rd	AM	20%	770	Y	Implemented
	PM		980		
Intersection #18 (New Schulte Rd/Lammers Rd) & New Schulte Road Extension	AM	60%	2,259	Y	Proposed to be Constructed with IPC 20
	PM		2,913		
Intersection #19a – Old Schulte Rd/Lammers Rd	AM	5%	190	Y	Implemented
	PM		240		
Intersection #19b – Old Schulte Rd/Lammers Rd (Lengthen Northbound Left from Intersection #19a by 175')	AM	35%	1,340	Y	Implemented
	PM		1,710		
Intersection #19c – Old Schulte Rd/Lammers Rd (Lengthen Northbound Left from Intersection #19b by 75')	AM	40%	1,558	Y	Implemented
	PM		2,134		
Intersection #20 – Valpico Rd/Lammers Rd	AM	100%	3,830	N	Initiated Design and Coordination
	PM		4,890		
Mountain House Parkway/I-205 Bridge Maintenance	Refer to CRSP FEIR			Y	Pending ⁷
Lengthen the northbound Mountain House Parkway right-turn lane to provide additional storage and access to the eastbound I-205 on-ramp	Refer to CRSP FEIR			Y	Implemented ⁵
Ramp metering, with two mixed-flow and 1 HOV bypass lane for the eastbound I-205 diagonal on-ramp	Refer to CRSP FEIR			Y	Partially implemented ⁶

Impact ¹	Peak Period	Percent of Project	Trigger	Triggered by Trip Generation In Table 6? (Y/N)	Mitigation Measure Status
TRANS-2					
Construction of Phase 1 of the Project would cause a significant impact on one freeway segment – I-205 Eastbound between Mountain House Parkway and Tracy Boulevard, which would fall from LOS D to LOS E in the PM peak hour		Refer to CRSP FEIR		Y	Contribute RTIF Payments
TRANS-7					
Project Buildout would cause over-capacity conditions on the existing roadway and freeway network		Refer to CRSP FEIR		Y	Contribute RTIF, TIF, and other applicable fee payments
TRANS-8, 9, 10, & 14					
TRANS-8, 9, 10, & 14: Cumulative/Buildout CRSPEIR mitigation measures		Refer to CRSP FEIR		Not Applicable	Not applicable since Phase 1 has not been fully implemented

Notes:

1. Impacts provided in Table 2-1 of the CRSP Final EIR
2. Triggers and Mitigations provided in Table 4.14-12 and Table 4.14-13 in Section E.1.a.i of the CRSP Draft EIR
3. The CRSPEIR requires lane geometry for Phase I that is different from cumulative geometry. The cumulative geometry has already been striped in the current condition. The CEQA trigger has not been met.
4. Included in the I-205/Mountain House Parkway PSR.
5. Included in the Phase 1G/J (ENG 18-0006) Street Improvement Plan Set
6. Ramp metering, one mixed-flow lane and 1 HOV bypass lane have been implemented as approved by Caltrans. The addition of the second mixed flow on ramp was not approved by Caltrans for implementation at this time but is included in a future upgraded interchange in the I-205/Mountain House Parkway PSR.
7. City staff working on bridge maintenance agreement.

4.5 IPC 20 CUMULATIVE CONDITIONS

IPC 20 is consistent with the land use assumptions for buildout conditions in the CRSP EIR. IPC 20 will be required to pay traffic impact fees to offset incremental impacts on the City roadway network. The following mitigation measures and triggers apply to Cumulative Conditions:

- **TRANS-8:** The Project will construct the following improvements, in accordance with then-applicable engineering standards and requirements and as determined by the City Engineer:
 - *Intersection #1 (Mountain House Parkway/I-205 Westbound Ramps):* Change the striping from two left turns and one through-right (which is recommended in Mitigation Measure TRANS-1 to mitigate the Existing Plus Phase 1 impact) to one through-left and two right-turn lanes and change the signal phasing to allow westbound right turns and southbound through lanes to run concurrently on the same phase. This mitigation would provide LOS C in the AM peak hour and LOS D in the PM peak hour, for 2035 Plus Phase 1 Project conditions. This mitigation will be implemented, in coordination with Caltrans, when appropriate, based on periodic traffic volume monitoring by the City, and is expected to be needed when both the southbound through and westbound left-turn volumes grow substantially (in either peak hour), relative to the current volumes.
 - *Intersection #4 (New Schulte Road/Mountain House Parkway):* Signalize the intersection.
 - *Intersection #18 (New Schulte Road/Lammers Road):* Add a right- turn lane to the eastbound approach, for a mitigated configuration of one left turn lane, two through lanes, and one right-turn lane.
 - *Intersection #20 (Valpico Road/Lammers Road):* Add a second southbound left-turn lane, for a mitigated configuration of two left-turn lanes, three through lanes, and one right-turn lane.
 - Ramp metering, with two mixed-flow lanes and 1 HOV bypass lane for the eastbound I-205 loop on-ramp.
- **TRANS-9:** The Project will contribute to capacity improvements in San Joaquin County through payment of the RTIF in accordance with applicable laws and regulations. However, because neither full funding for the Interstate 205 capacity project nor prioritization of such improvements above others in the RTIF can be assured, the payment of regional traffic fees does not guarantee to fully mitigate this impact. (Note: Mitigation TRANS-9 is the same as Mitigation TRANS-2).
- **TRANS-10:** Each Project applicant will pay the applicable TMP Program Fee, the RTIF, and any other applicable transportation fees that may be in place when individual projects are processed under the Specific Plan in accordance with applicable laws and regulations.
 - In addition to the above mitigation, the following interchange improvements have been identified based on 2035 Plus Build-Out traffic turn movement projections derived from the roadway segment projections in the DEIR. These mitigations will be provided through a combination of the City Transportation Master Plan fee, state and federal funding sources. Planning, design and construction of these improvements will require cooperation between the City, Caltrans, Mountain House Community Facilities District, and the San Joaquin County Council of Governments. Since the traffic projections for the 2035 Plus Build-Out case, that form the basis for these improvement designs, are speculative due to uncertainty regarding how long it will take for the Project to buildout and regarding changes in regional land use and demographic changes over that period, the City will require that a re-assessment of traffic forecasts and projected operating conditions at these two interchanges be performed upon SU completion of Phase 1 of the Project. The re-assessment will include forecasts of traffic through Project Build-Out, to the appropriate horizon year at the time the re-assessment occurs, and the forecasts will include all other planned/projected land use growth and planned/funded infrastructure projects in Tracy and the region, through the horizon year. Based

- on the re-assessment, the design and timing of the two interchange improvements will be adjusted if appropriate, and the City will continue to work with the above agencies to plan, design and construct the improvements based on the updated design and schedule. This process will include all necessary steps to comply with the requirements of CEQA.
- At the I-205/Mountain House Parkway Interchange, the City of Tracy will prepare a Project Study Report - Project Development Support (PSR-PDS) document to study long-term improvements at the interchange, using the appropriate cumulative conditions forecasts available at the time of PSR-PDS preparation, which may be those in the FEIR, the volumes developed in the re-assessment described above, or another set of updated forecasts that include build-out of Cordes Ranch Specific Plan and the Mountain House community. The City will coordinate with Caltrans, San Joaquin County, Mountain House Community Services District, and San Joaquin Council of Governments (SJCOG) in the preparation of the document.
 - The PSR-PDS will identify the interchange design for Cumulative Conditions based on one of the following improvement options. The PSR-PDS will also identify the ultimate footprint of the interchange in order to preserve the required right-of-way before development occurs in the vicinity of the I-205/Mountain House Parkway Interchange. It is noted that Caltrans has indicated a preference for Option 3 because it provides the best traffic operation.
 - Option #1: Signal Controlled Ramps with Existing Bridge: Construct a northbound-to-westbound loop on-ramp, including relocation and potential widening of the westbound off-ramp, and reconstructing the southbound to eastbound loop on-ramp to eliminate the free movement.
 - Option #2: Signal Controlled Ramps with Widened Bridge: Construct a northbound-to-westbound loop on-ramp, including relocation and potential widening of the westbound off-ramp, and reconstruct the southbound to eastbound loop on-ramp to eliminate the free movement. In addition to the ramp improvements, the existing bridge would be widened by one lane to accommodate the additional width necessary to achieve improved LOS. The widening would occur within Caltrans existing right-of-way.
 - Option #3: Free Flow Ramps with Existing Bridge: Construct of a northbound-to-westbound loop ramp, including relocation and potential widening of the westbound off-ramp to provide a second left turn lane (for a total of one left-turn lane, one through-left, and two right-turn lanes that operate in the same phase as the southbound through movement.
 - At the I-580/Patterson Pass Interchange the City of Tracy will prepare a Project Study Report - Project Development Support (PSR-PDS) document to study long-term improvement options at the interchange, using the appropriate cumulative conditions forecasts available at the time of PSR-PDS preparation, which may be those in the FEIR, the volumes developed in the re-assessment described above, or another set of updated forecasts that include build-out of the Cordes Ranch Specific Plan and the Mountain House community. The document will study the following interchange improvements. The City will coordinate with Caltrans, San Joaquin County, and San Joaquin Council of Governments (SJCOG) in the preparation of the document:
 - Construction of a partial cloverleaf (par-clo) interchange on the south side of I-580, and a spread diamond configuration on the north side of I-580. This will provide the required right-of-way for a northbound Patterson Pass to westbound I-580 loop on-ramp;
 - Add a two-lane southbound Patterson Pass to eastbound I-580 loop on-ramp with ramp metering;
 - Provide ramp metering on the northbound to eastbound ramp and the southbound to westbound ramp;
 - Widen the bridge to four lanes;

- At the Patterson Pass/I-580 Eastbound Ramps intersection, on the northbound approach, provide one through lane and one right-turn lane; southbound, one through lane and two right-turn lanes feeding the loop on-ramp; and eastbound (I- 580 off-ramp), one left-turn lane, one through-left, and one right-turn lane; and
 - At the Patterson Pass/I-580 Westbound Ramps intersection: on the northbound approach, one left-turn lane and two through lanes; southbound, two through lanes and one right- turn lane; and westbound (I-580 off-ramp), one through-left lane and two right-turn lanes.
- These improvements will provide LOS C or better operation at the ramp terminal intersections, based on 2035 Plus Project Build-Out volumes estimated from the roadway segment volumes presented in the DEIR.
- Implementation of these mitigation measures will provide the first step toward the funding, design and construction of the ultimate interchange improvements at I-205/Mountain House Parkway and I-580/Patterson Pass Road, However, because construction of the improvements depends on future actions by the City of Tracy, SJCOG, Caltrans, San Joaquin County, and Mountain House Community Services District, these impacts remain significant and unavoidable after mitigation.
- **TRANS-14:** Implement Mitigation Measures TRANS-7 and TRANS-10.

5 GENERAL PLAN ANALYSIS

The General Plan analysis methodology evaluates the Project assuming a base year of 2024, which reflects changes to prevailing traffic patterns and City growth based on current count data and geometry of the built roadway network compared to when the CRSP EIR was completed.

The following scenarios were analyzed for the General Plan analysis:

- Existing Conditions
- Existing Plus Approved Projects Conditions
- Existing Plus Approved Projects Plus Project Conditions

5.1 EXISTING CONDITIONS

The Existing Conditions analysis reflect the roadway network and traffic volumes at the time of the data collection. The study intersections are presented in **Figure 12**. The roadway network reflects intersection geometry, traffic control, signal timing, and turning movement volumes as of the August 2024 data collection. Turning movement volumes were collected at each of the study intersections on Tuesday, August 27, 2024, which represents a typical weekday when schools were in session. Passenger, heavy vehicle, bike and pedestrian movements were counted during both the AM Peak Period (4:00 AM to 9:00 AM) and the PM Peak Period (3:00 PM – 6:00 PM).

In addition, 72-hour ADT “tube” counts were collected on International Parkway (south of Promontory Parkway) and on Old Schulte Road (east of Bud Lyons Way) on August 27-29, 2024 to determine the AM and PM peak hour of these two major adjacent roadways within the CRSP area. Analysis of the tube and intersection turning movement counts, included in the **Appendix**, show the following traffic patterns:

- International Parkway experiences its peak demand at 7:00 AM
- Old Schulte Road experiences its peak demand at 6:00 AM

Count data was reviewed to select the appropriate traffic volumes for use in this analysis. This analysis conservatively uses the individual peak hour volumes, factor, and heavy vehicle percentages from each study intersection for its AM (one hour between 4:00 AM and 9:00 AM) and PM (one hour between 3:00 PM and 6:00 PM) analysis.

Figure 12 displays the existing traffic volumes and lane geometry at the study intersections. **Table 10** provides the levels of service (LOS) of the existing study intersections.

All intersections currently operate at an acceptable LOS except for the following:

- Intersection #5 - International Parkway & Old Schulte Road
 - AM Peak Hour – LOS F
- Intersection #16 - Lammers Road & Eleventh Street
 - AM Peak Hour – LOS E
- Intersection #17 - Lammers Road & Old Schulte Road
 - AM Peak Hour – LOS E

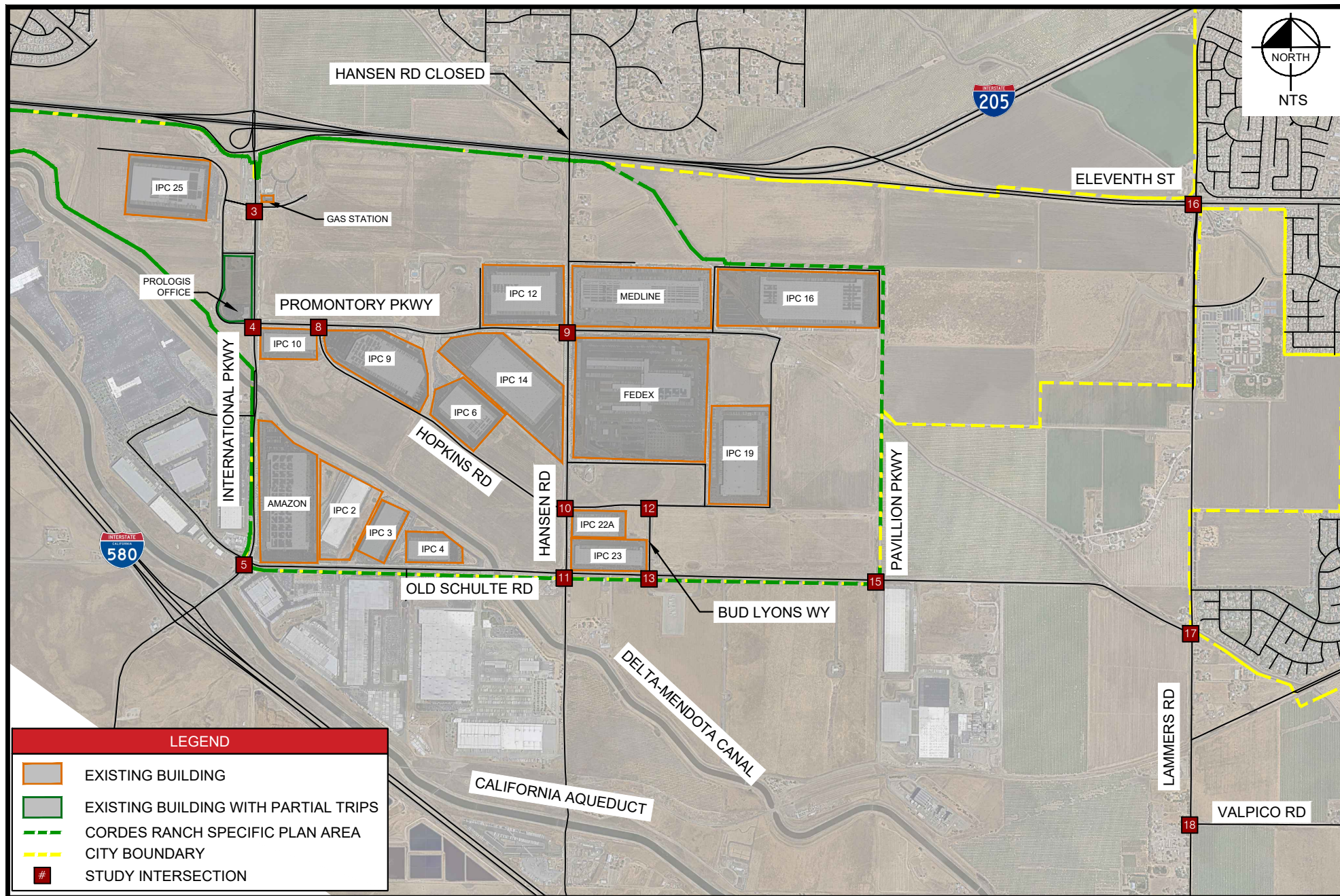
Table 10: Existing Conditions LOS Results

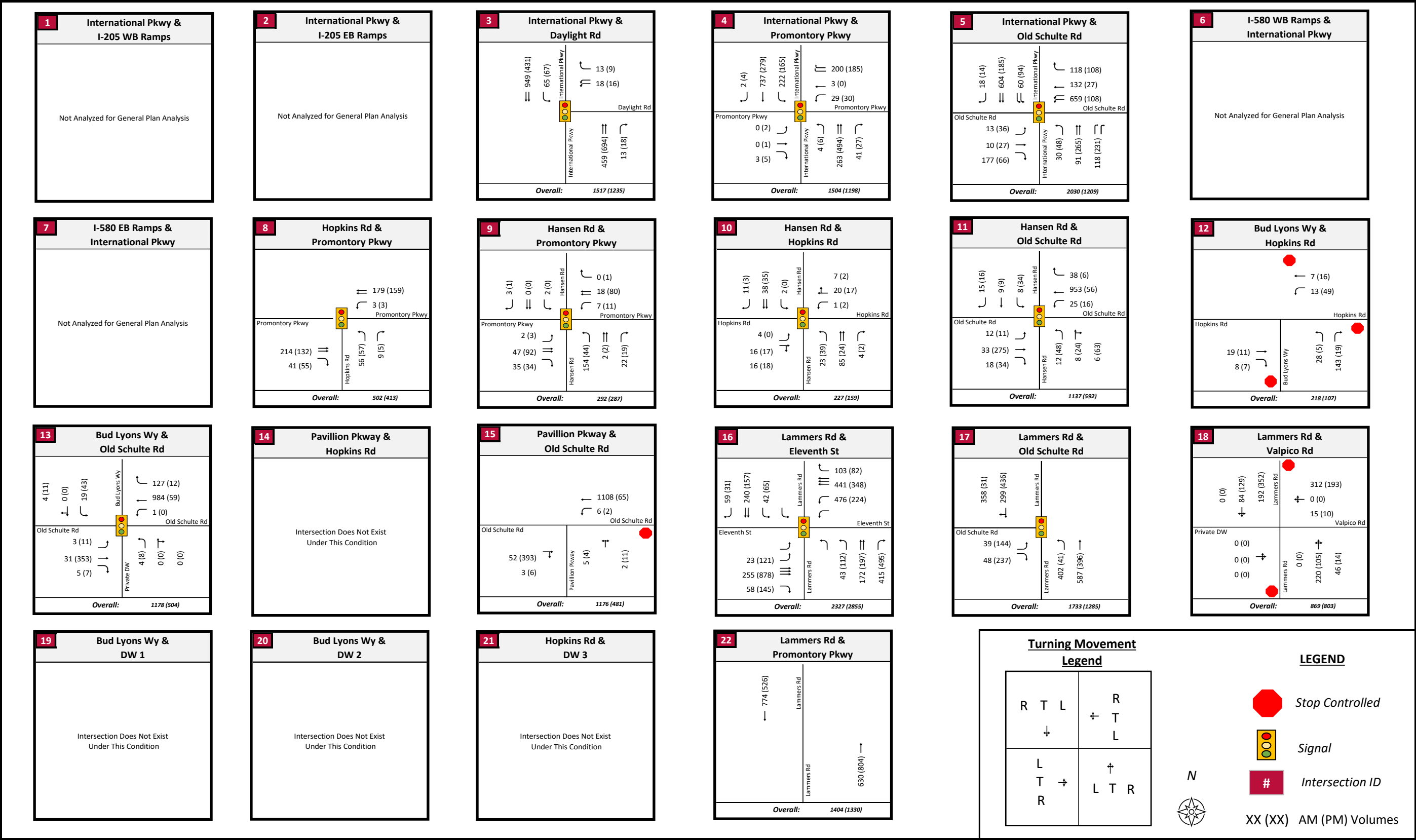
Intersection		LOS Standard	Existing Conditions						
			Control Type	AM Peak Hour			PM Peak Hour		
				MVMT	Delay	LOS	MVMT	Delay	LOS
1	International Parkway & I-205 WB Ramps	-	Not Analyzed for General Plan Analysis						
2	International Parkway & I-205 EB Ramps	-	Not Analyzed for General Plan Analysis						
3	International Parkway & Daylight Road	E	Signal	-	5.6	A	-	6.3	A
4	International Parkway & Promontory Parkway	D	Signal	-	24.2	C	-	26.9	C
5	International Parkway & Old Schulte Road	E	Signal	-	107.9	F	-	51.7	D
6	International Parkway & I-580 WB Ramps	-	Not Analyzed for General Plan Analysis						
7	International Parkway & I-580 EB Ramps	-	Not Analyzed for General Plan Analysis						
8	Hopkins Road & Promontory Parkway	D	Signal	-	22.6	C	-	6.0	A
9	Hansen Road & Promontory Parkway	D	Signal	-	17.4	B	-	11.9	B
10	Hansen Road & Hopkins Road	D	Signal	-	30.3	C	-	26.1	C
11	Hansen Road & Old Schulte Road	D	Signal	-	16.8	B	-	30.9	C
12	Bud Lyons Way & Hopkins Road	D	AWSC	-	8.1	A	-	8.2	A
13	Bud Lyons Way & Old Schulte Road	D	Signal	-	11.0	B	-	19.4	B
14	Pavillion Parkway & Hopkins Road	D	Intersection Does Not Exist						
15	Pavillion Parkway & Old Schulte Road	D	SSSC	NB	32.7	D	NB	12.4	B
16	Lammers Road & Eleventh Street	D	Signal	-	65.6	E	-	20.8	C
17	Lammers Road & Old Schulte Road	D	Signal	-	74.3	E	-	13.7	B
18	Lammers Road & Valpico Road	D	SSSC	WB	20.0	C	WB	14.2	B
19	Project Driveway 1 & Bud Lyons Way	D	Intersection Does Not Exist						
20	Project Driveway 2 & Bud Lyons Way	D	Intersection Does Not Exist						
21	Project Driveway 3 & Hopkins Road	D	Intersection Does Not Exist						
22	Lammers Road & Promontory Parkway	D	Intersection Does Not Exist						

Notes:

1. Analysis performed using HCM 7th Edition methodology in Synchro™ 12 and Simtraffic™ Software
2. Overall level of service (LOS) standard for the City is D. For intersections within 1/4-mile of an interchange LOS standard is E
3. SSSC - Side Street Stop Control, Signal - Signalized Intersection, AWSC – All-way Stop Controlled, MVMT – approach movement direction
4. Deficient LOS is denoted by **bold text**
5. Project caused LOS deficiency is denoted by **bold and gray highlighted text**
6. Delay indicated in seconds/vehicle

Analysis output sheets are provided in the **Appendix**.





5.2 EXISTING PLUS APPROVED CONDITIONS

Traffic operations were evaluated at study intersections under Existing Plus Approved Conditions. In order to evaluate conditions with approved projects, the trip generation, distribution, and assignment were identified for each approved project, and then, these traffic volumes were added to the study intersections to evaluate prevailing peak hour operations under each analysis scenarios.

Figure 14 shows assumed development and roadway network under Existing Plus Approved Conditions. The Existing Plus Approved Conditions intersection lane geometry and turning movement volumes are shown in **Figure 15**.

Where applicable, conditioned on-site and approved project frontage improvements are assumed to have been constructed for this scenario. Specifically, improvements for the Costco Depot Warehouse and the 16286 W Schulte Rd Warehouse projects including improvements along Old Schulte Road and at the intersections of Hansen Rd and Old Schulte Road and Bud Lyons Way and Old Schulte Road.

5.2.1 APPROVED TRIP GENERATION, DISTRIBUTION, & ASSIGNMENT

The following projects are currently approved, pending approval or constructed, but were not fully occupied or operational at the time of data collection:

- IPC 6 – 403.56 KSF Warehouse
- IPC 8 – 1,202.40 KSF Light Industrial
- IPC 28 – 524.08 KSF Warehouse
- IPC Office - 117.13 KSF Office Building (84% of total approved)
- West Parkway Village – Various commercial uses (Parcel 7 and Taco Bell)
- Promontory Station – Retail, Restaurant, Gas Station, Charging Station
- 16286 W Schulte Rd Warehouse – 217.47 KSF Warehouse
- Avenues – 480 Residential Units (67% of total units approved)
- Tracy Lakes (formerly Tracy Village) – 403 Residential Units
- Costco Depot – 1,745.05 KSF Warehouse

Trip generation for approved projects were tabulated from their respective traffic studies, where available. The traffic study and trip generation for the 16286 W Schulte Rd Warehouse was not yet available at the time of this study; therefore, ITE Code 110 (Light Industrial) was used to generate traffic for this site.

In addition, some of the approved developments are in various stages of construction and were partially occupied under Existing Conditions. Where this was the case, the trip generation for that site was pro-rated to include only the remaining unbuilt or unoccupied portions of the development as it was assumed that the occupied portion of the approved projects' trip generation was captured in the traffic counts. These are indicated in **Table 11**.

Table 11 shows the trip generation estimates for approved projects which are estimated to generate 1,767 AM peak hour trips (1,081 IN / 686 OUT) and 2,175 PM peak hour trips (1,032 IN / 1,143 OUT).

Table 11: Approved Projects Trip Generation

Land Uses	Project Size	AM PEAK HOUR			PM PEAK HOUR		
		Total Peak Hour	IN	/ OUT	Total Peak Hour	IN	/ OUT
Trip Generation Rates							
High-Cube Warehousing (City of Tracy) ¹		0.12	69%	/ 31%	0.14	31%	/ 69%
Light Industrial (ITE Code 110)		0.17	79%	/ 21%	0.33	25%	/ 75%
Manufacturing (ITE Code 140)		0.62	77%	/ 23%	0.67	31%	/ 69%
Office (ITE Code 710)		1.56	72%	/ 28%	1.49	39%	/ 28%
Low/Mid Density Residential & Residential Real Estate ²		0.55	25%	/ 75%	1.05	63%	/ 37%
Approved Project Uses and Trip Generation							
IPC 6 (High-Cube Warehouse City of Tracy)	403.56 KSF	44	30	/ 14	48	14	/ 34
IPC 8 (Light Industrial ITE 110)	1,202.40 KSF	204	161	/ 43	397	99	/ 298
IPC 28 (High-Cube Warehouse City of Tracy)	524.08 KSF	63	49	/ 14	73	20	/ 53
IPC Office (Office ITE 710) ³	117.13 KSF	183	132	/ 51	175	69	/ 106
West Parkway Village (Commercial Mixed-Use) ⁴	-	41	23	/ 18	50	26	/ 24
Promontory Station (Retail, Restaurant, Gas Station, Charging Station) ⁵	-	309	160	/ 149	347	181	/ 166
16286 W Schulte Rd Warehouse ⁶	217.47 KSF	37	28	/ 9	72	20	/ 52
Avenues	480 DUs	264	66	/ 198	504	318	/ 186
Tracy Lakes ⁷	403 DUs	221	55	/ 166	422	266	/ 156
Costco Depot	1,745.05 KSF	401	377	/ 24	87	19	/ 68
Approved Total		1,767	1,081	/ 686	2,175	1,032	/ 1,143

Notes:

1. Custom City of Tracy High-Cube Warehousing Rate, conservatively appropriate based on driveway counts.
2. Residential trip generation rate used in the Avenues and Tracy Lakes traffic studies.
3. 84-percent of total approved CRSP Office is unbuilt/unoccupied.
4. West Parkway Village Frontage Review and Traffic Study Update (Kimley-Horn, August 2019) Parcel 7 and Fast Food with Drive Thru Parcels Included
5. Formerly IPC retail.
6. Draft 16286 Warehouse Traffic Study
7. 67-percent of total approved homes yet to be built. (403/600)

Trip Distribution of Approved CRSP Projects

Trip distribution for approved CRSP Projects and the 16286 W Schulte Rd Warehouse were split by vehicle type. Many of the CRSP warehouses have specific truck driveways where all inbound and outbound truck traffic is routed. In addition, the City of Tracy prohibits trucks along certain roadways and intersections. Therefore, the distribution of passenger cars and trucks were identified separately.

Distribution and assignment for approved CRSP Projects and the 16286 W Schulte Rd Warehouse was based on previous studies completed for similar warehouse uses in the area and modified based on CRSP daily trip origin-destination data for passenger car and trucks from Fall 2023 collected through the Replica data analytics platform. Newer distribution patterns for the existing CRSP area were taken from Replica and compared and slightly adjusted from the previous analysis and is included in the **Appendix**.

The following lists the distribution assumptions used for passenger cars:

- I-205 West of International Parkway: 2%
- Mountain House North of I-205: 15%
- I-205 East of International Parkway: 26%
- 11th Street East of Lammers Road: 14%
- Valpico Road East of Lammers Road: 15%
- Lammers Road South of Valpico Road: 2%
- I-580 East of International Parkway: 23%
- I-580 West of International Parkway: 3%

Refer to **Figure 16** for passenger car distribution assumptions.

The following lists the distribution assumptions used for truck trips:

- I-205 West of International Parkway: 11%
- I-205 East of International Parkway: 30%
- I-580 East of International Parkway: 35%
- I-580 West of International Parkway: 19%
- Mountain House Parkway North of I-205: 5%

Refer to Figure 18 for truck distribution assumptions.

Table 12 provides a summary of the LOS results, and the following study intersections operate at an unacceptable LOS:

- Intersection #4- International Parkway & Promontory Parkway
 - AM Peak Hour – LOS F
- Intersection #5 - International Parkway & Old Schulte Road
 - AM Peak Hour – LOS F
- Intersection #15 – Pavillion Parkway & Old Schulte Road
 - AM Peak Hour – LOS F
- Intersection #16 - Lammers Road & Eleventh Street
 - AM Peak Hour – LOS E
- Intersection #17 - Lammers Road & Old Schulte Road
 - AM Peak Hour – LOS F
- Intersection #18 – Lammers Road & Valpico
 - AM Peak Hour – LOS F

Analysis output sheets are provided in the **Appendix**.

Table 12: Existing Plus Approved Project Conditions LOS Results

Intersection		LOS Standard	Existing Plus Approved Conditions						
			Control Type	AM Peak Hour			PM Peak Hour		
				MVMT	Delay	LOS	MVMT	Delay	LOS
1	International Parkway & I-205 WB Ramps	-	Not Analyzed for General Plan Analysis						
2	International Parkway & I-205 EB Ramps	-	Not Analyzed for General Plan Analysis						
3	International Parkway & Daylight Road	E	Signal	-	9.5	A	-	12.6	B
4	International Parkway & Promontory Parkway	D	Signal	-	69.2	E	-	41.7	D
5	International Parkway & Old Schulte Road	E	Signal	-	109.8	F	-	54.6	D
6	International Parkway & I-580 WB Ramps	-	Not Analyzed for General Plan Analysis						
7	International Parkway & I-580 EB Ramps	-	Not Analyzed for General Plan Analysis						
8	Hopkins Road & Promontory Parkway	D	Signal	-	17.1	B	-	8.8	A
9	Hansen Road & Promontory Parkway	D	Signal	-	17.0	B	-	11.6	B
10	Hansen Road & Hopkins Road	D	Signal	-	35.0	D	-	25.9	C
11	Hansen Road & Old Schulte Road	D	Signal	-	23.1	C	-	35.2	D
12	Bud Lyons Way & Hopkins Road	D	AWSC	-	8.2	A	-	8.2	A
13	Bud Lyons Way & Old Schulte Road	D	Signal	-	42.1	D	-	39.7	D
14	Pavillion Parkway & Hopkins Road	D	Intersection Does Not Exist						
15	Pavillion Parkway & Old Schulte Road	D	SSSC	NB	49.8	F		21.3	C
16	Lammers Road & Eleventh Street	D	Signal	-	64.7	E	-	21.0	C
17	Lammers Road & Old Schulte Road	D	Signal	-	189.5	F	-	27.9	C
18	Lammers Road & Valpico Road	D	SSSC	WB	290.2	F	WB	1235	F
19	Project Driveway 1 & Bud Lyons Way	D	Intersection Does Not Exist						
20	Project Driveway 2 & Bud Lyons Way	D	Intersection Does Not Exist						
21	Project Driveway 3 & Hopkins Road	D	Intersection Does Not Exist						
22	Lammers Road & Promontory Parkway	D	Intersection Does Not Exist						

Notes:

1. Analysis performed using HCM 7th Edition methodology in Synchro™ 12 and Simtraffic™ Software
2. Overall level of service (LOS) standard for the City is D. For intersections within 1/4-mile of an interchange LOS standard is E
3. SSSC - Side Street Stop Control, Signal - Signalized Intersection, AWSC – All-way Stop Controlled, MVMT – approach movement direction
4. Deficient LOS is denoted by **bold text**
5. Project caused LOS deficiency is denoted by **bold and gray highlighted text**
6. Delay indicated in seconds/vehicle

Analysis output sheets are provided in the **Appendix**.

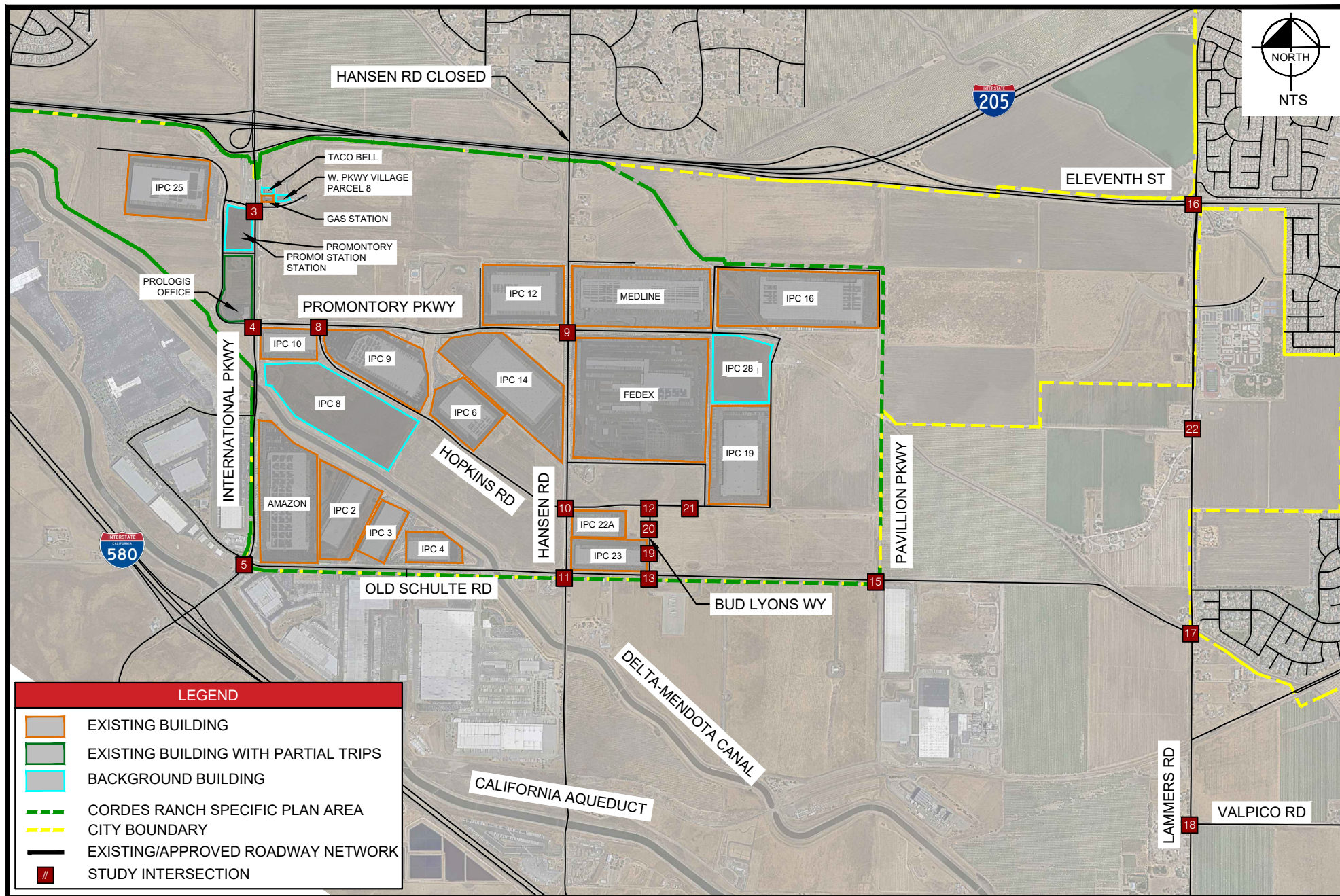
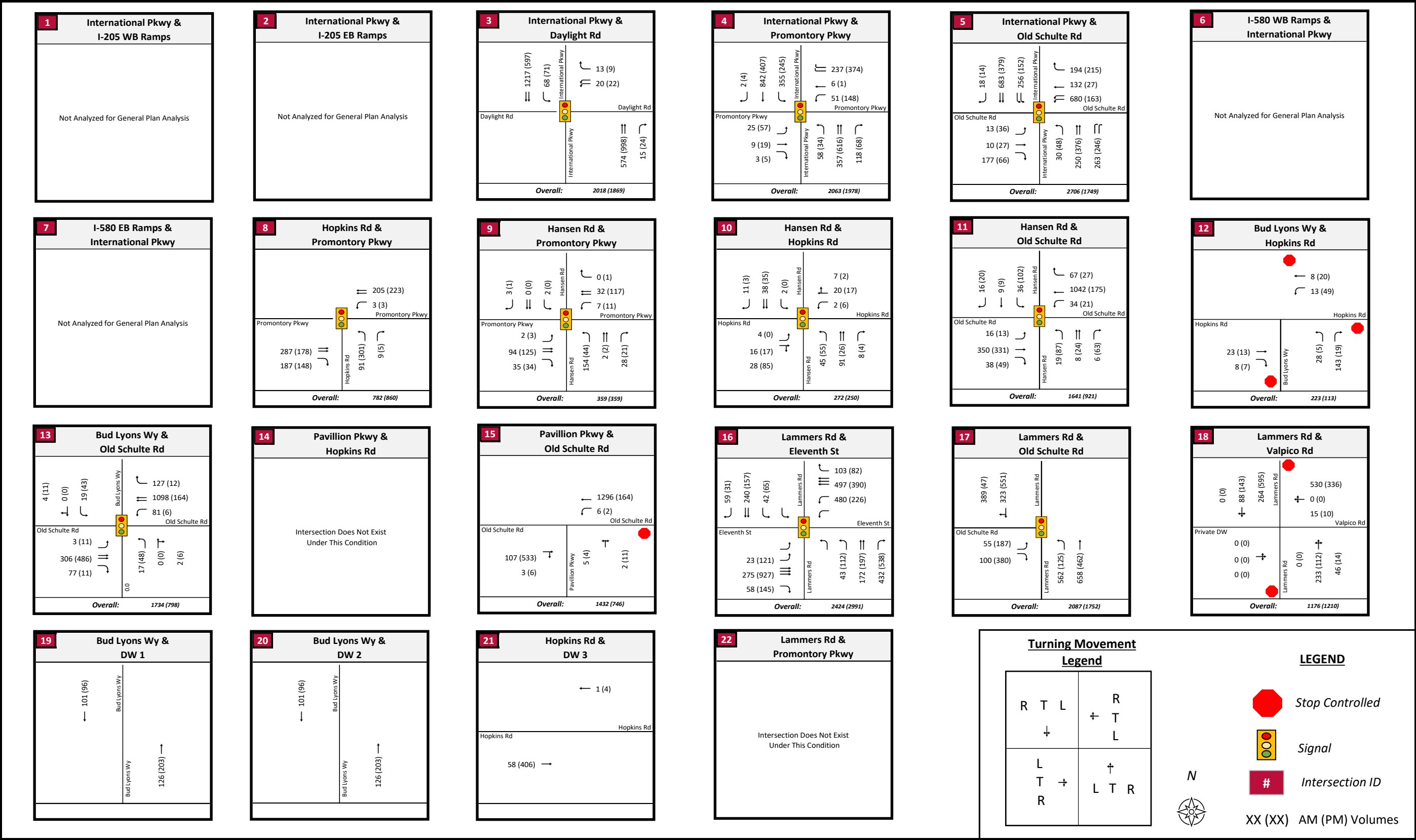


Figure 14



5.3 EXISTING PLUS APPROVED PLUS PROJECT CONDITIONS

5.3.1 PROJECT TRIP GENERATION, DISTRIBUTION, & ASSIGNMENT

The Project proposes to construct a 1,300,256 square foot High Cube warehouse on a currently undeveloped parcel within the CRSP area. The project parcel is bounded by Old Schulte Road, Bud Lyons Way, Hopkins Road and Pavilion Parkway (the project boundary is offset from Pavillion Parkway by approximately 1200 feet) with four driveways proposed (two on Bud Lyons Way and two on Hopkins Road). The eastern Hopkins Road driveway will be gated and used for emergency vehicle access only. The southern Bud Lyons Way driveway will be the exclusive heavy vehicle access for the site. The northern driveway on Bud Lyons Way will be used by passenger cars only.

Table 13 also shows the proposed Project trip generation which is estimated to generate 156 AM Peak Hour trips (108 IN / 48 OUT) and 182 PM Peak Hour trips (56 IN / 126 OUT).

Table 13: Project Trip Generation

Land Uses	Project Size	AM PEAK HOUR				PM PEAK HOUR				
		Total	IN	/	OUT	Total	IN	/	OUT	
Trip Generation Rates										
High-Cube Warehousing (City of Tracy) ¹		0.12	69%	/	31%	0.14	31%	/	69%	
Project Trip Generation										
IPC 20 (High-Cube Warehouse)	1,300.26 KSF	156	108	/	48	182	56	/	126	
Passenger Car		108	75	/	33	142	44	/	98	
Truck		48	33	/	15	40	12	/	28	
Project Total		156	108	/	48	182	56	/	126	

Notes:

1. Custom City of Tracy High-Cube Warehousing Rate, conservatively appropriate based on driveway counts.

Trip Distribution of Project

Trip distribution, for the proposed Project, was split by vehicle type. Many of the CRSP warehouses have specific truck driveways where all inbound and outbound truck traffic is routed. In addition, the City of Tracy prohibits trucks along certain roadways and intersections. Therefore, the distribution of passenger cars and trucks were identified separately.

Distribution and assignment, for the proposed Project, was distributed in the same manner as the approved trips.

The following lists the Project distribution assumptions used for passenger cars:

- I-205 West of International Parkway: 2%
- Mountain House North of I-205: 15%
- I-205 East of International Parkway: 26%
- 11th Street East of Lammers Road: 14%
- Valpico Road East of Lammers Road: 15%
- Lammers Road South of Valpico Road: 2%
- I-580 East of International Parkway: 23%
- I-580 West of International Parkway: 3%

Refer to **Figure 16** and **Figure 17** for the passenger car distribution and assignment, respectively.

The following lists the Project distribution assumptions used for truck trips:

- I-205 West of International Parkway: 11%
- I-205 East of International Parkway: 30%
- I-580 East of International Parkway: 35%
- I-580 West of International Parkway: 19%
- Mountain House Parkway North of I-205: 5%

Refer to **Figure 18** and **Figure 19** for the truck distribution and assignment for the Project, respectively.

The Existing Plus Approved Plus Project Conditions are based on the Existing Conditions traffic volumes plus the traffic generated by the approved projects, the changes to the road network, and proposed IPC 20 project. IPC 20 proposes to construct the building, make frontage improvements and add to the IPC road network connections that will result in a shift in traffic volumes. The roadway expansion includes the connection of Promontory Parkway to Lammers Road, Hopkins Road connection to Pavillion Road and the Pavillion Parkway connection to Old Schulte Road. The improved road network will distribute traffic in a grid pattern through IPC. The addition of more road and intersections relieves traffic condition at many intersections.

The Project proposes to construct the following street improvement plans:

- Phase 1K
 - 2-lane Pavillion Parkway between Old Schulte Road and Capital Parks Drive
 - 4-lane Promontory Parkway between Private Road to Pavillion Parkway
 - Single-lane of a future two-lane roundabout at Pavillion Parkway and Promontory Parkway
 - Signal at Pavillion Parkway and Old Schulte Road
- Hopkins Road Extension
 - 2-lane between Private Road and Pavillion Parkway
- Promontory Parkway Extension
 - 2-lane between Pavillion Parkway to Lammers Road
 - Signal at Lammers Road and Promontory Parkway

The Promontory Parkway Extension is a new major connection with enhanced network connectivity and circulation in the CRSP area. It is anticipated that existing traffic that currently uses Old Schulte Road and Eleventh Street/ I-205 will shift to use the Promontory Parkway Extension to access the CRSP area or other

destinations along International Parkway or Lammers Road. To quantify the amount of traffic that would redistribute to the new Promontory Parkway Extension, Kimley-Horn utilized the existing counts at intersections along Old Schulte Road and volume imbalances between intersection to identify the number of vehicles that have an origin or destination within the CRSP or adjacent County industrial areas versus the number of vehicles that are passing through on the way to the freeway. The following redistribution assumptions were made based on these calculations:

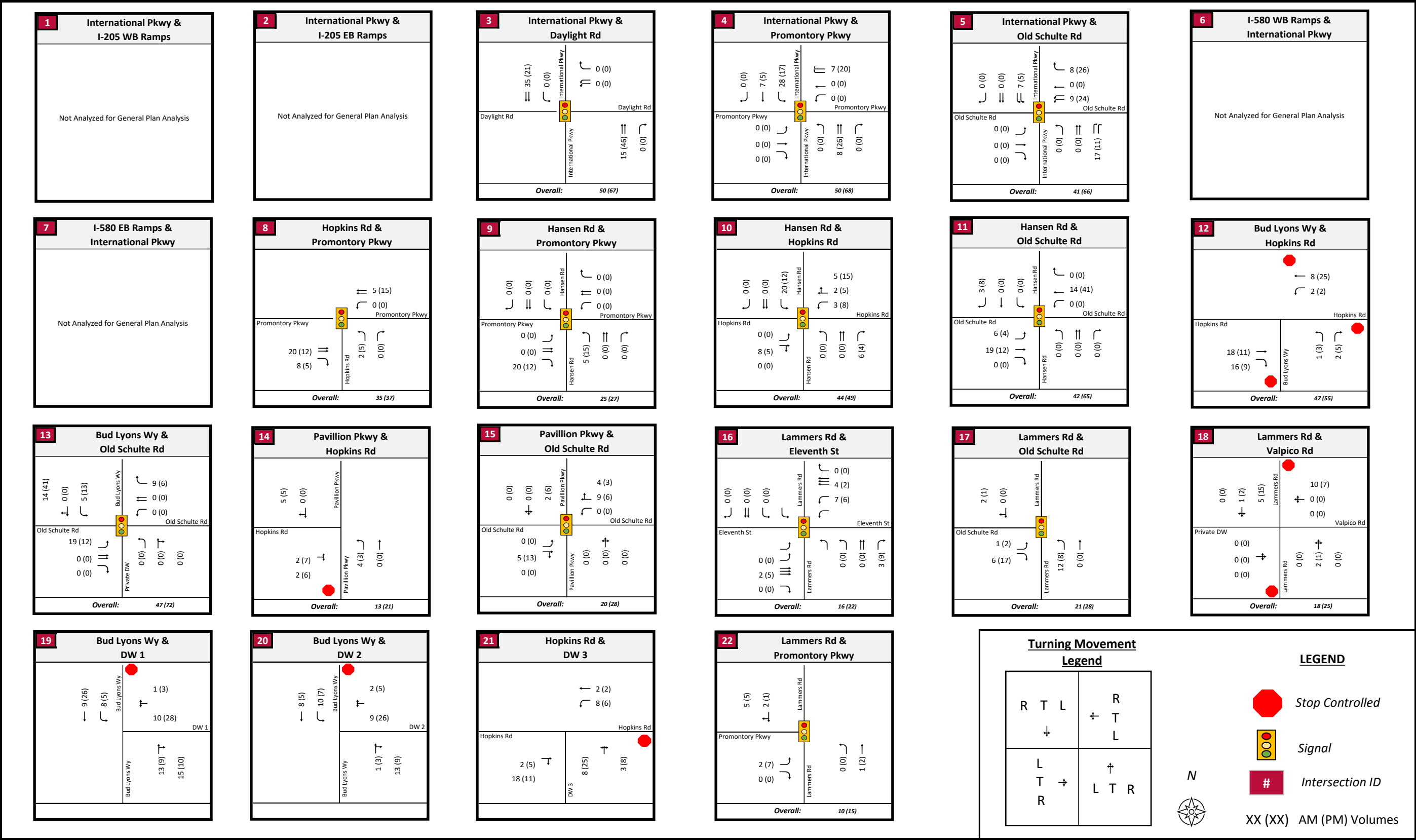
- In the AM Peak Hour:
 - Of the existing 402 northbound left turns at Intersection #17 Lammers Road & Old Schulte Road, 25% or 101 vehicles would instead continue north and turn left onto Promontory Parkway.
 - Of the existing 358 southbound right turns at Intersection #17 Lammers Road & Old Schulte Road, 66% or 236 vehicles would instead make a southbound right earlier onto Promontory Parkway.
 - Of the existing 118 northbound right turns at Intersection #5 International Parkway & Old Schulte Road, 19% or 23 vehicles would instead continue north and make a northbound right turn at Intersection #4 International Parkway & Promontory Parkway.
- In the PM Peak Hour:
 - Of the existing 41 northbound left turns at Intersection #17 Lammers Road & Old Schulte Road, 25% or 10 vehicles would instead continue north and turn left onto Promontory Parkway.
 - Of the existing 31 southbound right turns at Intersection #17 Lammers Road & Old Schulte Road, 66% or 20 vehicles would instead make a southbound right earlier onto Promontory Parkway.
 - Of the existing 231 northbound right turns at Intersection #5 International Parkway & Old Schulte Road, 42% or 97 vehicles would instead continue north and make a northbound right turn at Intersection #4 International Parkway & Promontory Parkway.

Routing assumptions for the existing and approved projects onto Promontory Parkway Extension and Pavillion Parkway were similarly distributed so that the overall distribution of trips remained the same as what is reported in **Figure 16** and **Figure 18** but the routes assigned better reflect the shortest or most convenient path for a passenger car based on knowledge of the future roadway network geometry, congestion levels, and engineering judgement.

In addition to the specific geometric improvements and redistribution assumptions outlined above, retiming of all study intersections was assumed to occur with the construction of Pavillion Parkway and Promontory Parkway. This is necessary due to the re-distribution of existing and approved traffic expected to occur with the construction of these new roadways.

The applicant will, as part of the Promontory Parkway Extension project, construct a single -lane roundabout at the intersection on Pavillion parkway/Promontory Parkway as a first phase of a future two-lane roundabout. The traffic volumes at the roundabout will be low on opening day and the intersection will operate at acceptable conditions. The single lane roundabout has a capacity of approximately 20,000 daily vehicles. Based on the peak hour volumes forecasted, the daily volumes with IPC 20 are expected to be about 5,500 vehicles. Therefore, the roundabout is expected to operate acceptably.

Figure 20 illustrates the Existing Plus Approved Plus Project Conditions study intersections. **Figure 21** illustrates the Existing Plus Approved Conditions Volumes With Project (New Roads) Conditions Lane Geometry. The Existing Plus Approved Plus Project Conditions intersection lane geometry and volumes are shown in **Figure 22**.



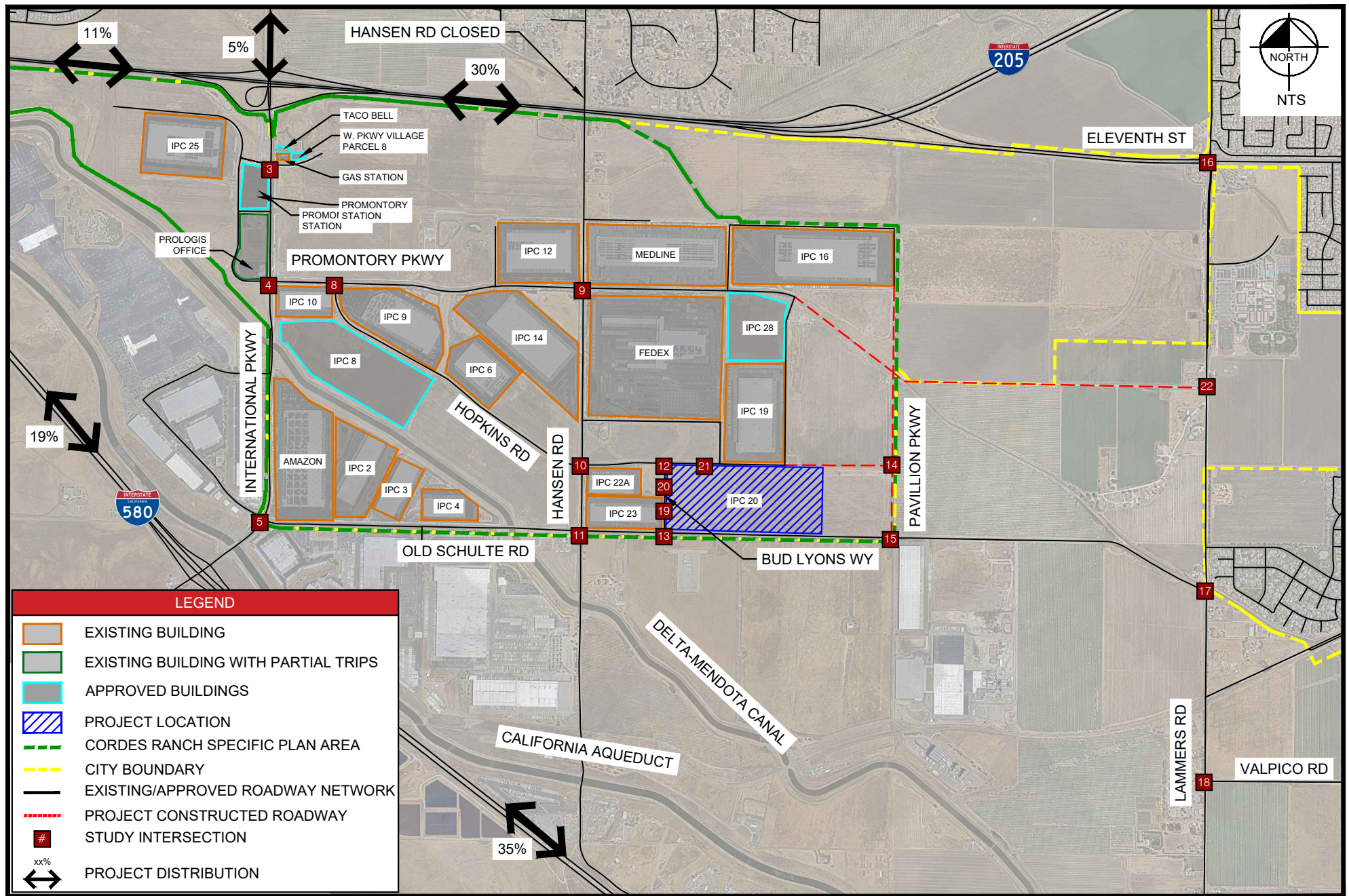
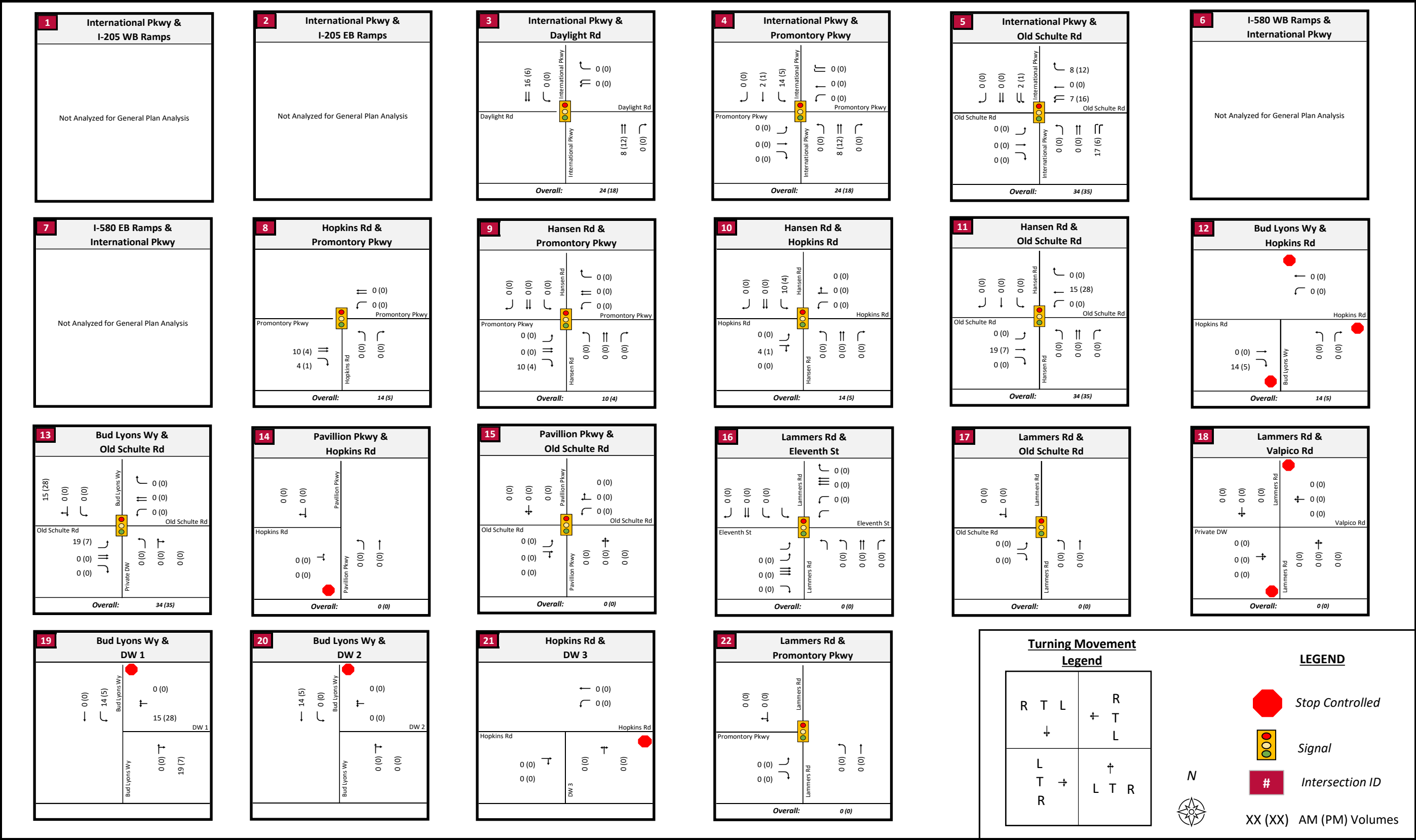


Figure 18



The results of the Existing Plus Approved Plus Project Conditions LOS analysis are presented in **Table 14**. All intersections operate at acceptable LOS except for the following:

- **Intersection #4 - International Parkway & Promontory Parkway**
 - **Project Caused Deficiency**
 - AM Peak Hour – LOS F
 - This deficiency is caused by the rerouting of existing and approved project traffic volumes because of the new road network connections, and the addition of IPC 20 traffic. The rerouting of IPC traffic occurs from primarily the International Parkway/Old Schulte Road intersection to the International Parkway/Promontory Parkway intersection. The International Parkway/Old Schulte Road intersection delay decreases with the rerouting of traffic.
- **Intersection #5 - International Parkway & Old Schulte Road**
 - **Not a Project Caused Deficiency**
 - AM Peak Hour – LOS F
 - This intersection would continue to operate at LOS F with the addition of the Project, but the delay decreases due to the rerouting of traffic to Promontory Parkway. The Project does not cause a deficiency at the intersection.
- **Intersection #17 - Lammers Road & Old Schulte Road**
 - **Not a Project Caused Deficiency**
 - AM Peak Hour – LOS F
 - The rerouting of the volumes decreases the delay, but the intersection still operates at F. By changing the signal timing and phasing at this intersection, the delay would decrease even more and would improve the LOS.
- **Intersection #18 – Lammers Road & Valpico**
 - **Project Caused Deficiency**
 - AM Peak Hour – LOS F

The following intersection improvements are recommended:

- **Intersection #4 - International Parkway & Promontory Parkway**
 - Prohibit southbound U-turn movements
 - Adjust signal timing to allow a protected westbound right turn overlap with the protected southbound left movement.
- **Intersection #17 - Lammers Road & Old Schulte Road**
 - Retime the intersection and phasing plan to accommodate overlapping westbound right turn and southbound left turn phasing.
- **Intersection #18 – Lammers Road & Valpico**
 - Install previously identified improvements at this intersection:
 - Signal with northbound left turn lane, southbound left turn lane, westbound right turn lane with overlap signal phasing
- **Roadway Network Signal Retiming**
 - Due to the rerouting of traffic, IPC shall update the signal timing for all intersections that are anticipated to experience changes in traffic where signal timings and phasing are critical to acceptable LOS operations and minimizing queue lengths, especially in left turn

pockets. The Promontory Parkway, International Parkway and Old Schulte Road corridors have interconnected signals due to close spacings. Therefore, all signals along Promontory Parkway and Old Schulte between International Parkway and Lammers Road, including the end points, and International Parkway and Berkeley Road are required to be retimed.

Table 15 provides the LOS summary with the required intersection improvements implemented.

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Table 14: Existing Plus Approved Plus Project Conditions Analysis LOS Results

Intersection		LOS Standard	Existing Plus Approved Projects Conditions							Existing Plus Approved Projects Plus Project Conditions									Project Induced Deficiency? (Y/N)
			Control Type	AM Peak Hour			PM Peak Hour			Control Type	AM Peak Hour				PM Peak Hour				
				MVMT	Delay	LOS	MVMT	Delay	LOS		MVMT	Delay	Δ	LOS	MVMT	Delay	Δ	LOS	
1	International Parkway & I-205 WB Ramps	-	Not Studied Under General Plan Analysis							Not Analyzed for General Plan Analysis									-
2	International Parkway & I-205 EB Ramps	-	Not Studied Under General Plan Analysis							Not Analyzed for General Plan Analysis									-
3	International Parkway & Daylight Road	E	Signal	-	9.5	A	-	12.6	B	Signal	-	10.1	0.6	B	-	13.8	1.2	B	N
4	International Parkway & Promontory Parkway	D	Signal	-	69.2	E	-	41.7	D	Signal	-	76.9	7.7	E	-	42.2	0.5	D	Y
5	International Parkway & Old Schulte Road	E	Signal	-	109.8	F	-	54.6	D	Signal	-	91.2	-18.6	F	-	53.9	-0.7	E	N
6	International Parkway & I-580 WB Ramps	-	Not Studied Under General Plan Analysis							Not Analyzed for General Plan Analysis									-
7	International Parkway & I-580 EB Ramps	-	Not Studied Under General Plan Analysis							Not Analyzed for General Plan Analysis									-
8	Hopkins Road & Promontory Parkway	D	Signal	-	17.1	B	-	8.8	A	Signal	-	17.5	0.4	B	-	8.8	0.0	A	N
9	Hansen Road & Promontory Parkway	D	Signal	-	17.0	B	-	11.6	B	Signal	-	18.8	1.8	B	-	11.8	0.2	B	N
10	Hansen Road & Hopkins Road	D	Signal	-	35.0	D	-	25.9	C	Signal	-	40.7	5.7	D	-	27.8	1.9	C	N
11	Hansen Road & Old Schulte Road	D	Signal	-	23.1	C	-	35.2	D	Signal	-	19.6	-3.5	B	-	34.2	-1.0	C	N
12	Bud Lyons Way & Hopkins Road	D	AWSC	-	8.2	A	-	8.2	A	AWSC	-	8.7	0.5	A	-	8.4	0.2	A	N
13	Bud Lyons Way & Old Schulte Road	D	Signal	-	42.1	D	-	39.7	D	Signal	-	45.4	3.3	D	-	44.2	4.5	D	N
14	Pavillion Parkway & Hopkins Road	D	Intersection Does Not Exist							SSSC	-	8.7	8.7	A	-	8.7	-	A	N
15	Pavillion Parkway & Old Schulte Road	D	SSSC	NB	49.8	F	-	21.3	C	Signal	-	6.8	-43.0	A	-	11.9	-9.4	B	N
16	Lammers Road & Eleventh Street	D	Signal	-	64.7	E	-	21.0	C	Signal	-	38.8	-25.9	D	-	21.3	0.3	C	N
17	Lammers Road & Old Schulte Road	D	Signal	-	189.5	F	-	27.9	C	Signal	-	61.3	-128.2	E	-	26.4	-1.5	C	Y
18	Lammers Road & Valpico Road	D	SSSC	WB	290.2	F	WB	1235	F	SSSC	WB	309.1	18.9	F	WB	1403	168.0	F	Y
19	Project Driveway 1 & Bud Lyons Way	D	Intersection Does Not Exist							SSSC	WB	10.9	10.9	B	WB	11.8	11.8	B	N
20	Project Driveway 2 & Bud Lyons Way	D	Intersection Does Not Exist							SSSC	WB	9.1	9.1	A	WB	9.6	9.6	A	N
21	Project Driveway 3 & Hopkins Road	D	Intersection Does Not Exist							SSSC	NB	9.2	9.2	A	NB	12.1	12.1	B	N
21	Project Driveway 3 & Hopkins Road	D	Intersection Does Not Exist							SSSC	NB	9.2	9.2	A	NB	12.1	12.1	B	N
22	Lammers Road & Promontory Parkway	D	Intersection Does Not Exist							Signal	-	8.9	-	A	-	10.3	-	B	N

Notes:

1. Analysis performed using HCM 7th Edition methodology in Synchro™ 12 and Simtraffic™ Software
2. Overall level of service (LOS) standard for the City is D. For intersections within 1/4-mile of an interchange LOS standard is E
3. SSSC - Side Street Stop Control, Signal - Signalized Intersection, AWSC – All-way Stop Controlled, MVMT – approach movement direction
4. Deficient LOS is denoted by **bold text**
5. Project caused LOS deficiency is denoted by **bold and gray highlighted text**
6. Delay indicated in seconds/vehicle

Table 15: Existing Plus Approved Plus Project with Improvements LOS Results

Intersection		LOS Standard	Existing Plus Approved Projects Plus Project Conditions							Improved Existing Plus Approved Projects Plus Project Conditions							Improvement Description
			Control Type	AM Peak Hour			PM Peak Hour			Control Type	AM Peak Hour			PM Peak Hour			
				MVMT	Delay	LOS	MVMT	Delay	LOS		MVMT	Delay	LOS	MVMT	Delay	LOS	
4	International Parkway & Promontory Parkway	D	Signal	-	76.9	E	-	42.2	D	Signal	-	53.8	D	-	37.3	D	- Prohibit SB u-turn movements - WBR overlap
17	Lammers Road & Old Schulte Road	D	Signal	-	61.3	E	-	26.4	C	Signal	-	20.5	C	-	23.1	C	-EBR overlap
18	Lammers Road & Valpico Road	D	SSSC	WB	309.1	F	WB	1403	F	Signal	WB	24.9	C	WB	20	B	- Install Signal - Add NBL, SBL, and WBR turn lanes - WBR overlap

- Notes:
- 1. Analysis performed using HCM 7th Edition methodology in Synchro™ 12 Software
 - 2. Overall level of service (LOS) standard for the City is D. For intersections within 1/4-mile of an interchange LOS standard is E
 - 3. SSSC - Side Street Stop Control, Signal - Signalized Intersection, AWSC – All-way Stop Controlled, MVMT – approach movement direction
 - 4. Deficient LOS is denoted by **bold text**
 - 5. Project caused LOS deficiency is denoted by **bold and gray highlighted text**
 - 6. Delay indicated in seconds/vehicle

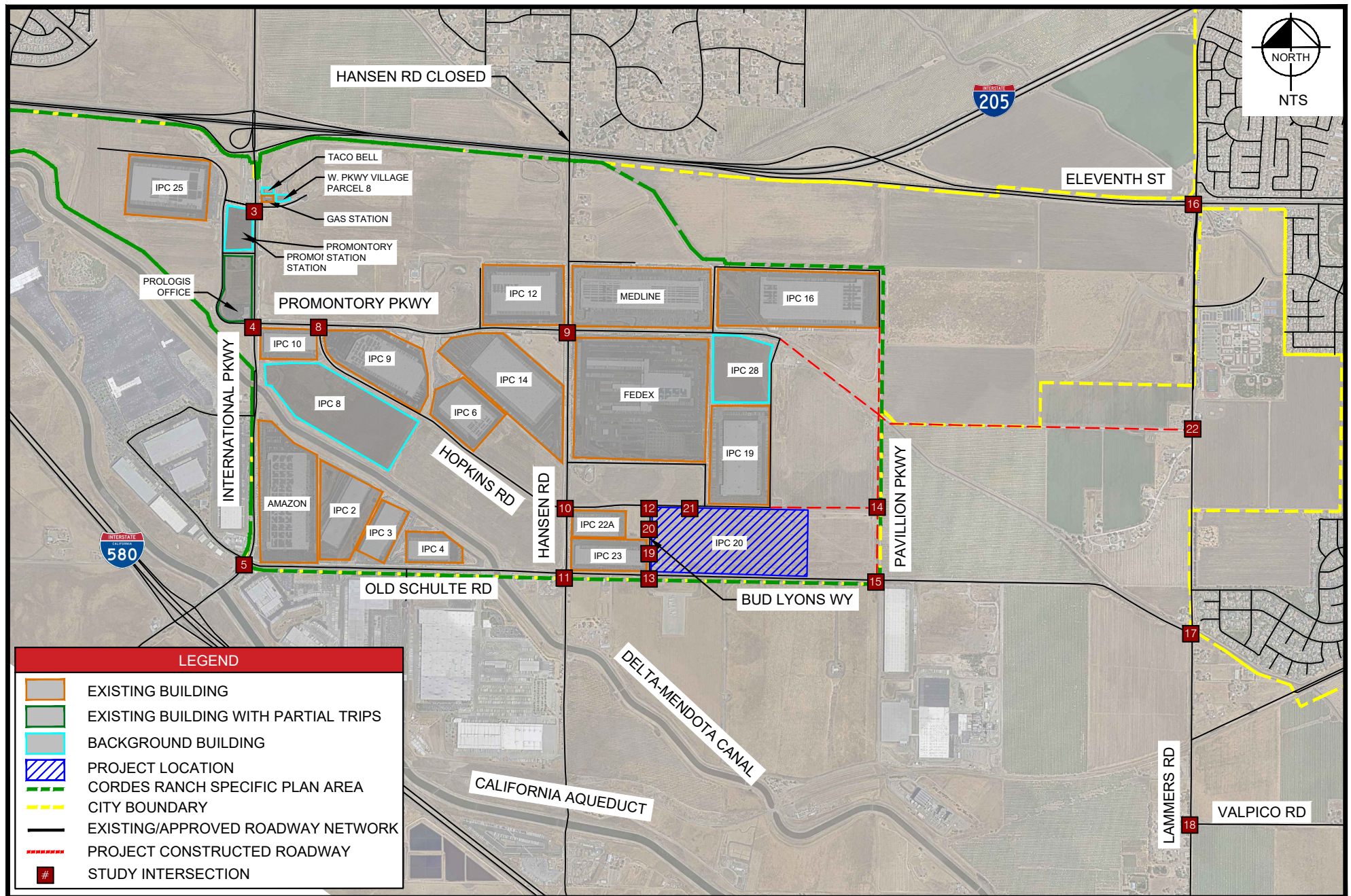
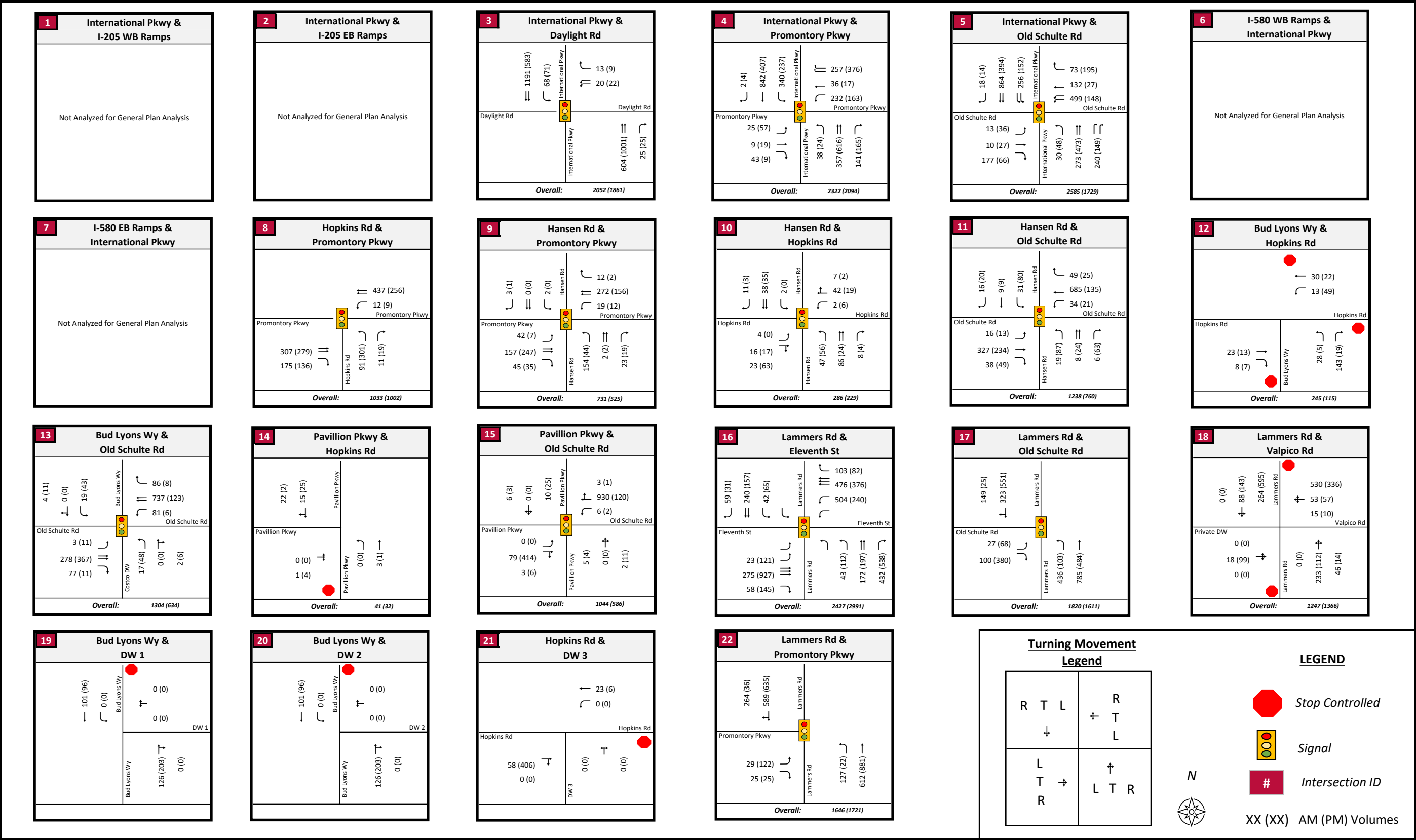
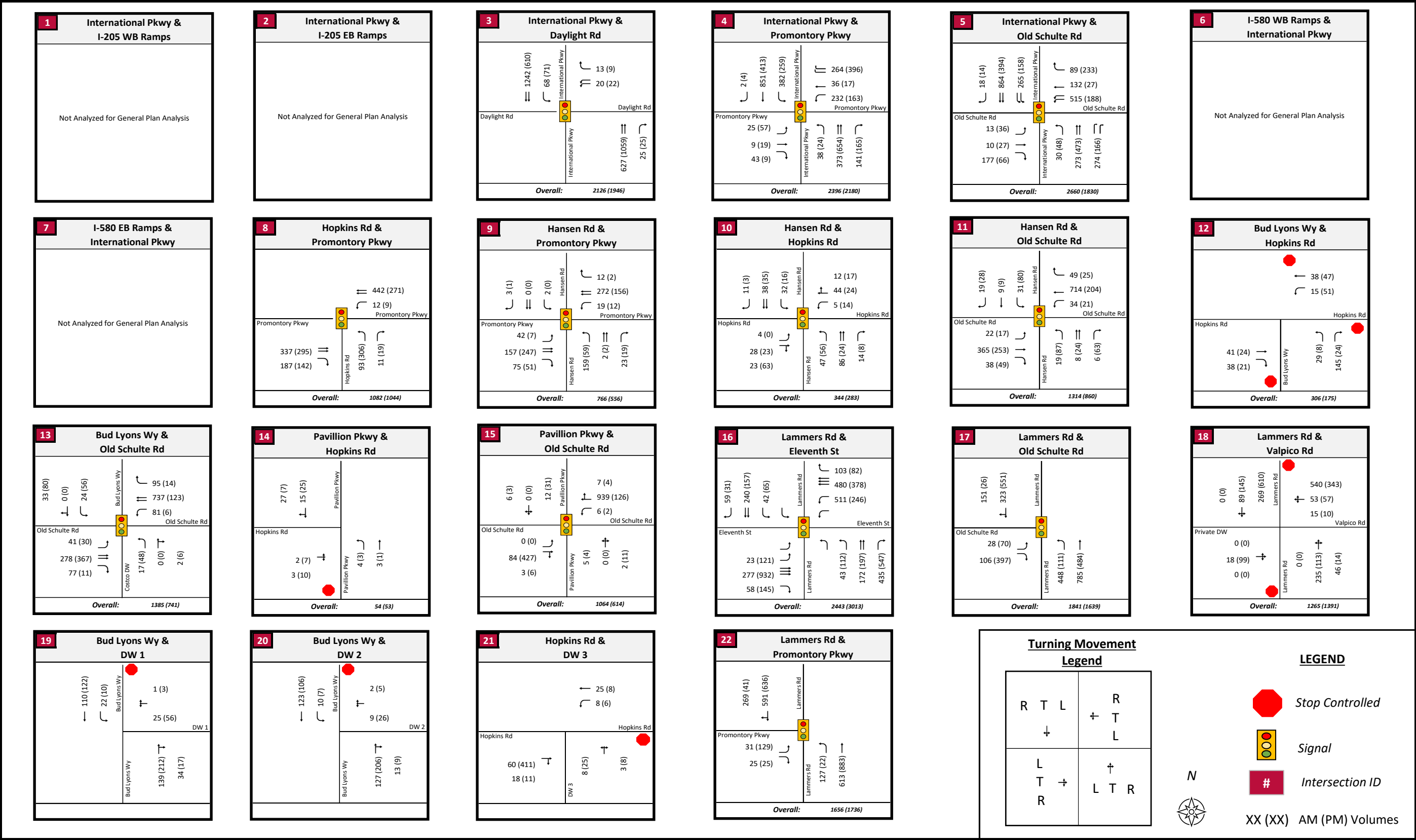


Figure 20





6 PROMONTORY PARKWAY TRUCK RESTRICTION

As discussed previously, the Project will construct several new roads in the CRSP area including the Promontory Parkway Extension to Lammers Road. Although these new roads will provide enhanced connectivity, truck traffic will be prohibited from using the Promontory Parkway Extension. Lammers Road currently prohibits trucks, therefore, this connection between IPC and the greater City roadway network must also prohibit trucks. The roundabout layout will discourage truck traffic traveling to and from the east along Promontory Parkway. Signs will be posted at all approaches to the roundabout notifying trucks of the prohibition of traveling further east on Promontory Parkway. The intersection of Lammers Road and Promontory Parkway will be a T-intersection and have signal control. It is likely that additional measures may be required to limit trucks on Promontory Parkway at this intersection, although existing truck prohibition signs are already located north and south of the proposed intersection along Lammers Road. In addition to the signs, enforcement will be required by the City Police Department for truck violations east of the roundabout along Promontory Parkway.

The applicant shall prepare a monthly monitoring program to observe truck violations and, if deemed necessary by the City Engineer, install additional measures to discourage/prohibit IPC truck traffic from using the Promontory Parkway Extension to Lammers Road. These measures may include additional traffic signs, curb and median measures or other traffic calming measures to discourage/prevent truck traffic on Promontory Parkway east of Pavillion Parkway.

7 APPENDIX

- A. Existing (2011) Conditions Synchro Outputs
- B. Existing (2011) Plus Approved CRSP Projects Conditions Synchro Outputs
- C. Existing (2011) Plus Approved CRSP Projects Plus Project Conditions Synchro Outputs
- D. Existing (2011) Plus Approved CRSP Projects Plus Project Conditions Improvements Synchro Outputs
- E. Existing (2024) Conditions Synchro Outputs
- F. Existing (2024) Plus Approved Projects Conditions Synchro Outputs
- G. Existing (2024) Plus Approved Projects Plus Project Conditions Synchro Outputs
- H. Existing (2024) Plus Approved Projects Plus Project Conditions Improvements Synchro Outputs
- I. Study Intersection, Roadway, and Driveway Traffic Counts and Data Collection
- J. Roadway Improvement Plans

A. Existing (2011) Conditions Synchro Outputs

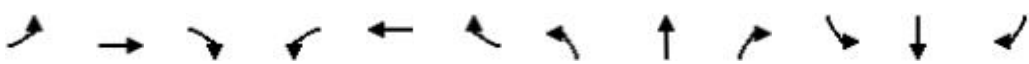
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IPC 20 CEQA Analysis

Existing (2011) Conditions Analysis

1: International Parkway & WB 205 On Ramp/WB 205 Off Ramp

Timing Plan: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰	↰↰	↰	↰↰			↰↰↰	↰
Traffic Volume (vph)	0	0	0	285	1	245	13	105	0	0	341	307
Future Volume (vph)	0	0	0	285	1	245	13	105	0	0	341	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					1.00	0.88	1.00	0.95			0.91	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1645	2584	1641	3282			4715	1468
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1645	2584	1641	3282			4715	1468
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	320	1	275	15	118	0	0	383	345
RTOR Reduction (vph)	0	0	0	0	0	197	0	0	0	0	0	171
Lane Group Flow (vph)	0	0	0	0	321	78	15	118	0	0	383	174
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)					17.0	17.0	0.8	35.0			30.2	30.2
Effective Green, g (s)					17.0	17.0	0.8	35.0			30.2	30.2
Actuated g/C Ratio					0.28	0.28	0.01	0.58			0.50	0.50
Clearance Time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					466	732	21	1914			2373	738
v/s Ratio Prot					c0.20		c0.01	0.04			0.08	
v/s Ratio Perm						0.03						c0.12
v/c Ratio					0.68	0.10	0.71	0.06			0.16	0.23
Uniform Delay, d1					19.1	15.8	29.4	5.4			8.0	8.3
Progression Factor					1.00	1.00	1.01	0.65			1.00	1.00
Incremental Delay, d2					4.2	0.0	74.9	0.0			0.1	0.7
Delay (s)					23.3	15.9	104.8	3.6			8.2	9.1
Level of Service					C	B	F	A			A	A
Approach Delay (s/veh)		0.0			19.9			15.0			8.6	
Approach LOS		A			B			B			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			13.9									
HCM 2000 Level of Service											B	
HCM 2000 Volume to Capacity ratio			0.40									
Actuated Cycle Length (s)			60.0									
Sum of lost time (s)											12.0	
Intersection Capacity Utilization			48.2%									
ICU Level of Service											A	
Analysis Period (min)			15									

c Critical Lane Group

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	0	13	0	0	0	0	58	106	0	353	0
Future Volume (vph)	60	0	13	0	0	0	0	58	106	0	353	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95	1.00		0.95	
Frt	1.00	1.00	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1559	1559	1468					3282	1468		3282	
Flt Permitted	0.95	0.95	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1559	1559	1468					3282	1468		3282	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	67	0	15	0	0	0	0	65	119	0	397	0
RTOR Reduction (vph)	0	0	13	0	0	0	0	0	29	0	0	0
Lane Group Flow (vph)	33	34	2	0	0	0	0	65	90	0	397	0
Turn Type	Prot	NA	Perm					NA	Perm		NA	Perm
Protected Phases	7	4						2			6	
Permitted Phases			4						2			6
Actuated Green, G (s)	6.8	6.8	6.8					45.2	45.2		45.2	
Effective Green, g (s)	6.8	6.8	6.8					45.2	45.2		45.2	
Actuated g/C Ratio	0.11	0.11	0.11					0.75	0.75		0.75	
Clearance Time (s)	4.0	4.0	4.0					4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	176	176	166					2472	1105		2472	
v/s Ratio Prot	0.02	c0.02						0.02			c0.12	
v/s Ratio Perm			0.00						0.06			
v/c Ratio	0.18	0.19	0.01					0.02	0.08		0.16	
Uniform Delay, d1	24.0	24.1	23.6					1.8	1.9		2.0	
Progression Factor	1.00	1.00	1.00					0.77	0.64		0.99	
Incremental Delay, d2	0.5	0.5	0.0					0.0	0.1		0.1	
Delay (s)	24.6	24.6	23.6					1.4	1.3		2.2	
Level of Service	C	C	C					A	A		A	
Approach Delay (s/veh)		24.4			0.0			1.4			2.2	
Approach LOS		C			A			A			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			4.7									
HCM 2000 Volume to Capacity ratio			0.16									
Actuated Cycle Length (s)			60.0									
Intersection Capacity Utilization			19.8%									
Analysis Period (min)			15									
c Critical Lane Group												

IPC 20 CEQA Analysis
3: International Parkway & Daylight Road

Existing (2011) Conditions Analysis
Timing Plan: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑↑			↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	0	164	0	0	366	0
Future Volume (vph)	0	0	0	0	0	0	0	164	0	0	366	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.0			4.0	
Lane Util. Factor								0.95			0.95	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								3282			3282	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								3282			3282	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	0	0	0	0	184	0	0	411	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	184	0	0	411	0
Turn Type								NA			NA	
Protected Phases		4						2			6	
Permitted Phases												
Actuated Green, G (s)								60.0			60.0	
Effective Green, g (s)								60.0			60.0	
Actuated g/C Ratio								1.00			1.00	
Clearance Time (s)								4.0			4.0	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								3282			3282	
v/s Ratio Prot								0.06			c0.13	
v/s Ratio Perm												
v/c Ratio								0.05			0.12	
Uniform Delay, d1								0.0			0.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.0			0.0	
Delay (s)								0.0			0.0	
Level of Service								A			A	
Approach Delay (s/veh)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)		0.1						HCM 2000 Level of Service		A		
HCM 2000 Volume to Capacity ratio		0.14										
Actuated Cycle Length (s)		60.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		13.5%						ICU Level of Service		A		
Analysis Period (min)		15										
c Critical Lane Group												

4: International Parkway & Promontory Parkway

Timing Plan: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	164	0	0	366	0
Future Volume (vph)	0	0	0	0	0	0	0	164	0	0	366	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								5.8			5.8	
Lane Util. Factor								1.00			1.00	
Frpb, ped/bikes								1.00			1.00	
Flpb, ped/bikes								1.00			1.00	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								1727			1727	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								1727			1727	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	0	0	0	0	184	0	0	411	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	184	0	0	411	0
Confl. Peds. (#/hr)									1	1		
Turn Type	Prot		Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)								120.0			120.0	
Effective Green, g (s)								120.0			120.0	
Actuated g/C Ratio								1.00			1.00	
Clearance Time (s)								5.8			5.8	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								1727			1727	
v/s Ratio Prot								0.11			c0.24	
v/s Ratio Perm												
v/c Ratio								0.10			0.23	
Uniform Delay, d1								0.0			0.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.1			0.3	
Delay (s)								0.1			0.3	
Level of Service								A			A	
Approach Delay (s/veh)		0.0			0.0			0.1			0.3	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			0.3									
HCM 2000 Volume to Capacity ratio			0.28									
Actuated Cycle Length (s)			120.0									
Intersection Capacity Utilization			29.0%									
Analysis Period (min)			15									
c Critical Lane Group												

IPC 20 CEQA Analysis
5: International Parkway & Old Schulte Road

Existing (2011) Conditions Analysis
Timing Plan: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	17	46	240	47	90	66	43	95	97	115	36
Future Volume (vph)	16	17	46	240	47	90	66	43	95	97	115	36
Ideal Flow (vphpl)	1200	1800	1900	1200	1800	1900	1200	1800	1900	1200	1800	1900
Total Lost time (s)	4.0	5.8	5.8	4.0	5.8		4.0	5.8	5.8	4.0	5.8	5.8
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1036	3109	1468	1923	1411		1036	3109	1468	2011	3109	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1036	3109	1468	1923	1411		1036	3109	1468	2011	3109	1468
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	18	19	52	270	53	101	74	48	107	109	129	40
RTOR Reduction (vph)	0	0	48	0	39	0	0	0	93	0	0	36
Lane Group Flow (vph)	18	19	4	270	115	0	74	48	14	109	129	4
Heavy Vehicles (%)	10%	10%	10%	15%	15%	15%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	3.9	8.4	8.4	63.5	68.0		17.8	16.0	16.0	12.5	10.7	10.7
Effective Green, g (s)	3.9	8.4	8.4	63.5	68.0		17.8	16.0	16.0	12.5	10.7	10.7
Actuated g/C Ratio	0.03	0.07	0.07	0.53	0.57		0.15	0.13	0.13	0.10	0.09	0.09
Clearance Time (s)	4.0	5.8	5.8	4.0	5.8		4.0	5.8	5.8	4.0	5.8	5.8
Vehicle Extension (s)	3.0	3.0	3.0	4.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	33	217	102	1017	799		153	414	195	209	277	130
v/s Ratio Prot	c0.02	0.01		c0.14	c0.08		c0.07	0.02		0.05	c0.04	
v/s Ratio Perm			0.00						0.01			0.00
v/c Ratio	0.54	0.08	0.03	0.26	0.14		0.48	0.11	0.07	0.52	0.46	0.02
Uniform Delay, d1	57.1	52.2	52.0	15.4	12.2		46.8	45.7	45.5	50.9	51.9	49.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.90	1.17	1.00
Incremental Delay, d2	17.1	0.1	0.1	0.6	0.0		2.3	0.1	0.1	2.3	1.2	0.0
Delay (s)	74.3	52.3	52.1	16.1	12.3		49.2	45.8	45.6	48.4	62.1	49.9
Level of Service	E	D	D	B	B		D	D	D	D	E	D
Approach Delay (s/veh)		56.6			14.7			46.8			54.9	
Approach LOS		E			B			D			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			36.6			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.32									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			19.6			
Intersection Capacity Utilization			43.2%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			↑	↑		4	↑			
Traffic Volume (veh/h)	15	85	0	0	216	185	53	0	119	0	0	0
Future Volume (Veh/h)	15	85	0	0	216	185	53	0	119	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	17	96	0	0	243	208	60	0	134	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					1196							
pX, platoon unblocked												
vC, conflicting volume	451			96			373	581	96	373	373	243
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	451			96			373	581	96	373	373	243
tC, single (s)	4.2			4.2			7.2	6.6	6.4	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	98			100			89	100	86	100	100	100
cM capacity (veh/h)	1068			1449			554	401	926	481	536	777
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2							
Volume Total	113	243	208	60	134							
Volume Left	17	0	0	60	0							
Volume Right	0	0	208	0	134							
cSH	1068	1700	1700	554	926							
Volume to Capacity	0.02	0.14	0.12	0.11	0.14							
Queue Length 95th (ft)	1	0	0	9	13							
Control Delay (s/veh)	1.4	0.0	0.0	12.3	9.5							
Lane LOS	A			B	A							
Approach Delay (s/veh)	1.4	0.0		10.4								
Approach LOS				B								
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			30.1%		ICU Level of Service				A			
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	32	12	63	206	0	0	0	0	68	1	11
Future Volume (Veh/h)	0	32	12	63	206	0	0	0	0	68	1	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	36	13	71	231	0	0	0	0	76	1	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	231			49			422	409	36	409	422	231
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	231			49			422	409	36	409	422	231
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.4
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	100			95			100	100	100	85	100	98
cM capacity (veh/h)	1291			1508			501	495	1014	511	480	777
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2							
Volume Total	36	13	302	77	12							
Volume Left	0	0	71	76	0							
Volume Right	0	13	0	0	12							
cSH	1700	1700	1508	511	777							
Volume to Capacity	0.02	0.01	0.05	0.15	0.02							
Queue Length 95th (ft)	0	0	4	13	1							
Control Delay (s/veh)	0.0	0.0	2.1	13.3	9.7							
Lane LOS			A	B	A							
Approach Delay (s/veh)	0.0		2.1	12.8								
Approach LOS				B								
Intersection Summary												
Average Delay			4.0									
Intersection Capacity Utilization			31.5%		ICU Level of Service				A			
Analysis Period (min)			15									

IPC 20 CEQA Analysis
8: Hopkins Road & Promontory Parkway

Existing (2011) Conditions Analysis
Timing Plan: AM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	240	208	0	55	91	0
Future Volume (vph)	240	208	0	55	91	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	1.00		0.95	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	3282	1468		3282	1641	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	3282	1468		3282	1641	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	270	234	0	62	102	0
RTOR Reduction (vph)	0	190	0	0	0	0
Lane Group Flow (vph)	270	44	0	62	102	0
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	11.3	11.3		11.3	40.7	
Effective Green, g (s)	11.3	11.3		11.3	40.7	
Actuated g/C Ratio	0.19	0.19		0.19	0.68	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	618	276		618	1113	
v/s Ratio Prot	c0.08			0.02	c0.06	
v/s Ratio Perm		0.03				
v/c Ratio	0.43	0.15		0.10	0.09	
Uniform Delay, d1	21.5	20.3		20.1	3.3	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.2		0.0	0.1	
Delay (s)	22.0	20.6		20.2	3.4	
Level of Service	C	C		C	A	
Approach Delay (s/veh)	21.3			20.2	3.4	
Approach LOS	C			C	A	
Intersection Summary						
HCM 2000 Control Delay (s/veh)		18.5		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.18				
Actuated Cycle Length (s)		60.0		Sum of lost time (s)		12.0
Intersection Capacity Utilization		18.3%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

IPC 20 CEQA Analysis
9: Hansen Rd & Promontory Pkwy

Existing (2011) Conditions Analysis
Timing Plan: AM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	0	0	0	0	40	0	0	49	0	
Future Volume (vph)	0	0	0	0	0	0	0	40	0	0	49	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)								5.8			5.8		
Lane Util. Factor								0.95			0.95		
Frbp, ped/bikes								1.00			1.00		
Flpb, ped/bikes								1.00			1.00		
Frt								1.00			1.00		
Flt Protected								1.00			1.00		
Satd. Flow (prot)								3282			3282		
Flt Permitted								1.00			1.00		
Satd. Flow (perm)								3282			3282		
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Adj. Flow (vph)	0	0	0	0	0	0	0	45	0	0	55	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	0	0	45	0	0	55	0	
Confl. Bikes (#/hr)								5					
Turn Type	Prot		Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	5	2		1	6		7	4		3	8		
Permitted Phases			2			6			4			8	
Actuated Green, G (s)								8.0			8.0		
Effective Green, g (s)								8.0			8.0		
Actuated g/C Ratio								0.07			0.07		
Clearance Time (s)								5.8			5.8		
Vehicle Extension (s)								3.0			3.0		
Lane Grp Cap (vph)								218			218		
v/s Ratio Prot								0.01			c0.02		
v/s Ratio Perm													
v/c Ratio								0.20			0.25		
Uniform Delay, d1								52.9			53.1		
Progression Factor								1.00			1.00		
Incremental Delay, d2								0.4			0.6		
Delay (s)								53.4			53.7		
Level of Service								D			D		
Approach Delay (s/veh)		0.0			0.0			53.4			53.7		
Approach LOS		A			A			D			D		
Intersection Summary													
HCM 2000 Control Delay (s/veh)			53.6									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.02										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	18.5
Intersection Capacity Utilization			13.2%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

IPC 20 CEQA Analysis
 10: Hansen Rd/Iron Horse Parkway & Hopkins Road

Existing (2011) Conditions Analysis

Timing Plan: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	40	0	0	49	0
Future Volume (vph)	0	0	0	0	0	0	0	40	0	0	49	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.0			4.0	
Lane Util. Factor								0.95			0.95	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								3282			3282	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								3282			3282	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	0	0	0	0	45	0	0	55	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	45	0	0	55	0
Turn Type	Prot			Prot			Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)								35.0			35.0	
Effective Green, g (s)								35.0			35.0	
Actuated g/C Ratio								1.00			1.00	
Clearance Time (s)								4.0			4.0	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								3282			3282	
v/s Ratio Prot								0.01			c0.02	
v/s Ratio Perm												
v/c Ratio								0.01			0.01	
Uniform Delay, d1								0.0			0.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.0			0.0	
Delay (s)								0.0			0.0	
Level of Service								A			A	
Approach Delay (s/veh)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)		0.0			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.03										
Actuated Cycle Length (s)		35.0			Sum of lost time (s)			16.0				
Intersection Capacity Utilization		6.7%			ICU Level of Service			A				
Analysis Period (min)		15										

c Critical Lane Group

IPC 20 CEQA Analysis
11: Old Schulte Road & Hansen Rd

Existing (2011) Conditions Analysis
Timing Plan: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	3	54	15	2	255	34	24	3	7	34	2	13
Future Volume (vph)	3	54	15	2	255	34	24	3	7	34	2	13
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	3	61	17	2	287	38	27	3	8	38	2	15
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1						
Volume Total (vph)	64	17	327	27	11	55						
Volume Left (vph)	3	0	2	27	0	38						
Volume Right (vph)	0	17	38	0	8	15						
Hadj (s)	0.28	-0.45	0.19	0.67	-0.34	0.14						
Departure Headway (s)	5.4	4.6	5.1	6.3	5.3	5.8						
Degree Utilization, x	0.10	0.02	0.46	0.05	0.02	0.09						
Capacity (veh/h)	651	745	694	530	625	576						
Control Delay (s/veh)	7.7	6.5	12.3	8.4	7.2	9.3						
Approach Delay (s/veh)	7.5		12.3	8.1		9.3						
Approach LOS	A		B	A		A						
Intersection Summary												
Delay			10.9									
Level of Service			B									
Intersection Capacity Utilization			33.2%		ICU Level of Service		A					
Analysis Period (min)			15									

IPC 20 CEQA Analysis
16: S Lammers Rd & Eleventh St

Existing (2011) Conditions Analysis
Timing Plan: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	237	89	300	937	78	120	140	450	53	120	76
Future Volume (vph)	23	237	89	300	937	78	120	140	450	53	120	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	1641	4715	1468	3183	3282	1468	3183	1727	1468
Flt Permitted	0.22	1.00	1.00	0.58	1.00	1.00	0.67	1.00	1.00	0.65	1.00	1.00
Satd. Flow (perm)	756	4715	1468	1004	4715	1468	2247	3282	1468	2186	1727	1468
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	26	266	100	337	1053	88	135	157	506	60	135	85
RTOR Reduction (vph)	0	0	54	0	0	47	0	0	321	0	0	42
Lane Group Flow (vph)	26	266	46	337	1053	41	135	157	185	60	135	43
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	21.9	21.9	21.9	21.9	21.9	21.9	17.2	17.2	17.2	17.2	17.2	17.2
Effective Green, g (s)	21.9	21.9	21.9	21.9	21.9	21.9	17.2	17.2	17.2	17.2	17.2	17.2
Actuated g/C Ratio	0.46	0.46	0.46	0.46	0.46	0.46	0.37	0.37	0.37	0.37	0.37	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	351	2192	682	466	2192	682	820	1198	536	798	630	536
v/s Ratio Prot		0.06			0.22			0.05			0.08	
v/s Ratio Perm	0.03		0.03	c0.34		0.03	0.06		c0.13	0.03		0.03
v/c Ratio	0.07	0.12	0.06	0.72	0.48	0.05	0.16	0.13	0.34	0.07	0.21	0.08
Uniform Delay, d1	6.9	7.1	6.9	10.1	8.6	6.9	10.0	9.9	10.8	9.7	10.2	9.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.0	0.0	5.4	0.1	0.0	0.4	0.2	1.7	0.1	0.7	0.2
Delay (s)	7.0	7.1	7.0	15.6	8.8	6.9	10.5	10.1	12.6	9.9	11.0	10.0
Level of Service	A	A	A	B	A	A	B	B	B	A	B	B
Approach Delay (s/veh)		7.1			10.2			11.7			10.5	
Approach LOS		A			B			B			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			10.3									
HCM 2000 Level of Service										B		
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			47.1									
Sum of lost time (s)										8.0		
Intersection Capacity Utilization			45.8%									
ICU Level of Service										A		
Analysis Period (min)			15									

c Critical Lane Group

IPC 20 CEQA Analysis
17: Lammers Road & Old Schulte Road

Existing (2011) Conditions Analysis
Timing Plan: AM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	39	36	208	423	221	70
Future Volume (vph)	39	36	208	423	221	70
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	44	40	234	475	248	79
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	84	709	327			
Volume Left (vph)	44	234	0			
Volume Right (vph)	40	0	79			
Hadj (s)	0.07	0.24	-0.11			
Departure Headway (s)	6.4	4.8	4.9			
Degree Utilization, x	0.15	0.95	0.45			
Capacity (veh/h)	538	737	720			
Control Delay (s/veh)	10.5	43.5	11.8			
Approach Delay (s/veh)	10.5	43.5	11.8			
Approach LOS	B	E	B			
Intersection Summary						
Delay			31.8			
Level of Service			D			
Intersection Capacity Utilization			64.0%	ICU Level of Service	C	
Analysis Period (min)			15			

18: Lammers Road & Private Driveway/Valpico Road

Timing Plan: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	6	0	403	0	6	8	174	8	0
Future Volume (Veh/h)	0	0	0	6	0	403	0	6	8	174	8	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	0	7	0	453	0	7	9	196	9	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	866	417	9	413	413	12	9			16		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	866	417	9	413	413	12	9			16		
tC, single (s)	7.2	6.6	6.3	7.2	6.6	6.3	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.6	4.1	3.4	2.3			2.3		
p0 queue free %	100	100	100	99	100	57	100			87		
cM capacity (veh/h)	136	449	1050	484	452	1046	1560			1551		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	0	460	16	205								
Volume Left	0	7	0	196								
Volume Right	0	453	9	0								
cSH	1700	1028	1560	1551								
Volume to Capacity	0.00	0.45	0.00	0.13								
Queue Length 95th (ft)	0	59	0	11								
Control Delay (s/veh)	0.0	11.3	0.0	7.4								
Lane LOS	A	B		A								
Approach Delay (s/veh)	0.0	11.3	0.0	7.4								
Approach LOS	A	B										
Intersection Summary												
Average Delay			9.9									
Intersection Capacity Utilization			48.7%		ICU Level of Service					A		
Analysis Period (min)			15									

IPC 20 CEQA Analysis

Existing (2011) Conditions Analysis

1: International Parkway & WB 205 On Ramp/WB 205 Off Ramp

Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	138	0	255	10	333	0	0	261	86
Future Volume (vph)	0	0	0	138	0	255	10	333	0	0	261	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					1.00	0.88	1.00	0.95			0.91	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1641	2584	1641	3282			4715	1468
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1641	2584	1641	3282			4715	1468
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	155	0	287	11	374	0	0	293	97
RTOR Reduction (vph)	0	0	0	0	0	232	0	0	0	0	0	40
Lane Group Flow (vph)	0	0	0	0	155	55	11	374	0	0	293	57
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)					11.4	11.4	1.4	40.6			35.2	35.2
Effective Green, g (s)					11.4	11.4	1.4	40.6			35.2	35.2
Actuated g/C Ratio					0.19	0.19	0.02	0.68			0.59	0.59
Clearance Time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					311	490	38	2220			2766	861
v/s Ratio Prot					c0.09		0.01	c0.11			0.06	
v/s Ratio Perm						0.02						0.04
v/c Ratio					0.49	0.11	0.28	0.16			0.10	0.06
Uniform Delay, d1					21.7	20.1	28.8	3.5			5.4	5.3
Progression Factor					1.00	1.00	1.61	0.23			1.00	1.00
Incremental Delay, d2					1.2	0.1	4.0	0.1			0.0	0.1
Delay (s)					22.9	20.2	50.6	0.9			5.5	5.4
Level of Service					C	C	D	A			A	A
Approach Delay (s/veh)		0.0			21.1			2.4			5.5	
Approach LOS		A			C			A			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			10.2		HCM 2000 Level of Service						B	
HCM 2000 Volume to Capacity ratio			0.26									
Actuated Cycle Length (s)			60.0		Sum of lost time (s)						12.0	
Intersection Capacity Utilization			26.3%		ICU Level of Service						A	
Analysis Period (min)			15									

c Critical Lane Group

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	263	5	26	0	0	0	0	80	335	0	189	0
Future Volume (vph)	263	5	26	0	0	0	0	80	335	0	189	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95	1.00		0.95	
Frt	1.00	1.00	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1559	1566	1468					3282	1468		3282	
Flt Permitted	0.95	0.95	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1559	1566	1468					3282	1468		3282	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	296	6	29	0	0	0	0	90	376	0	212	0
RTOR Reduction (vph)	0	0	23	0	0	0	0	0	130	0	0	0
Lane Group Flow (vph)	151	151	6	0	0	0	0	90	246	0	212	0
Turn Type	Prot	NA	Perm					NA	Perm		NA	Free
Protected Phases	7	4						2			6	
Permitted Phases			4						2			Free
Actuated Green, G (s)	12.8	12.8	12.8					39.2	39.2		39.2	
Effective Green, g (s)	12.8	12.8	12.8					39.2	39.2		39.2	
Actuated g/C Ratio	0.21	0.21	0.21					0.65	0.65		0.65	
Clearance Time (s)	4.0	4.0	4.0					4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	332	334	313					2144	959		2144	
v/s Ratio Prot	c0.10	0.10						0.03			0.06	
v/s Ratio Perm			0.00						c0.17			
v/c Ratio	0.45	0.45	0.01					0.04	0.25		0.09	
Uniform Delay, d1	20.5	20.5	18.6					3.7	4.3		3.8	
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.26	
Incremental Delay, d2	0.9	0.9	0.0					0.0	0.6		0.0	
Delay (s)	21.5	21.5	18.6					3.7	4.9		4.9	
Level of Service	C	C	B					A	A		A	
Approach Delay (s/veh)		21.2			0.0			4.7			4.9	
Approach LOS		C			A			A			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			10.2									
HCM 2000 Volume to Capacity ratio			0.30									
Actuated Cycle Length (s)			60.0									
Intersection Capacity Utilization			34.8%									
Analysis Period (min)			15									
c Critical Lane Group												

IPC 20 CEQA Analysis
3: International Parkway & Daylight Road

Existing (2011) Conditions Analysis
Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑↑			↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	0	415	0	0	215	0
Future Volume (vph)	0	0	0	0	0	0	0	415	0	0	215	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.0			4.0	
Lane Util. Factor								0.95			0.95	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								3282			3282	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								3282			3282	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	0	0	0	0	466	0	0	242	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	466	0	0	242	0
Turn Type								NA			NA	
Protected Phases		4						2			6	
Permitted Phases												
Actuated Green, G (s)								55.0			55.0	
Effective Green, g (s)								55.0			55.0	
Actuated g/C Ratio								1.00			1.00	
Clearance Time (s)								4.0			4.0	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								3282			3282	
v/s Ratio Prot								c0.14			0.07	
v/s Ratio Perm												
v/c Ratio								0.14			0.07	
Uniform Delay, d1								0.0			0.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.0			0.0	
Delay (s)								0.0			0.0	
Level of Service								A			A	
Approach Delay (s/veh)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)		0.1						HCM 2000 Level of Service		A		
HCM 2000 Volume to Capacity ratio		0.17										
Actuated Cycle Length (s)		55.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		14.8%						ICU Level of Service		A		
Analysis Period (min)		15										
c Critical Lane Group												

4: International Parkway & Promontory Parkway

Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	415	0	0	215	0
Future Volume (vph)	0	0	0	0	0	0	0	415	0	0	215	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								5.8			5.8	
Lane Util. Factor								1.00			1.00	
Frpb, ped/bikes								1.00			1.00	
Flpb, ped/bikes								1.00			1.00	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								1727			1727	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								1727			1727	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	0	0	0	0	466	0	0	242	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	466	0	0	242	0
Confl. Peds. (#/hr)								2				2
Turn Type	Prot		Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			8			6			2
Actuated Green, G (s)								120.0			120.0	
Effective Green, g (s)								120.0			120.0	
Actuated g/C Ratio								1.00			1.00	
Clearance Time (s)								5.8			5.8	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								1727			1727	
v/s Ratio Prot								0.27			0.14	
v/s Ratio Perm												
v/c Ratio								0.26			0.14	
Uniform Delay, d1								0.0			0.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.3			0.1	
Delay (s)								0.3			0.1	
Level of Service								A			A	
Approach Delay (s/veh)		0.0			0.0			0.3			0.1	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			0.3									
HCM 2000 Volume to Capacity ratio			0.32									
Actuated Cycle Length (s)			120.0									
Intersection Capacity Utilization			26.7%									
Analysis Period (min)			15									
c Critical Lane Group												

IPC 20 CEQA Analysis
5: International Parkway & Old Schulte Road

Existing (2011) Conditions Analysis
Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	35	99	92	33	123	59	112	299	111	60	18
Future Volume (vph)	56	35	99	92	33	123	59	112	299	111	60	18
Ideal Flow (vphpl)	1200	1800	1900	1200	1800	1900	1200	1800	1900	1200	1800	1900
Total Lost time (s)	4.0	5.8	5.8	4.0	5.8		4.0	5.8	5.8	4.0	5.8	5.8
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1036	3109	1468	1923	1380		1036	3109	1468	2011	3109	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1036	3109	1468	1923	1380		1036	3109	1468	2011	3109	1468
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	63	39	111	103	37	138	66	126	336	125	67	20
RTOR Reduction (vph)	0	0	99	0	125	0	0	0	169	0	0	10
Lane Group Flow (vph)	63	39	12	103	50	0	66	126	167	125	67	10
Heavy Vehicles (%)	10%	10%	10%	15%	15%	15%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	14.7	13.5	13.5	12.8	11.6		15.6	59.8	59.8	14.3	58.5	58.5
Effective Green, g (s)	14.7	13.5	13.5	12.8	11.6		15.6	59.8	59.8	14.3	58.5	58.5
Actuated g/C Ratio	0.12	0.11	0.11	0.11	0.10		0.13	0.50	0.50	0.12	0.49	0.49
Clearance Time (s)	4.0	5.8	5.8	4.0	5.8		4.0	5.8	5.8	4.0	5.8	5.8
Vehicle Extension (s)	3.0	3.0	3.0	4.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	126	349	165	205	133		134	1549	731	239	1515	715
v/s Ratio Prot	c0.06	0.01		0.05	c0.04		c0.06	0.04		0.06	0.02	
v/s Ratio Perm			0.01						c0.11			0.01
v/c Ratio	0.50	0.11	0.07	0.50	0.37		0.49	0.08	0.22	0.52	0.04	0.01
Uniform Delay, d1	49.2	47.8	47.6	50.5	50.8		48.5	15.7	17.0	49.6	16.1	15.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1	0.1	0.1	2.6	1.8		2.8	0.1	0.7	2.0	0.0	0.0
Delay (s)	52.3	48.0	47.8	53.2	52.6		51.3	15.8	17.7	51.6	16.1	15.8
Level of Service	D	D	D	D	D		D	B	B	D	B	B
Approach Delay (s/veh)		49.2			52.8			21.5			37.0	
Approach LOS		D			D			C			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			36.1			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.33									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			19.6			
Intersection Capacity Utilization			45.7%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			↑	↑		4	↑			
Traffic Volume (veh/h)	8	397	0	0	151	100	6	1	73	0	0	0
Future Volume (Veh/h)	8	397	0	0	151	100	6	1	73	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	9	446	0	0	170	112	7	1	82	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					1196							
pX, platoon unblocked												
vC, conflicting volume	282			446			634	746	446	635	634	170
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	282			446			634	746	446	635	634	170
tC, single (s)	4.2			4.2			7.2	6.6	6.4	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	99			100			98	100	86	100	100	100
cM capacity (veh/h)	1236			1073			372	324	586	325	383	853
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2							
Volume Total	455	170	112	8	82							
Volume Left	9	0	0	7	0							
Volume Right	0	0	112	0	82							
cSH	1236	1700	1700	365	586							
Volume to Capacity	0.01	0.10	0.07	0.02	0.14							
Queue Length 95th (ft)	1	0	0	2	12							
Control Delay (s/veh)	0.2	0.0	0.0	15.1	12.1							
Lane LOS	A			C	B							
Approach Delay (s/veh)	0.2	0.0		12.4								
Approach LOS				B								
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			40.9%		ICU Level of Service				A			
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	187	142	136	21	0	0	0	0	218	4	68
Future Volume (Veh/h)	0	187	142	136	21	0	0	0	0	218	4	68
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	210	160	153	24	0	0	0	0	245	4	76
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	24			370			618	540	210	540	700	24
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	24			370			618	540	210	540	700	24
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.4
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	100			87			100	100	100	37	99	93
cM capacity (veh/h)	1540			1146			321	379	810	389	301	1016
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2							
Volume Total	210	160	177	249	76							
Volume Left	0	0	153	245	0							
Volume Right	0	160	0	0	76							
cSH	1700	1700	1146	387	1016							
Volume to Capacity	0.12	0.09	0.13	0.64	0.07							
Queue Length 95th (ft)	0	0	12	108	6							
Control Delay (s/veh)	0.0	0.0	7.6	29.6	8.8							
Lane LOS			A	D	A							
Approach Delay (s/veh)	0.0		7.6	24.8								
Approach LOS				C								
Intersection Summary												
Average Delay			10.8									
Intersection Capacity Utilization			40.8%		ICU Level of Service				A			
Analysis Period (min)			15									

IPC 20 CEQA Analysis
8: Hopkins Road & Promontory Parkway

Existing (2011) Conditions Analysis
Timing Plan: PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	134	171	0	134	264	0
Future Volume (vph)	134	171	0	134	264	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	1.00		0.95	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	3282	1468		3282	1641	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	3282	1468		3282	1641	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	151	192	0	151	297	0
RTOR Reduction (vph)	0	164	0	0	0	0
Lane Group Flow (vph)	151	28	0	151	297	0
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	8.6	8.6		8.6	43.4	
Effective Green, g (s)	8.6	8.6		8.6	43.4	
Actuated g/C Ratio	0.14	0.14		0.14	0.72	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	470	210		470	1186	
v/s Ratio Prot	c0.05			0.05	c0.18	
v/s Ratio Perm		0.02				
v/c Ratio	0.32	0.13		0.32	0.25	
Uniform Delay, d1	23.0	22.4		23.0	2.8	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.2		0.3	0.5	
Delay (s)	23.4	22.7		23.4	3.3	
Level of Service	C	C		C	A	
Approach Delay (s/veh)	23.0			23.4	3.3	
Approach LOS	C			C	A	
Intersection Summary						
HCM 2000 Control Delay (s/veh)		15.7		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.26				
Actuated Cycle Length (s)		60.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		25.0%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

IPC 20 CEQA Analysis
9: Hansen Rd & Promontory Pkwy

Existing (2011) Conditions Analysis
Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	54	0	0	39	0
Future Volume (vph)	0	0	0	0	0	0	0	54	0	0	39	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								5.8			5.8	
Lane Util. Factor								0.95			0.95	
Frpb, ped/bikes								1.00			1.00	
Flpb, ped/bikes								1.00			1.00	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								3282			3282	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								3282			3282	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	0	0	0	0	61	0	0	44	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	61	0	0	44	0
Confl. Peds. (#/hr)									1	1		
Turn Type	Prot		Perm	Prot		Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6			4			8
Actuated Green, G (s)								12.0			12.0	
Effective Green, g (s)								12.0			12.0	
Actuated g/C Ratio								0.10			0.10	
Clearance Time (s)								5.8			5.8	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								328			328	
v/s Ratio Prot								c0.02			0.01	
v/s Ratio Perm												
v/c Ratio								0.18			0.13	
Uniform Delay, d1								49.5			49.2	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.2			0.1	
Delay (s)								49.7			49.4	
Level of Service								D			D	
Approach Delay (s/veh)		0.0			0.0			49.7			49.4	
Approach LOS		A			A			D			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			49.7					HCM 2000 Level of Service			D	
HCM 2000 Volume to Capacity ratio			0.02									
Actuated Cycle Length (s)			120.0					Sum of lost time (s)			18.5	
Intersection Capacity Utilization			13.7%					ICU Level of Service			A	
Analysis Period (min)			15									
c Critical Lane Group												

IPC 20 CEQA Analysis
10: Hansen Rd/Iron Horse Parkway & Hopkins Road

Existing (2011) Conditions Analysis
Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	54	0	0	39	0
Future Volume (vph)	0	0	0	0	0	0	0	54	0	0	39	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.0			4.0	
Lane Util. Factor								0.95			0.95	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								3282			3282	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								3282			3282	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	0	0	0	0	61	0	0	44	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	61	0	0	44	0
Turn Type	Prot			Prot			Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)								35.0			35.0	
Effective Green, g (s)								35.0			35.0	
Actuated g/C Ratio								1.00			1.00	
Clearance Time (s)								4.0			4.0	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								3282			3282	
v/s Ratio Prot								c0.02			0.01	
v/s Ratio Perm												
v/c Ratio								0.01			0.01	
Uniform Delay, d1								0.0			0.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.0			0.0	
Delay (s)								0.0			0.0	
Level of Service								A			A	
Approach Delay (s/veh)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)		0.0			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.03										
Actuated Cycle Length (s)		35.0			Sum of lost time (s)			16.0				
Intersection Capacity Utilization		6.7%			ICU Level of Service			A				
Analysis Period (min)		15										

c Critical Lane Group

IPC 20 CEQA Analysis
11: Old Schulte Road & Hansen Rd

Existing (2011) Conditions Analysis
Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	336	42	8	84	23	81	19	16	18	16	5
Future Volume (vph)	12	336	42	8	84	23	81	19	16	18	16	5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	13	378	47	9	94	26	91	21	18	20	18	6
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1						
Volume Total (vph)	391	47	129	91	39	44						
Volume Left (vph)	13	0	9	91	0	20						
Volume Right (vph)	0	47	26	0	18	6						
Hadj (s)	0.27	-0.45	0.15	0.67	-0.15	0.18						
Departure Headway (s)	5.5	4.8	5.8	6.8	5.9	6.5						
Degree Utilization, x	0.60	0.06	0.21	0.17	0.06	0.08						
Capacity (veh/h)	637	728	593	494	556	504						
Control Delay (s/veh)	15.1	6.9	10.3	10.0	8.2	10.0						
Approach Delay (s/veh)	14.2		10.3	9.4		10.0						
Approach LOS	B		B	A		B						
Intersection Summary												
Delay			12.5									
Level of Service			B									
Intersection Capacity Utilization			36.4%	ICU Level of Service					A			
Analysis Period (min)			15									

IPC 20 CEQA Analysis
16: S Lammers St & Eleventh St

Existing (2011) Conditions Analysis
Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	1125	86	109	401	78	40	100	540	64	123	29
Future Volume (vph)	115	1125	86	109	401	78	40	100	540	64	123	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	1641	4715	1468	3183	3282	1468	3183	1727	1468
Flt Permitted	0.48	1.00	1.00	0.24	1.00	1.00	0.66	1.00	1.00	0.68	1.00	1.00
Satd. Flow (perm)	1616	4715	1468	416	4715	1468	2241	3282	1468	2283	1727	1468
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	129	1264	97	122	451	88	45	112	607	72	138	33
RTOR Reduction (vph)	0	0	61	0	0	55	0	0	13	0	0	18
Lane Group Flow (vph)	129	1264	36	122	451	33	45	112	594	72	138	15
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	16.6	16.6	16.6	16.6	16.6	16.6	20.0	20.0	20.0	20.0	20.0	20.0
Effective Green, g (s)	16.6	16.6	16.6	16.6	16.6	16.6	20.0	20.0	20.0	20.0	20.0	20.0
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.37	0.37	0.45	0.45	0.45	0.45	0.45	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	601	1754	546	154	1754	546	1004	1471	658	1023	774	658
v/s Ratio Prot		0.27			0.10			0.03			0.08	
v/s Ratio Perm	0.08		0.02	c0.29		0.02	0.02		c0.40	0.03		0.01
v/c Ratio	0.21	0.72	0.06	0.79	0.25	0.05	0.04	0.07	0.90	0.07	0.17	0.02
Uniform Delay, d1	9.5	12.0	9.0	12.4	9.7	8.9	6.9	7.0	11.3	7.0	7.3	6.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	1.4	0.0	23.6	0.0	0.0	0.0	0.1	17.9	0.1	0.5	0.0
Delay (s)	9.7	13.4	9.0	36.1	9.7	9.0	7.0	7.1	29.3	7.1	7.8	6.9
Level of Service	A	B	A	D	A	A	A	A	C	A	A	A
Approach Delay (s/veh)		12.8			14.5			24.7			7.5	
Approach LOS		B			B			C			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			15.7									
HCM 2000 Level of Service										B		
HCM 2000 Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			44.6									
Sum of lost time (s)										8.0		
Intersection Capacity Utilization			68.5%									
ICU Level of Service										C		
Analysis Period (min)			15									

c Critical Lane Group

IPC 20 CEQA Analysis
17: Lammers Road & Old Schulte Road

Existing (2011) Conditions Analysis
Timing Plan: PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	75	297	67	119	211	25
Future Volume (vph)	75	297	67	119	211	25
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	84	334	75	134	237	28
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	418	209	265			
Volume Left (vph)	84	75	0			
Volume Right (vph)	334	0	28			
Hadj (s)	-0.18	0.24	-0.03			
Departure Headway (s)	5.0	5.7	5.4			
Degree Utilization, x	0.58	0.33	0.40			
Capacity (veh/h)	685	581	627			
Control Delay (s/veh)	14.8	11.5	11.8			
Approach Delay (s/veh)	14.8	11.5	11.8			
Approach LOS	B	B	B			
Intersection Summary						
Delay			13.1			
Level of Service			B			
Intersection Capacity Utilization			55.1%	ICU Level of Service	B	
Analysis Period (min)			15			

IPC 20 CEQA Analysis
18: Lammers Road & Private Driveway/Valpico Road

Existing (2011) Conditions Analysis
Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	9	0	135	0	5	7	397	6	0
Future Volume (Veh/h)	0	0	0	9	0	135	0	5	7	397	6	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	0	10	0	152	0	6	8	446	7	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1061	913	7	909	909	10	7			14		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1061	913	7	909	909	10	7			14		
tC, single (s)	7.2	6.6	6.3	7.2	6.6	6.3	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.6	4.1	3.4	2.3			2.3		
p0 queue free %	100	100	100	95	100	86	100			71		
cM capacity (veh/h)	129	189	1052	193	190	1048	1563			1553		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	0	162	14	453								
Volume Left	0	10	0	446								
Volume Right	0	152	8	0								
cSH	1700	823	1563	1553								
Volume to Capacity	0.00	0.20	0.00	0.29								
Queue Length 95th (ft)	0	18	0	30								
Control Delay (s/veh)	0.0	10.4	0.0	8.2								
Lane LOS	A	B		A								
Approach Delay (s/veh)	0.0	10.4	0.0	8.2								
Approach LOS	A	B										
Intersection Summary												
Average Delay			8.6									
Intersection Capacity Utilization			44.5%		ICU Level of Service				A			
Analysis Period (min)			15									

B. Existing (2011) Plus Approved CRSP Projects Conditions Synchro Outputs

DRAFT

IPC 20 CEQA Analysis

Existing Plus Background Conditions

1: International Parkway & WB 205 On Ramp/WB 205 Off Ramp

Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰	↰↰	↰	↰↰			↰↰↰	↰
Traffic Volume (veh/h)	0	0	0	810	1	245	46	202	0	0	498	307
Future Volume (veh/h)	0	0	0	810	1	245	46	202	0	0	498	307
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1752	1752	1752	1752	1752	0	0	1752	1752
Adj Flow Rate, veh/h				910	1	275	52	227	0	0	560	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				10	10	10	10	10	0	0	10	10
Cap, veh/h				961	1	1507	64	1076	0	0	1123	
Arrive On Green				0.58	0.58	0.58	0.04	0.32	0.00	0.00	0.23	0.00
Sat Flow, veh/h				1667	2	2613	1668	3416	0	0	4940	1485
Grp Volume(v), veh/h				911	0	275	52	227	0	0	560	0
Grp Sat Flow(s),veh/h/ln				1668	0	1306	1668	1664	0	0	1594	1485
Q Serve(g_s), s				40.7	0.0	4.0	2.5	4.0	0.0	0.0	8.1	0.0
Cycle Q Clear(g_c), s				40.7	0.0	4.0	2.5	4.0	0.0	0.0	8.1	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				962	0	1507	64	1076	0	0	1123	
V/C Ratio(X)				0.95	0.00	0.18	0.81	0.21	0.00	0.00	0.50	
Avail Cap(c_a), veh/h				1001	0	1568	83	1076	0	0	1123	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.8	0.0	8.0	38.2	19.7	0.0	0.0	26.5	0.0
Incr Delay (d2), s/veh				16.8	0.0	0.1	35.3	0.4	0.0	0.0	1.6	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				17.6	0.0	1.0	1.6	1.5	0.0	0.0	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				32.6	0.0	8.1	73.5	20.1	0.0	0.0	28.1	0.0
LnGrp LOS				C		A	E	C			C	
Approach Vol, veh/h					1186			279			560	
Approach Delay, s/veh					26.9			30.1			28.1	
Approach LOS					C			C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		29.9			7.1	22.8		50.1				
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0				
Max Green Setting (Gmax), s		24.0			4.0	16.0		48.0				
Max Q Clear Time (g_c+I1), s		6.0			4.5	10.1		42.7				
Green Ext Time (p_c), s		1.3			0.0	1.9		3.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				27.7								
HCM 7th LOS				C								
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	61	0	0	0	0	188	430	0	1041	0
Future Volume (veh/h)	60	0	61	0	0	0	0	188	430	0	1041	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No						No				No	
Adj Sat Flow, veh/h/ln	1752	1752	1752				0	1752	1752	0	1752	1752
Adj Flow Rate, veh/h	67	0	69				0	211	483	0	1170	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10				0	10	10	0	10	10
Cap, veh/h	261	0	116				0	2476	1104	0	2476	
Arrive On Green	0.08	0.00	0.08				0.00	0.74	0.74	0.00	0.74	0.00
Sat Flow, veh/h	3337	0	1485				0	3416	1485	0	3416	1485
Grp Volume(v), veh/h	67	0	69				0	211	483	0	1170	0
Grp Sat Flow(s),veh/h/ln	1668	0	1485				0	1664	1485	0	1664	1485
Q Serve(g_s), s	0.8	0.0	2.0				0.0	0.8	5.6	0.0	6.2	0.0
Cycle Q Clear(g_c), s	0.8	0.0	2.0				0.0	0.8	5.6	0.0	6.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	261	0	116				0	2476	1104	0	2476	
V/C Ratio(X)	0.26	0.00	0.59				0.00	0.09	0.44	0.00	0.47	
Avail Cap(c_a), veh/h	1186	0	528				0	2476	1104	0	2476	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.95	0.95	0.00	0.84	0.00
Uniform Delay (d), s/veh	19.5	0.0	20.0				0.0	1.6	2.2	0.0	2.3	0.0
Incr Delay (d2), s/veh	0.5	0.0	4.8				0.0	0.1	1.2	0.0	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.8				0.0	0.1	0.6	0.0	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.0	0.0	24.8				0.0	1.6	3.4	0.0	2.8	0.0
LnGrp LOS	C		C					A	A		A	
Approach Vol, veh/h	136						694			1170		
Approach Delay, s/veh	22.4						2.9			2.8		
Approach LOS	C						A			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	37.5			7.5			37.5					
Change Period (Y+Rc), s	4.0			4.0			4.0					
Max Green Setting (Gmax), s	21.0			16.0			21.0					
Max Q Clear Time (g_c+l1), s	7.6			4.0			8.2					
Green Ext Time (p_c), s	2.8			0.3			6.8					
Intersection Summary												
HCM 7th Control Delay, s/veh	4.2											
HCM 7th LOS	A											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

IPC 20 CEQA Analysis
3: International Pkwy & Daylight Rd

Existing Plus Background Conditions
Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	5	23	28	5	29	56	537	32	34	996	68
Future Volume (veh/h)	51	5	23	28	5	29	56	537	32	34	996	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	57	6	26	31	6	33	63	603	36	38	1119	76
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	71	117	104	90	103	87	129	1497	668	126	1465	654
Arrive On Green	0.04	0.07	0.07	0.03	0.06	0.06	0.08	0.45	0.45	0.08	0.44	0.44
Sat Flow, veh/h	1668	1664	1485	3237	1752	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	57	6	26	31	6	33	63	603	36	38	1119	76
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1618	1752	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	1.8	0.2	0.9	0.5	0.2	1.1	1.9	6.5	0.7	1.1	15.0	1.6
Cycle Q Clear(g_c), s	1.8	0.2	0.9	0.5	0.2	1.1	1.9	6.5	0.7	1.1	15.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	117	104	90	103	87	129	1497	668	126	1465	654
V/C Ratio(X)	0.80	0.05	0.25	0.35	0.06	0.38	0.49	0.40	0.05	0.30	0.76	0.12
Avail Cap(c_a), veh/h	126	515	459	244	529	448	724	2737	1221	208	1682	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	23.0	23.3	25.3	23.6	24.0	23.5	9.8	8.2	23.2	12.5	8.8
Incr Delay (d2), s/veh	17.9	0.2	1.2	0.9	0.2	2.7	4.0	0.2	0.0	0.5	2.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1	0.3	0.2	0.1	0.4	0.8	1.7	0.2	0.4	4.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.0	23.2	24.6	26.2	23.8	26.7	27.5	10.1	8.3	23.7	14.6	8.9
LnGrp LOS	D	C	C	C	C	C	C	B	A	C	B	A
Approach Vol, veh/h	89			70			702			1233		
Approach Delay, s/veh	36.3			26.2			11.5			14.5		
Approach LOS	D			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	29.6	5.7	8.3	9.9	29.1	6.3	7.7				
Change Period (Y+Rc), s	5.4	5.8	4.2	* 4.6	5.8	5.8	4.0	4.6				
Max Green Setting (Gmax), s	6.6	43.6	4.0	* 16	23.0	26.8	4.0	16.0				
Max Q Clear Time (g_c+I1), s	13.5	8.5	2.5	2.9	3.9	17.0	3.8	3.1				
Green Ext Time (p_c), s	0.0	6.2	0.0	0.1	0.2	6.3	0.0	0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	14.8											
HCM 7th LOS	B											
Notes												
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.												

IPC 20 CEQA Analysis
4: International Pkwy & Promontory Pkwy

Existing Plus Background Conditions
Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1	5	31	3	252	73	350	74	420	591	5
Future Volume (veh/h)	32	1	5	31	3	252	73	350	74	420	591	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	36	1	6	35	3	283	82	393	83	472	664	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	49	230	195	48	229	341	70	1734	773	537	1130	957
Arrive On Green	0.03	0.13	0.13	0.03	0.13	0.13	0.04	0.52	0.52	0.17	0.65	0.65
Sat Flow, veh/h	1668	1752	1485	1668	1752	2613	1668	3328	1483	3237	1752	1484
Grp Volume(v), veh/h	36	1	6	35	3	283	82	393	83	472	664	6
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1306	1668	1664	1483	1618	1752	1484
Q Serve(g_s), s	2.6	0.1	0.4	2.5	0.2	12.7	5.0	7.7	3.4	17.1	26.0	0.2
Cycle Q Clear(g_c), s	2.6	0.1	0.4	2.5	0.2	12.7	5.0	7.7	3.4	17.1	26.0	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	230	195	48	229	341	70	1734	773	537	1130	957
V/C Ratio(X)	0.74	0.00	0.03	0.73	0.01	0.83	1.18	0.23	0.11	0.88	0.59	0.01
Avail Cap(c_a), veh/h	70	467	396	70	467	697	70	1734	773	647	1130	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00	0.61	0.61	0.61
Uniform Delay (d), s/veh	57.8	45.3	45.5	57.8	45.4	50.9	57.5	15.6	14.6	48.9	12.2	7.6
Incr Delay (d2), s/veh	21.8	0.0	0.1	19.0	0.0	5.0	164.4	0.3	0.3	7.5	1.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.2	1.3	0.1	4.3	5.2	2.8	1.2	7.3	9.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.6	45.3	45.5	76.8	45.4	55.9	221.9	15.9	14.9	56.4	13.5	7.6
LnGrp LOS	E	D	D	E	D	E	F	B	B	E	B	A
Approach Vol, veh/h	43			321			558			1142		
Approach Delay, s/veh	74.1			58.1			46.0			31.2		
Approach LOS	E			E			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	83.2	7.4	20.3	23.9	68.3	7.5	20.3				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	59.6	5.0	32.0	24.0	40.6	5.0	32.0				
Max Q Clear Time (g_c+I1), s	17.0	28.0	4.5	2.4	19.1	9.7	4.6	14.7				
Green Ext Time (p_c), s	0.0	4.6	0.0	0.0	0.8	2.7	0.0	1.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	40.3											
HCM 7th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												

IPC 20 CEQA Analysis
5: International Pkwy & Old Schulte Road

Existing Plus Background Conditions
Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	17	46	298	47	253	66	191	177	234	198	36
Future Volume (veh/h)	16	17	46	298	47	253	66	191	177	234	198	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1106	1660	1752	1060	1589	1678	1106	1660	1752	1106	1660	1752
Adj Flow Rate, veh/h	18	19	52	335	53	284	74	215	199	263	222	40
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	15	15	15	10	10	10	10	10	10
Cap, veh/h	70	113	101	1164	947	942	70	339	281	136	339	159
Arrive On Green	0.07	0.07	0.07	0.59	0.60	0.60	0.07	0.11	0.11	0.07	0.11	0.11
Sat Flow, veh/h	1054	1660	1485	1958	1589	1422	1054	3153	2613	2044	3153	1485
Grp Volume(v), veh/h	18	19	52	335	53	284	74	215	199	263	222	40
Grp Sat Flow(s),veh/h/ln	1054	1660	1485	979	1589	1422	1054	1577	1306	1022	1577	1485
Q Serve(g_s), s	1.9	1.3	4.1	10.0	1.7	10.1	8.0	7.8	8.8	8.0	8.1	3.0
Cycle Q Clear(g_c), s	1.9	1.3	4.1	10.0	1.7	10.1	8.0	7.8	8.8	8.0	8.1	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	113	101	1164	947	942	70	339	281	136	339	159
V/C Ratio(X)	0.26	0.17	0.52	0.29	0.06	0.30	1.05	0.63	0.71	1.93	0.66	0.25
Avail Cap(c_a), veh/h	70	293	262	1164	947	942	70	1056	875	136	1056	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	52.7	54.0	11.9	10.1	8.5	56.0	51.3	51.7	56.0	51.4	49.1
Incr Delay (d2), s/veh	1.9	0.7	4.0	0.2	0.0	0.2	122.9	2.0	3.3	444.2	2.2	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	1.6	2.0	0.5	2.8	4.5	3.1	2.9	10.4	3.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.1	53.4	58.0	12.1	10.2	8.7	178.9	53.3	55.0	500.2	53.6	49.9
LnGrp LOS	E	D	E	B	B	A	F	D	E	F	D	D
Approach Vol, veh/h	89			672			488			525		
Approach Delay, s/veh	56.5			10.5			73.0			277.1		
Approach LOS	E			B			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	18.7	75.4	14.0	12.0	18.7	12.0	77.3				
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	40.2	40.2	31.0	21.2	8.0	40.2	8.0	44.2				
Max Q Clear Time (g_c+10), s	10.8	10.8	12.0	6.1	10.0	10.1	3.9	12.1				
Green Ext Time (p_c), s	0.0	2.1	1.7	0.1	0.0	1.4	0.0	1.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	108.9											
HCM 7th LOS	F											
Notes												
User approved pedestrian interval to be less than phase max green.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			↑	↑		4	↑			
Traffic Volume (veh/h)	15	173	0	0	303	239	53	0	261	0	0	0
Future Volume (veh/h)	15	173	0	0	303	239	53	0	261	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1752	1752	0	0	1752	1752	1678	1678	1678			
Adj Flow Rate, veh/h	17	194	0	0	340	269	60	0	0			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	10	10	0	0	10	10	15	15	15			
Cap, veh/h	42	481	0	0	409	346	426	0				
Arrive On Green	0.30	0.30	0.00	0.00	0.23	0.23	0.27	0.00	0.00			
Sat Flow, veh/h	141	1604	0	0	1752	1485	1598	0	1422			
Grp Volume(v), veh/h	211	0	0	0	340	269	60	0	0			
Grp Sat Flow(s),veh/h/ln	1745	0	0	0	1752	1485	1598	0	1422			
Q Serve(g_s), s	5.8	0.0	0.0	0.0	11.1	10.2	1.7	0.0	0.0			
Cycle Q Clear(g_c), s	5.8	0.0	0.0	0.0	11.1	10.2	1.7	0.0	0.0			
Prop In Lane	0.08		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	523	0	0	0	409	346	426	0				
V/C Ratio(X)	0.40	0.00	0.00	0.00	0.83	0.78	0.14	0.00				
Avail Cap(c_a), veh/h	523	0	0	0	467	396	426	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	16.7	0.0	0.0	0.0	21.9	21.5	16.8	0.0	0.0			
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.0	10.9	8.3	0.7	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	0.0	5.4	4.0	0.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.0	0.0	0.0	0.0	32.8	29.8	17.5	0.0	0.0			
LnGrp LOS	B				C	C	B					
Approach Vol, veh/h	211			609			60					
Approach Delay, s/veh	19.0			31.5			17.5					
Approach LOS	B			C			B					
Timer - Assigned Phs	2			6			8					
Phs Duration (G+Y+Rc), s	22.0			18.0			20.0					
Change Period (Y+Rc), s	4.0			4.0			4.0					
Max Green Setting (Gmax), s	16.0			16.0			16.0					
Max Q Clear Time (g_c+I1), s	7.8			13.1			3.7					
Green Ext Time (p_c), s	0.7			0.9			0.2					

Intersection Summary

HCM 7th Control Delay, s/veh	27.5
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑		↑						↑	↑
Traffic Volume (veh/h)	0	32	12	150	206	0	0	0	0	154	1	11
Future Volume (veh/h)	0	32	12	150	206	0	0	0	0	154	1	11
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1752	1752	1752	1752	0				1678	1678	1678
Adj Flow Rate, veh/h	0	36	13	169	231	0				173	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	10	10	10	10	0				15	15	15
Cap, veh/h	0	65	55	189	258	0				799	5	
Arrive On Green	0.00	0.04	0.04	0.26	0.26	0.00				0.50	0.50	0.00
Sat Flow, veh/h	0	1752	1485	725	991	0				1589	9	1422
Grp Volume(v), veh/h	0	36	13	400	0	0				174	0	0
Grp Sat Flow(s),veh/h/ln	0	1752	1485	1716	0	0				1598	0	1422
Q Serve(g_s), s	0.0	1.2	0.5	13.5	0.0	0.0				3.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.2	0.5	13.5	0.0	0.0				3.6	0.0	0.0
Prop In Lane	0.00		1.00	0.42		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	65	55	446	0	0				803	0	
V/C Ratio(X)	0.00	0.55	0.24	0.90	0.00	0.00				0.22	0.00	
Avail Cap(c_a), veh/h	0	467	396	457	0	0				803	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.50	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	28.4	28.1	21.4	0.0	0.0				8.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.1	2.2	11.3	0.0	0.0				0.6	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.2	6.3	0.0	0.0				1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	35.5	30.2	32.7	0.0	0.0				8.9	0.0	0.0
LnGrp LOS		D	C	C						A		
Approach Vol, veh/h		49			400						174	
Approach Delay, s/veh		34.1			32.7						8.9	
Approach LOS		C			C						A	
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				6.2		34.2		19.6				
Change Period (Y+Rc), s				4.0		4.0		4.0				
Max Green Setting (Gmax), s				16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s				3.2		5.6		15.5				
Green Ext Time (p_c), s				0.1		0.6		0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh			26.2									
HCM 7th LOS			C									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

IPC 20 CEQA Analysis
8: Hopkins Rd & Promontory Pkwy

Existing Plus Background Conditions
Timing Plan: AM PEAK HOUR



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↗	↖	↕↕	↖	↗
Traffic Volume (veh/h)	354	130	10	247	39	1
Future Volume (veh/h)	354	130	10	247	39	1
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	398	146	11	278	44	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	681	304	238	681	986	877
Arrive On Green	0.20	0.20	0.20	0.20	0.59	0.59
Sat Flow, veh/h	3416	1485	808	3416	1668	1485
Grp Volume(v), veh/h	398	146	11	278	44	1
Grp Sat Flow(s),veh/h/ln	1664	1485	808	1664	1668	1485
Q Serve(g_s), s	4.9	3.9	0.6	3.3	0.5	0.0
Cycle Q Clear(g_c), s	4.9	3.9	5.4	3.3	0.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	681	304	238	681	986	877
V/C Ratio(X)	0.58	0.48	0.05	0.41	0.04	0.00
Avail Cap(c_a), veh/h	1361	607	403	1361	986	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.98	0.98	1.00	1.00
Uniform Delay (d), s/veh	16.2	15.8	18.6	15.5	3.9	3.8
Incr Delay (d2), s/veh	0.5	0.8	0.1	0.4	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.2	0.1	1.1	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.7	16.6	18.7	15.9	4.0	3.8
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	544			289	45	
Approach Delay, s/veh	16.7			16.0	3.9	
Approach LOS	B			B	A	
Timer - Assigned Phs	2		4		8	
Phs Duration (G+Y+Rc), s	31.2		13.8		13.8	
Change Period (Y+Rc), s	4.6		4.6		4.6	
Max Green Setting (Gmax), s	17.4		18.4		18.4	
Max Q Clear Time (g_c+l1), s	2.5		6.9		7.4	
Green Ext Time (p_c), s	0.1		2.3		1.3	
Intersection Summary						
HCM 7th Control Delay, s/veh			15.8			
HCM 7th LOS			B			

IPC 20 CEQA Analysis
9: Hansen Rd & Promontory Pkwy

Existing Plus Background Conditions
Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	125	66	20	60	2	105	82	39	5	77	39
Future Volume (veh/h)	50	125	66	20	60	2	105	82	39	5	77	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	56	140	74	22	67	2	118	92	44	6	87	44
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	96	668	298	45	567	253	150	1046	467	13	774	345
Arrive On Green	0.06	0.20	0.20	0.03	0.17	0.17	0.09	0.31	0.31	0.01	0.23	0.23
Sat Flow, veh/h	1668	3328	1485	1668	3328	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	56	140	74	22	67	2	118	92	44	6	87	44
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1668	1664	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	1.3	1.4	1.7	0.5	0.7	0.0	2.8	0.8	0.9	0.1	0.8	1.0
Cycle Q Clear(g_c), s	1.3	1.4	1.7	0.5	0.7	0.0	2.8	0.8	0.9	0.1	0.8	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	668	298	45	567	253	150	1046	467	13	774	345
V/C Ratio(X)	0.58	0.21	0.25	0.49	0.12	0.01	0.79	0.09	0.09	0.45	0.11	0.13
Avail Cap(c_a), veh/h	203	3035	1354	203	3035	1354	365	2752	1227	203	2428	1083
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	13.7	13.8	19.7	14.4	14.2	18.3	9.9	10.0	20.3	12.4	12.5
Incr Delay (d2), s/veh	5.5	0.2	0.4	8.0	0.1	0.0	8.7	0.0	0.1	21.5	0.1	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.5	0.3	0.2	0.0	1.2	0.2	0.2	0.1	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.4	13.9	14.3	27.7	14.5	14.2	27.0	10.0	10.0	41.8	12.5	12.6
LnGrp LOS	C	B	B	C	B	B	C	A	B	D	B	B
Approach Vol, veh/h	270			91			254			137		
Approach Delay, s/veh	16.2			17.7			17.9			13.8		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.1	13.0	4.3	18.7	6.4	11.7	7.7	15.4				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	5.0	37.5	5.0	34.0	5.0	37.5	9.0	30.0				
Max Q Clear Time (g_c+I), s	12.5	3.7	2.1	2.9	3.3	2.7	4.8	3.0				
Green Ext Time (p_c), s	0.0	1.1	0.0	0.6	0.0	0.4	0.1	0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	16.5											
HCM 7th LOS	B											
Notes												
User approved pedestrian interval to be less than phase max green.												

IPC 20 CEQA Analysis
10: Hansen Rd & Hopkins Rd

Existing Plus Background Conditions

Timing Plan: AM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	5	21	9	2	15	69	177	19	43	190	5
Future Volume (veh/h)	5	5	21	9	2	15	69	177	19	43	190	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	6	6	24	10	2	17	78	199	21	48	213	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	13	120	482	21	63	537	99	1099	490	68	1037	463
Arrive On Green	0.01	0.39	0.39	0.01	0.40	0.40	0.06	0.33	0.33	0.04	0.31	0.31
Sat Flow, veh/h	1668	306	1225	1668	159	1350	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	6	0	30	10	0	19	78	199	21	48	213	6
Grp Sat Flow(s),veh/h/ln	1668	0	1531	1668	0	1509	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	0.3	0.0	1.0	0.5	0.0	0.6	3.8	3.5	0.8	2.3	3.9	0.2
Cycle Q Clear(g_c), s	0.3	0.0	1.0	0.5	0.0	0.6	3.8	3.5	0.8	2.3	3.9	0.2
Prop In Lane	1.00		0.80	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	13	0	602	21	0	601	99	1099	490	68	1037	463
V/C Ratio(X)	0.46	0.00	0.05	0.48	0.00	0.03	0.79	0.18	0.04	0.71	0.21	0.01
Avail Cap(c_a), veh/h	101	0	602	101	0	601	203	1099	490	142	1037	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	0.0	15.5	40.4	0.0	15.1	38.2	19.6	18.7	39.0	20.8	19.6
Incr Delay (d2), s/veh	23.4	0.0	0.2	16.4	0.0	0.1	13.1	0.4	0.2	12.9	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.4	0.3	0.0	0.2	1.8	1.3	0.3	1.1	1.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.1	0.0	15.6	56.8	0.0	15.2	51.4	20.0	18.9	51.9	20.9	19.6
LnGrp LOS	E		B	E		B	D	C	B	D	C	B
Approach Vol, veh/h	36					29		298		267		
Approach Delay, s/veh	23.7					29.5		28.1		26.5		
Approach LOS	C					C		C		C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	37.0	7.3	33.0	4.6	37.4	8.9	31.5				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	5.0	32.4	7.0	27.2	5.0	32.4	10.0	24.2				
Max Q Clear Time (g_c+I2), s	12.5	3.0	4.3	5.5	2.3	2.6	5.8	5.9				
Green Ext Time (p_c), s	0.0	0.1	0.0	1.1	0.0	0.1	0.0	1.1				
Intersection Summary												
HCM 7th Control Delay, s/veh			27.2									
HCM 7th LOS			C									

IPC 20 CEQA Analysis
11: Old Schulte Road & Hansen Rd

Existing Plus Background Conditions

Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	167	15	2	439	204	24	3	7	149	2	71
Future Volume (veh/h)	69	167	15	2	439	204	24	3	7	149	2	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	78	188	17	2	493	229	27	3	8	167	2	80
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	15	15	15	15	15	15	10	10	10	10	10	10
Cap, veh/h	119	1014	859	8	898	761	77	37	100	196	281	238
Arrive On Green	0.07	0.60	0.60	0.00	0.54	0.54	0.05	0.09	0.09	0.12	0.16	0.16
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1668	422	1127	1668	1752	1485
Grp Volume(v), veh/h	78	188	17	2	493	229	27	0	11	167	2	80
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1668	0	1549	1668	1752	1485
Q Serve(g_s), s	5.2	5.5	0.5	0.1	21.3	9.8	1.7	0.0	0.7	10.8	0.1	5.3
Cycle Q Clear(g_c), s	5.2	5.5	0.5	0.1	21.3	9.8	1.7	0.0	0.7	10.8	0.1	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		1.00
Lane Grp Cap(c), veh/h	119	1014	859	8	898	761	77	0	137	196	281	238
V/C Ratio(X)	0.66	0.19	0.02	0.26	0.55	0.30	0.35	0.00	0.08	0.85	0.01	0.34
Avail Cap(c_a), veh/h	131	1014	859	131	898	761	137	0	338	288	541	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	49.6	9.7	8.7	54.5	16.8	14.2	50.9	0.0	46.0	47.6	38.8	41.0
Incr Delay (d2), s/veh	10.0	0.4	0.0	14.4	2.1	0.9	2.7	0.0	0.4	14.6	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.9	0.2	0.1	7.8	3.1	0.8	0.0	0.3	5.1	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.6	10.1	8.7	68.9	18.9	15.0	53.6	0.0	46.4	62.2	38.9	42.2
LnGrp LOS	E	B	A	E	B	B	D		D	E	D	D
Approach Vol, veh/h	283			724			38			249		
Approach Delay, s/veh	23.7			17.8			51.5			55.6		
Approach LOS	C			B			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	73.0	16.9	15.5	12.2	65.4	9.1	23.4				
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	9.0	* 38	19.0	24.0	9.0	37.7	9.0	34.0				
Max Q Clear Time (g_c+I2), s	12.5	7.5	12.8	2.7	7.2	23.3	3.7	7.3				
Green Ext Time (p_c), s	0.0	1.5	0.2	0.0	0.0	4.4	0.0	0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	27.4											
HCM 7th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection

Intersection Delay, s/veh 7.7

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	46	2	23	20	9	57
Future Vol, veh/h	46	2	23	20	9	57
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	52	2	26	22	10	64
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	7.9	8	7.4
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	57	46	2	23	20
LT Vol	9	0	0	0	23	0
Through Vol	0	0	46	0	0	20
RT Vol	0	57	0	2	0	0
Lane Flow Rate	10	64	52	2	26	22
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.015	0.074	0.069	0.003	0.038	0.03
Departure Headway (Hd)	5.342	4.141	4.825	4.124	5.328	4.827
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	663	852	738	860	669	737
Service Time	3.133	1.932	2.585	1.884	3.088	2.587
HCM Lane V/C Ratio	0.015	0.075	0.07	0.002	0.039	0.03
HCM Control Delay, s/veh	8.2	7.3	7.9	6.9	8.3	7.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.2	0.2	0	0.1	0.1

IPC 20 CEQA Analysis
13: Old Schulte Road & Bud Lyons Wy

Existing Plus Background Conditions
Timing Plan: AM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	324	0	0	645	73	0	0	0	28	0	10
Future Volume (veh/h)	10	324	0	0	645	73	0	0	0	28	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No				No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	0	1752
Adj Flow Rate, veh/h	11	364	0	0	725	82	0	0	0	31	0	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	0	10
Cap, veh/h	18	1499		2	1406	1192	57	2	0	39	0	0
Arrive On Green	0.01	0.86	0.00	0.00	0.80	0.80	0.00	0.00	0.00	0.02	0.00	0.00
Sat Flow, veh/h	1668	1752	1485	1668	1752	1485	1668	1752	0	1668	31	
Grp Volume(v), veh/h	11	364	0	0	725	82	0	0	0	31	84.0	
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1485	1668	1752	0	1668	F	
Q Serve(g_s), s	0.6	3.6	0.0	0.0	13.2	1.1	0.0	0.0	0.0	1.8		
Cycle Q Clear(g_c), s	0.6	3.6	0.0	0.0	13.2	1.1	0.0	0.0	0.0	1.8		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		
Lane Grp Cap(c), veh/h	18	1499		2	1406	1192	57	2	0	39		
V/C Ratio(X)	0.62	0.24		0.00	0.52	0.07	0.00	0.00	0.00	0.79		
Avail Cap(c_a), veh/h	70	1499		70	1406	1192	70	533	0	105		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.94	0.94	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	46.8	1.3	0.0	0.0	3.2	2.0	0.0	0.0	0.0	46.1		
Incr Delay (d2), s/veh	29.0	0.4	0.0	0.0	1.4	0.1	0.0	0.0	0.0	37.9		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.0	0.0	2.3	0.2	0.0	0.0	0.0	1.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.8	1.6	0.0	0.0	4.5	2.1	0.0	0.0	0.0	84.0		
LnGrp LOS	E	A			A	A				F		
Approach Vol, veh/h	375		807			0						
Approach Delay, s/veh	3.8		4.3			0.0						
Approach LOS	A		A									
Timer - Assigned Phs	1	2	3		5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	87.8	7.2		5.0	82.8	7.2	0.0				
Change Period (Y+Rc), s	4.0	6.5	4.0		4.0	6.5	5.0	4.6				
Max Green Setting (Gmax), s	4.0	36.0	4.0		4.0	36.0	6.0	28.9				
Max Q Clear Time (g_c+I), s	10.0	5.6	0.0		2.6	15.2	3.8	0.0				
Green Ext Time (p_c), s	0.0	3.0	0.0		0.0	6.9	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	6.2
HCM 7th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

IPC 20 CEQA Analysis
16: Lammers Road & Eleventh St

Existing Plus Background Conditions

Timing Plan: AM PEAK HOUR

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	23	341	89	442	1125	120	120	143	528	91	123	76	
Future Volume (veh/h)	23	341	89	442	1125	120	120	143	528	91	123	76	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	
Adj Flow Rate, veh/h	26	383	0	497	1264	0	135	161	0	102	138	0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10	
Cap, veh/h	64	2691		380	3158		127	249		141	263		
Arrive On Green	0.02	0.56	0.00	0.12	0.66	0.00	0.04	0.07	0.00	0.04	0.08	0.00	
Sat Flow, veh/h	3237	4782	1485	3237	4782	1485	3237	3328	1485	3237	3328	1485	
Grp Volume(v), veh/h	26	383	0	497	1264	0	135	161	0	102	138	0	
Grp Sat Flow(s),veh/h/ln	1618	1594	1485	1618	1594	1485	1618	1664	1485	1618	1664	1485	
Q Serve(g_s), s	0.9	4.4	0.0	13.5	14.0	0.0	4.5	5.4	0.0	3.6	4.6	0.0	
Cycle Q Clear(g_c), s	0.9	4.4	0.0	13.5	14.0	0.0	4.5	5.4	0.0	3.6	4.6	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	64	2691		380	3158		127	249		141	263		
V/C Ratio(X)	0.41	0.14		1.31	0.40		1.07	0.65		0.72	0.52		
Avail Cap(c_a), veh/h	113	2691		380	3158		127	926		141	941		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	55.7	12.0	0.0	50.8	9.0	0.0	55.3	51.7	0.0	54.3	50.9	0.0	
Incr Delay (d2), s/veh	4.2	0.1	0.0	156.4	0.4	0.0	98.7	4.0	0.0	14.9	2.3	0.0	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	1.5	0.0	13.5	4.3	0.0	3.5	2.3	0.0	1.7	2.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d), s/veh	59.9	12.1	0.0	207.2	9.4	0.0	154.0	55.7	0.0	69.2	53.2	0.0	
LnGrp LOS	E	B		F	A		F	E		E	D		
Approach Vol, veh/h	409			1761			296			240			
Approach Delay, s/veh	15.1			65.2			100.5			60.0			
Approach LOS	B			E			F			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	19.0	70.8	10.0	15.2	7.8	82.0	10.5	14.7					
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1					
Max Green Setting (Gmax), s	13.5	41.3	4.5	32.5	4.0	50.8	5.0	32.0					
Max Q Clear Time (g_c+Tb), s	15.5	6.4	6.5	6.6	2.9	16.0	5.6	7.4					
Green Ext Time (p_c), s	0.0	2.5	0.0	1.1	0.0	10.4	0.0	1.2					

Intersection Summary

HCM 7th Control Delay, s/veh	61.0
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

IPC 20 CEQA Analysis
17: Lammers Road & Old Schulte Road

Existing Plus Background Conditions
Timing Plan: AM PEAK HOUR



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	117	147	419	423	221	212
Future Volume (veh/h)	117	147	419	423	221	212
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1678	1752	1752	1870	1870
Adj Flow Rate, veh/h	131	165	471	475	248	238
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	15	15	10	10	2	2
Cap, veh/h	234	208	526	1242	291	279
Arrive On Green	0.15	0.15	0.32	0.71	0.33	0.33
Sat Flow, veh/h	1598	1422	1668	1752	877	842
Grp Volume(v), veh/h	131	165	471	475	0	486
Grp Sat Flow(s), veh/h/ln	1598	1422	1668	1752	0	1719
Q Serve(g_s), s	5.8	8.5	20.3	8.2	0.0	19.9
Cycle Q Clear(g_c), s	5.8	8.5	20.3	8.2	0.0	19.9
Prop In Lane	1.00	1.00	1.00			0.49
Lane Grp Cap(c), veh/h	234	208	526	1242	0	570
V/C Ratio(X)	0.56	0.79	0.90	0.38	0.00	0.85
Avail Cap(c_a), veh/h	430	383	920	2062	0	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	31.1	24.7	4.4	0.0	23.5
Incr Delay (d2), s/veh	2.1	6.6	6.1	0.2	0.0	3.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.4	8.3	2.0	0.0	8.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	32.0	37.7	30.8	4.6	0.0	27.3
LnGrp LOS	C	D	C	A		C
Approach Vol, veh/h	296			946	486	
Approach Delay, s/veh	35.2			17.6	27.3	
Approach LOS	D			B	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	59.7			15.8	28.5	31.2
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	88.8			20.3	41.6	42.5
Max Q Clear Time (g_c+I1), s	10.2			10.5	22.3	21.9
Green Ext Time (p_c), s	3.3			0.6	1.5	3.1
Intersection Summary						
HCM 7th Control Delay, s/veh			23.3			
HCM 7th LOS			C			

IPC 20 CEQA Analysis
18: Lammers Road & Valpico Road

Existing Plus Background Conditions
Timing Plan: AM PEAK HOUR

Intersection												
Int Delay, s/veh	12.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	0	0	6	0	603	0	17	8	281	12	0
Future Vol, veh/h	1	0	0	6	0	603	0	17	8	281	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	1	0	0	7	0	678	0	19	9	316	13	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	664	673	13	669	669	24	13	0	0	28	0	0
Stage 1	645	645	-	24	24	-	-	-	-	-	-	-
Stage 2	19	28	-	645	645	-	-	-	-	-	-	-
Critical Hdwy	7.2	6.6	6.3	7.2	6.6	6.3	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.2	5.6	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.2	5.6	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.59	4.09	3.39	3.59	4.09	3.39	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	363	367	1044	361	369	1030	1554	-	-	1535	-	-
Stage 1	448	455	-	974	860	-	-	-	-	-	-	-
Stage 2	980	856	-	448	455	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	99	291	1044	286	292	1030	1554	-	-	1535	-	-
Mov Cap-2 Maneuver	99	291	-	286	292	-	-	-	-	-	-	-
Stage 1	355	361	-	974	860	-	-	-	-	-	-	-
Stage 2	335	856	-	355	361	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v41.92		15.87	0	7.63
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1554	-	-	99 1005	1524	-	-
HCM Lane V/C Ratio	-	-	-	0.011 0.681	0.206	-	-
HCM Control Delay (s/veh)	0	-	-	41.9 15.9	8	0	-
HCM Lane LOS	A	-	-	E C	A A	-	-
HCM 95th %tile Q(veh)	0	-	-	0 5.6	0.8	-	-

1: International Parkway & WB 205 On Ramp/WB 205 Off Ramp

Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰	↰↰	↰	↰↰			↰↰↰	↰
Traffic Volume (veh/h)	0	0	0	494	0	255	88	550	0	0	368	86
Future Volume (veh/h)	0	0	0	494	0	255	88	550	0	0	368	86
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1752	1752	1752	1752	1752	0	0	1752	1752
Adj Flow Rate, veh/h				555	0	287	99	618	0	0	413	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				10	10	10	10	10	0	0	10	10
Cap, veh/h				636	0	997	124	1615	0	0	1647	
Arrive On Green				0.38	0.00	0.38	0.07	0.49	0.00	0.00	0.34	0.00
Sat Flow, veh/h				1668	0	2613	1668	3416	0	0	4940	1485
Grp Volume(v), veh/h				555	0	287	99	618	0	0	413	0
Grp Sat Flow(s),veh/h/ln				1668	0	1306	1668	1664	0	0	1594	1485
Q Serve(g_s), s				18.5	0.0	4.6	3.5	7.0	0.0	0.0	3.7	0.0
Cycle Q Clear(g_c), s				18.5	0.0	4.6	3.5	7.0	0.0	0.0	3.7	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				636	0	997	124	1615	0	0	1647	
V/C Ratio(X)				0.87	0.00	0.29	0.80	0.38	0.00	0.00	0.25	
Avail Cap(c_a), veh/h				723	0	1132	167	1615	0	0	1647	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.97	0.97	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				17.2	0.0	12.9	27.3	9.8	0.0	0.0	14.1	0.0
Incr Delay (d2), s/veh				10.4	0.0	0.2	17.1	0.7	0.0	0.0	0.4	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.0	0.0	1.2	1.9	2.3	0.0	0.0	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				27.6	0.0	13.1	44.4	10.4	0.0	0.0	14.5	0.0
LnGrp LOS				C		B	D	B			B	
Approach Vol, veh/h					842			717			413	
Approach Delay, s/veh					22.6			15.1			14.5	
Approach LOS					C			B			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		33.1			8.5	24.7		26.9				
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0				
Max Green Setting (Gmax), s		26.0			6.0	16.0		26.0				
Max Q Clear Time (g_c+I1), s		9.0			5.5	5.7		20.5				
Green Ext Time (p_c), s		3.9			0.0	2.0		2.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				18.2								
HCM 7th LOS				B								
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	5	57	0	5	0	0	375	1065	0	659	0
Future Volume (veh/h)	263	5	57	0	5	0	0	375	1065	0	659	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752				0	1752	1752	0	1752	1752
Adj Flow Rate, veh/h	300	0	64				0	421	1197	0	740	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10				0	10	10	0	10	10
Cap, veh/h	405	0	180				0	2592	1156	0	2592	
Arrive On Green	0.12	0.00	0.12				0.00	0.78	0.78	0.00	0.78	0.00
Sat Flow, veh/h	3337	0	1485				0	3416	1485	0	3416	1485
Grp Volume(v), veh/h	300	0	64				0	421	1197	0	740	0
Grp Sat Flow(s),veh/h/ln	1668	0	1485				0	1664	1485	0	1664	1485
Q Serve(g_s), s	6.9	0.0	3.2				0.0	2.6	62.3	0.0	5.1	0.0
Cycle Q Clear(g_c), s	6.9	0.0	3.2				0.0	2.6	62.3	0.0	5.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	405	0	180				0	2592	1156	0	2592	
V/C Ratio(X)	0.74	0.00	0.36				0.00	0.16	1.04	0.00	0.29	
Avail Cap(c_a), veh/h	667	0	297				0	2592	1156	0	2592	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.60	0.60	0.00	0.97	0.00
Uniform Delay (d), s/veh	33.9	0.0	32.3				0.0	2.2	8.9	0.0	2.5	0.0
Incr Delay (d2), s/veh	2.7	0.0	1.2				0.0	0.1	30.3	0.0	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	1.2				0.0	0.5	20.5	0.0	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.6	0.0	33.5				0.0	2.3	39.2	0.0	2.8	0.0
LnGrp LOS	D		C				A		F	A		
Approach Vol, veh/h	364						1618			740		
Approach Delay, s/veh	36.1						29.6			2.8		
Approach LOS	D						C			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	66.3			13.7			66.3					
Change Period (Y+Rc), s	4.0			4.0			4.0					
Max Green Setting (Gmax), s	56.0			16.0			56.0					
Max Q Clear Time (g_c+l1), s	64.3			8.9			7.1					
Green Ext Time (p_c), s	0.0			0.8			6.3					
Intersection Summary												
HCM 7th Control Delay, s/veh	23.2											
HCM 7th LOS	C											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

IPC 20 CEQA Analysis
3: International Pkwy & Daylight Rd

Existing Plus Background Conditions
Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	5	39	41	0	39	56	1305	46	48	596	69
Future Volume (veh/h)	90	5	39	41	0	39	56	1305	46	48	596	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	101	6	44	46	0	44	63	1466	52	54	670	78
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	127	156	139	109	95	81	78	1819	811	66	1861	830
Arrive On Green	0.08	0.09	0.09	0.03	0.00	0.05	0.05	0.55	0.55	0.04	0.56	0.56
Sat Flow, veh/h	1668	1664	1485	3237	1752	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	101	6	44	46	0	44	63	1466	52	54	670	78
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1618	1752	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	4.2	0.2	1.9	1.0	0.0	2.0	2.6	24.9	1.1	2.2	7.8	1.7
Cycle Q Clear(g_c), s	4.2	0.2	1.9	1.0	0.0	2.0	2.6	24.9	1.1	2.2	7.8	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	156	139	109	95	81	78	1819	811	66	1861	830
V/C Ratio(X)	0.80	0.04	0.32	0.42	0.00	0.54	0.81	0.81	0.06	0.82	0.36	0.09
Avail Cap(c_a), veh/h	167	463	413	185	402	340	167	2032	906	110	1984	885
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	28.8	29.5	33.0	0.0	32.2	33.0	12.8	7.4	33.3	8.5	7.2
Incr Delay (d2), s/veh	17.7	0.1	1.3	1.0	0.0	5.6	17.4	2.5	0.0	9.0	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.1	0.7	0.4	0.0	0.8	1.4	7.5	0.3	1.0	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.4	28.9	30.8	34.0	0.0	37.7	50.3	15.3	7.5	42.3	8.7	7.2
LnGrp LOS	D	C	C	C		D	D	B	A	D	A	A
Approach Vol, veh/h	151			90			1581			802		
Approach Delay, s/veh	43.2			35.8			16.4			10.8		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	43.9	6.6	11.1	7.3	44.8	9.3	8.4				
Change Period (Y+Rc), s	5.4	5.8	4.2	* 4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	4.6	42.6	4.0	* 19	7.0	41.6	7.0	16.0				
Max Q Clear Time (g_c+I), s	14.2	26.9	3.0	3.9	4.6	9.8	6.2	4.0				
Green Ext Time (p_c), s	0.0	11.2	0.0	0.2	0.0	7.1	0.0	0.1				

Intersection Summary

HCM 7th Control Delay, s/veh	16.9
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

IPC 20 CEQA Analysis
4: International Pkwy & Promontory Pkwy

Existing Plus Background Conditions

Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	3	5	96	2	676	38	682	43	255	472	5
Future Volume (veh/h)	65	3	5	96	2	676	38	682	43	255	472	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	73	3	6	108	2	760	43	766	48	287	530	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	70	467	396	125	526	784	54	1334	594	338	828	701
Arrive On Green	0.04	0.27	0.27	0.08	0.30	0.30	0.03	0.40	0.40	0.10	0.47	0.47
Sat Flow, veh/h	1668	1752	1485	1668	1752	2613	1668	3328	1483	3237	1752	1484
Grp Volume(v), veh/h	73	3	6	108	2	760	43	766	48	287	530	6
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1306	1668	1664	1483	1618	1752	1484
Q Serve(g_s), s	5.0	0.2	0.4	7.7	0.1	34.5	3.1	21.5	2.4	10.5	27.4	0.3
Cycle Q Clear(g_c), s	5.0	0.2	0.4	7.7	0.1	34.5	3.1	21.5	2.4	10.5	27.4	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	467	396	125	526	784	54	1334	594	338	828	701
V/C Ratio(X)	1.05	0.01	0.02	0.86	0.00	0.97	0.80	0.57	0.08	0.85	0.64	0.01
Avail Cap(c_a), veh/h	70	467	396	125	526	784	70	1334	594	351	828	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	57.5	32.3	32.4	54.9	29.4	41.5	57.7	28.0	22.3	52.8	23.9	16.7
Incr Delay (d2), s/veh	122.5	0.0	0.0	37.3	0.0	22.3	38.0	1.8	0.3	16.5	3.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.1	0.1	4.5	0.0	13.3	1.8	8.5	0.9	4.9	11.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	180.0	32.3	32.4	92.2	29.4	63.7	95.7	29.8	22.5	69.3	27.5	16.8
LnGrp LOS	F	C	C	F	C	E	F	C	C	E	C	B
Approach Vol, veh/h	82			870			857			823		
Approach Delay, s/veh	163.8			67.2			32.7			42.0		
Approach LOS	F			E			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	62.5	13.0	36.6	16.5	53.9	9.0	40.6				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	55.6	9.0	32.0	13.0	47.6	5.0	36.0				
Max Q Clear Time (g_c+1.5), s	15.1	29.4	9.7	2.4	12.5	23.5	7.0	36.5				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.0	0.1	5.2	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	51.1											
HCM 7th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												

IPC 20 CEQA Analysis
5: International Pkwy & Old Schulte Road

Existing Plus Background Conditions
Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	35	99	235	33	307	59	220	346	274	234	18
Future Volume (veh/h)	56	35	99	235	33	307	59	220	346	274	234	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1106	1660	1752	1060	1589	1678	1106	1660	1752	1106	1660	1752
Adj Flow Rate, veh/h	63	39	111	264	37	345	66	247	389	308	263	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	15	15	15	10	10	10	10	10	10
Cap, veh/h	70	196	175	914	824	832	70	583	483	136	583	274
Arrive On Green	0.07	0.12	0.12	0.47	0.52	0.52	0.07	0.18	0.18	0.07	0.18	0.18
Sat Flow, veh/h	1054	1660	1485	1958	1589	1422	1054	3153	2613	2044	3153	1485
Grp Volume(v), veh/h	63	39	111	264	37	345	66	247	389	308	263	20
Grp Sat Flow(s),veh/h/ln	1054	1660	1485	979	1589	1422	1054	1577	1306	1022	1577	1485
Q Serve(g_s), s	7.1	2.5	8.6	10.0	1.4	15.9	7.5	8.3	17.1	8.0	8.9	1.3
Cycle Q Clear(g_c), s	7.1	2.5	8.6	10.0	1.4	15.9	7.5	8.3	17.1	8.0	8.9	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	196	175	914	824	832	70	583	483	136	583	274
V/C Ratio(X)	0.90	0.20	0.63	0.29	0.04	0.41	0.94	0.42	0.81	2.26	0.45	0.07
Avail Cap(c_a), veh/h	70	307	275	914	824	832	70	1161	962	136	1161	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	47.8	50.4	19.7	14.2	13.6	55.8	43.3	46.9	56.0	43.5	40.4
Incr Delay (d2), s/veh	72.7	0.5	3.7	0.2	0.0	0.3	86.4	0.5	3.2	589.8	0.5	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	1.1	3.3	2.2	0.5	4.8	3.6	3.2	5.6	13.2	3.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	128.3	48.3	54.2	19.9	14.3	14.0	142.1	43.8	50.1	645.8	44.1	40.5
LnGrp LOS	F	D	D	B	B	B	F	D	D	F	D	D
Approach Vol, veh/h	213			646			702			591		
Approach Delay, s/veh	75.0			16.4			56.5			357.5		
Approach LOS	E			B			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	28.0	60.0	20.0	12.0	28.0	12.0	68.0				
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	40.0	44.2	26.0	22.2	8.0	44.2	8.0	40.2				
Max Q Clear Time (g_c+1.0), s	19.1	19.1	12.0	10.6	9.5	10.9	9.1	17.9				
Green Ext Time (p_c), s	0.0	3.1	1.1	0.4	0.0	1.7	0.0	1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	129.0											
HCM 7th LOS	F											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			↑	↑		4	↑			
Traffic Volume (veh/h)	8	456	0	0	350	218	6	1	166	0	0	0
Future Volume (veh/h)	8	456	0	0	350	218	6	1	166	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1752	1752	0	0	1752	1752	1678	1678	1678			
Adj Flow Rate, veh/h	9	512	0	0	393	245	7	1	0			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	10	10	0	0	10	10	15	15	15			
Cap, veh/h	11	602	0	0	438	371	321	46				
Arrive On Green	0.35	0.35	0.00	0.00	0.25	0.25	0.23	0.23	0.00			
Sat Flow, veh/h	30	1720	0	0	1752	1485	1406	201	1422			
Grp Volume(v), veh/h	521	0	0	0	393	245	8	0	0			
Grp Sat Flow(s), veh/h/ln	1750	0	0	0	1752	1485	1607	0	1422			
Q Serve(g_s), s	19.3	0.0	0.0	0.0	15.2	10.4	0.3	0.0	0.0			
Cycle Q Clear(g_c), s	19.3	0.0	0.0	0.0	15.2	10.4	0.3	0.0	0.0			
Prop In Lane	0.02		0.00	0.00		1.00	0.87		1.00			
Lane Grp Cap(c), veh/h	613	0	0	0	438	371	367	0				
V/C Ratio(X)	0.85	0.00	0.00	0.00	0.90	0.66	0.02	0.00				
Avail Cap(c_a), veh/h	613	0	0	0	450	382	367	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	21.1	0.0	0.0	0.0	25.4	23.6	20.9	0.0	0.0			
Incr Delay (d2), s/veh	11.2	0.0	0.0	0.0	20.1	4.0	0.1	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	8.4	3.9	0.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.2	0.0	0.0	0.0	45.5	27.6	21.0	0.0	0.0			
LnGrp LOS	C				D	C	C					
Approach Vol, veh/h	521			638			8					
Approach Delay, s/veh	32.2			38.6			21.0					
Approach LOS	C			D			C					
Timer - Assigned Phs	2			6			8					
Phs Duration (G+Y+Rc), s	28.5			21.5			20.0					
Change Period (Y+Rc), s	4.0			4.0			4.0					
Max Green Setting (Gmax), s	24.0			18.0			16.0					
Max Q Clear Time (g_c+l1), s	21.3			17.2			2.3					
Green Ext Time (p_c), s	0.9			0.3			0.0					

Intersection Summary

HCM 7th Control Delay, s/veh	35.6
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑		↑						↑	↑
Traffic Volume (veh/h)	0	187	142	335	21	0	0	0	0	276	4	68
Future Volume (veh/h)	0	187	142	335	21	0	0	0	0	276	4	68
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1752	1752	1752	1752	0				1678	1678	1678
Adj Flow Rate, veh/h	0	210	160	376	24	0				310	4	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	10	10	10	10	0				15	15	15
Cap, veh/h	0	287	243	416	27	0				586	8	
Arrive On Green	0.00	0.16	0.16	0.26	0.26	0.00				0.37	0.37	0.00
Sat Flow, veh/h	0	1752	1485	1573	100	0				1578	20	1422
Grp Volume(v), veh/h	0	210	160	400	0	0				314	0	0
Grp Sat Flow(s),veh/h/ln	0	1752	1485	1673	0	0				1599	0	1422
Q Serve(g_s), s	0.0	6.8	6.1	13.9	0.0	0.0				9.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.8	6.1	13.9	0.0	0.0				9.2	0.0	0.0
Prop In Lane	0.00		1.00	0.94		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	287	243	443	0	0				594	0	
V/C Ratio(X)	0.00	0.73	0.66	0.90	0.00	0.00				0.53	0.00	
Avail Cap(c_a), veh/h	0	467	396	446	0	0				594	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.30	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	23.8	23.5	21.3	0.0	0.0				14.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.6	3.0	8.1	0.0	0.0				3.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	2.2	5.9	0.0	0.0				3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	27.4	26.5	29.4	0.0	0.0				18.1	0.0	0.0
LnGrp LOS		C	C	C						B		
Approach Vol, veh/h		370			400						314	
Approach Delay, s/veh		27.0			29.4						18.1	
Approach LOS		C			C						B	
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				13.8		26.3		19.9				
Change Period (Y+Rc), s				4.0		4.0		4.0				
Max Green Setting (Gmax), s				16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s				8.8		11.2		15.9				
Green Ext Time (p_c), s				1.0		0.8		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			25.3									
HCM 7th LOS			C									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

IPC 20 CEQA Analysis
8: Hopkins Rd & Promontory Pkwy

Existing Plus Background Conditions
Timing Plan: PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (veh/h)	222	79	5	545	229	7
Future Volume (veh/h)	222	79	5	545	229	7
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	249	89	6	612	257	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	883	394	361	883	885	787
Arrive On Green	0.27	0.27	0.27	0.27	0.53	0.53
Sat Flow, veh/h	3416	1485	976	3416	1668	1485
Grp Volume(v), veh/h	249	89	6	612	257	8
Grp Sat Flow(s), veh/h/ln	1664	1485	976	1664	1668	1485
Q Serve(g_s), s	2.7	2.1	0.2	7.5	3.8	0.1
Cycle Q Clear(g_c), s	2.7	2.1	2.9	7.5	3.8	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	883	394	361	883	885	787
V/C Ratio(X)	0.28	0.23	0.02	0.69	0.29	0.01
Avail Cap(c_a), veh/h	1287	574	479	1287	885	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.88	0.88	1.00	1.00
Uniform Delay (d), s/veh	13.1	12.9	14.3	14.9	5.9	5.0
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.9	0.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.6	0.0	2.4	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	13.3	13.1	14.3	15.8	6.7	5.0
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	338			618	265	
Approach Delay, s/veh	13.2			15.7	6.6	
Approach LOS	B			B	A	
Timer - Assigned Phs	2			4		8
Phs Duration (G+Y+Rc), s	28.5			16.5		16.5
Change Period (Y+Rc), s	4.6			4.6		4.6
Max Green Setting (Gmax), s	18.4			17.4		17.4
Max Q Clear Time (g_c+I1), s	5.8			4.7		9.5
Green Ext Time (p_c), s	0.6			1.4		2.5
Intersection Summary						
HCM 7th Control Delay, s/veh			13.1			
HCM 7th LOS			B			

IPC 20 CEQA Analysis
9: Hansen Rd & Promontory Pkwy

Existing Plus Background Conditions

Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	66	60	42	135	5	229	91	22	2	82	54
Future Volume (veh/h)	43	66	60	42	135	5	229	91	22	2	82	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	48	74	67	47	152	6	257	102	25	2	92	61
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	83	509	227	82	506	226	309	1310	584	5	703	314
Arrive On Green	0.05	0.15	0.15	0.05	0.15	0.15	0.18	0.39	0.39	0.00	0.21	0.21
Sat Flow, veh/h	1668	3328	1485	1668	3328	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	48	74	67	47	152	6	257	102	25	2	92	61
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1668	1664	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	1.3	0.9	1.8	1.3	1.9	0.2	6.8	0.9	0.5	0.1	1.0	1.6
Cycle Q Clear(g_c), s	1.3	0.9	1.8	1.3	1.9	0.2	6.8	0.9	0.5	0.1	1.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	509	227	82	506	226	309	1310	584	5	703	314
V/C Ratio(X)	0.58	0.15	0.30	0.57	0.30	0.03	0.83	0.08	0.04	0.44	0.13	0.19
Avail Cap(c_a), veh/h	181	2567	1145	254	2711	1209	326	2458	1096	181	2169	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	16.9	17.3	21.4	17.3	16.6	18.1	8.7	8.6	22.9	14.7	14.9
Incr Delay (d2), s/veh	6.2	0.1	0.7	6.2	0.3	0.0	16.0	0.0	0.0	54.3	0.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	0.6	0.6	0.6	0.0	3.5	0.2	0.1	0.1	0.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.6	17.0	18.0	27.6	17.7	16.7	34.1	8.8	8.6	77.3	14.8	15.2
LnGrp LOS	C	B	B	C	B	B	C	A	A	E	B	B
Approach Vol, veh/h	189			205			384			155		
Approach Delay, s/veh	20.1			19.9			25.7			15.8		
Approach LOS	C			B			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	11.7	4.1	23.9	6.3	11.7	12.5	15.5				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	7.0	35.5	5.0	34.0	5.0	37.5	9.0	30.0				
Max Q Clear Time (g_c+I1), s	13.3	3.8	2.1	2.9	3.3	3.9	8.8	3.6				
Green Ext Time (p_c), s	0.0	0.6	0.0	0.6	0.0	1.0	0.0	0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	21.6											
HCM 7th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												

IPC 20 CEQA Analysis
10: Hansen Rd & Hopkins Rd

Existing Plus Background Conditions

Timing Plan: PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱↱	↱	↰	↱↱	↰
Traffic Volume (veh/h)	5	3	114	36	9	47	40	153	10	25	332	5
Future Volume (veh/h)	5	3	114	36	9	47	40	153	10	25	332	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	6	3	128	40	10	53	45	172	11	28	373	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	13	13	565	60	101	534	65	1085	484	48	1051	469
Arrive On Green	0.01	0.39	0.39	0.04	0.42	0.42	0.04	0.33	0.33	0.03	0.32	0.32
Sat Flow, veh/h	1668	34	1456	1668	241	1280	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	6	0	131	40	0	63	45	172	11	28	373	6
Grp Sat Flow(s),veh/h/ln	1668	0	1490	1668	0	1521	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	0.3	0.0	4.9	2.0	0.0	2.1	2.2	3.1	0.4	1.4	7.2	0.2
Cycle Q Clear(g_c), s	0.3	0.0	4.9	2.0	0.0	2.1	2.2	3.1	0.4	1.4	7.2	0.2
Prop In Lane	1.00		0.98	1.00		0.84	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	13	0	579	60	0	634	65	1085	484	48	1051	469
V/C Ratio(X)	0.46	0.00	0.23	0.66	0.00	0.10	0.69	0.16	0.02	0.59	0.35	0.01
Avail Cap(c_a), veh/h	100	0	579	120	0	634	140	1085	484	120	1051	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	0.0	17.1	39.7	0.0	14.8	39.6	20.0	19.1	40.0	22.0	19.6
Incr Delay (d2), s/veh	23.5	0.0	0.9	11.7	0.0	0.3	12.5	0.3	0.1	10.9	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.7	1.0	0.0	0.7	1.1	1.1	0.1	0.7	2.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.7	0.0	18.0	51.4	0.0	15.1	52.1	20.3	19.2	50.9	22.2	19.6
LnGrp LOS	E		B	D		B	D	C	B	D	C	B
Approach Vol, veh/h	137				103				228		407	
Approach Delay, s/veh	20.1				29.2				26.5		24.1	
Approach LOS	C				C				C		C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	37.0	6.4	33.0	4.6	39.4	7.2	32.1				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	6.0	32.4	6.0	27.2	5.0	33.4	7.0	26.2				
Max Q Clear Time (g_c+14), s	14.0	6.9	3.4	5.1	2.3	4.1	4.2	9.2				
Green Ext Time (p_c), s	0.0	0.7	0.0	0.9	0.0	0.3	0.0	2.0				
Intersection Summary												
HCM 7th Control Delay, s/veh		24.7										
HCM 7th LOS		C										

IPC 20 CEQA Analysis
11: Old Schulte Road & Hansen Rd

Existing Plus Background Conditions

Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	524	42	8	227	130	81	19	16	334	16	144
Future Volume (veh/h)	55	524	42	8	227	130	81	19	16	334	16	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	62	589	47	9	255	146	91	21	18	375	18	162
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	15	15	15	15	15	15	10	10	10	10	10	10
Cap, veh/h	105	844	715	31	767	650	119	73	62	375	415	352
Arrive On Green	0.07	0.50	0.50	0.02	0.46	0.46	0.07	0.08	0.08	0.22	0.24	0.24
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1668	871	747	1668	1752	1485
Grp Volume(v), veh/h	62	589	47	9	255	146	91	0	39	375	18	162
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1668	0	1617	1668	1752	1485
Q Serve(g_s), s	4.5	32.3	2.0	0.7	11.7	7.5	6.4	0.0	2.7	27.0	1.0	11.2
Cycle Q Clear(g_c), s	4.5	32.3	2.0	0.7	11.7	7.5	6.4	0.0	2.7	27.0	1.0	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	105	844	715	31	767	650	119	0	135	375	415	352
V/C Ratio(X)	0.59	0.70	0.07	0.29	0.33	0.22	0.76	0.00	0.29	1.00	0.04	0.46
Avail Cap(c_a), veh/h	133	844	715	120	767	650	181	0	310	375	540	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	54.5	22.8	15.3	58.0	20.9	19.7	54.7	0.0	51.7	46.5	35.3	39.2
Incr Delay (d2), s/veh	5.2	4.8	0.2	4.9	1.1	0.8	9.9	0.0	1.7	44.7	0.1	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	12.9	0.7	0.3	4.5	2.5	3.0	0.0	1.1	15.4	0.4	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.8	27.6	15.5	62.9	22.0	20.5	64.6	0.0	53.3	91.2	35.4	40.5
LnGrp LOS	E	C	B	E	C	C	E		D	F	D	D
Approach Vol, veh/h	698			410			130			555		
Approach Delay, s/veh	29.6			22.4			61.2			74.6		
Approach LOS	C			C			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	66.9	31.0	15.8	11.9	61.3	12.6	34.2					
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	41.0	* 41	27.0	23.0	10.0	39.7	13.0	37.0				
Max Q Clear Time (g_c+I2), s	34.3	34.3	29.0	4.7	6.5	13.7	8.4	13.2				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.1	0.0	2.7	0.1	0.9				
Intersection Summary												
HCM 7th Control Delay, s/veh	44.2											
HCM 7th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	25	16	66	53	6	29
Future Vol, veh/h	25	16	66	53	6	29
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	28	18	74	60	7	33
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	7.5	8.3	7.5
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	29	25	16	66	53
LT Vol	6	0	0	0	66	0
Through Vol	0	0	25	0	0	53
RT Vol	0	29	0	16	0	0
Lane Flow Rate	7	33	28	18	74	60
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.011	0.04	0.038	0.021	0.108	0.079
Departure Headway (Hd)	5.623	4.421	4.806	4.106	5.262	4.762
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	640	815	738	862	680	750
Service Time	3.323	2.121	2.58	1.879	3.004	2.504
HCM Lane V/C Ratio	0.011	0.04	0.038	0.021	0.109	0.08
HCM Control Delay, s/veh	8.4	7.3	7.8	7	8.6	7.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.1	0.1	0.1	0.4	0.3

IPC 20 CEQA Analysis
13: Old Schulte Road & Bud Lyons Wy

Existing Plus Background Conditions

Timing Plan: PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	874	0	0	365	38	0	0	0	90	0	10
Future Volume (veh/h)	10	874	0	0	365	38	0	0	0	90	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	0	1752
Adj Flow Rate, veh/h	11	982	0	0	410	43	0	0	0	101	0	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	0	10
Cap, veh/h	16	1514		1	1445	1224	115	1	0	131	0	0
Arrive On Green	0.01	0.86	0.00	0.00	0.82	0.82	0.00	0.00	0.00	0.08	0.00	0.00
Sat Flow, veh/h	1668	1752	1485	1668	1752	1485	1668	1752	0	1668	101	
Grp Volume(v), veh/h	11	982	0	0	410	43	0	0	0	101	71.3	
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1485	1668	1752	0	1668	E	
Q Serve(g_s), s	1.0	25.9	0.0	0.0	8.0	0.8	0.0	0.0	0.0	8.9		
Cycle Q Clear(g_c), s	1.0	25.9	0.0	0.0	8.0	0.8	0.0	0.0	0.0	8.9		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		
Lane Grp Cap(c), veh/h	16	1514		1	1445	1224	115	1	0	131		
V/C Ratio(X)	0.67	0.65		0.00	0.28	0.04	0.00	0.00	0.00	0.77		
Avail Cap(c_a), veh/h	44	1514		44	1445	1224	115	280	0	373		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.56	0.56	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	74.0	3.1	0.0	0.0	3.0	2.4	0.0	0.0	0.0	67.7		
Incr Delay (d2), s/veh	9.5	1.2	0.0	0.0	0.5	0.1	0.0	0.0	0.0	3.5		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.5	4.7	0.0	0.0	2.1	0.2	0.0	0.0	0.0	3.9		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.6	4.4	0.0	0.0	3.5	2.4	0.0	0.0	0.0	71.3		
LnGrp LOS	F	A			A	A				E		
Approach Vol, veh/h	993		453			0						
Approach Delay, s/veh	5.2		3.4			0.0						
Approach LOS	A		A									
Timer - Assigned Phs	1	2	3		5	6	7	8				
Phs Duration (G+Y+Rc), s	0	135.2	14.8		6.0	129.2	14.8	0.0				
Change Period (Y+Rc), s	4.5	5.5	4.5		4.5	5.5	3.0	4.5				
Max Green Setting (Gmax), s	4.0	71.0	4.0		4.0	71.0	33.5	24.0				
Max Q Clear Time (g_c+I), s	10.0	27.9	0.0		3.0	10.0	10.9	0.0				
Green Ext Time (p_c), s	0.0	8.8	0.0		0.0	2.5	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	9.0
HCM 7th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

IPC 20 CEQA Analysis
16: Lammers Road & Eleventh St

Existing Plus Background Conditions

Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	1399	86	190	508	128	40	103	746	109	126	29
Future Volume (veh/h)	115	1399	86	190	508	128	40	103	746	109	126	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	129	1572	0	213	571	0	45	116	0	122	142	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	173	3309		190	3334		75	183		89	221	
Arrive On Green	0.05	0.69	0.00	0.06	0.70	0.00	0.02	0.05	0.00	0.03	0.07	0.00
Sat Flow, veh/h	3237	4782	1485	3237	4782	1485	3237	3328	1485	3237	3328	1485
Grp Volume(v), veh/h	129	1572	0	213	571	0	45	116	0	122	142	0
Grp Sat Flow(s),veh/h/ln	1618	1594	1485	1618	1594	1485	1618	1664	1485	1618	1664	1485
Q Serve(g_s), s	5.7	21.9	0.0	8.5	6.0	0.0	2.0	4.9	0.0	4.0	6.0	0.0
Cycle Q Clear(g_c), s	5.7	21.9	0.0	8.5	6.0	0.0	2.0	4.9	0.0	4.0	6.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	3309		190	3334		75	183		89	221	
V/C Ratio(X)	0.75	0.48		1.12	0.17		0.60	0.63		1.37	0.64	
Avail Cap(c_a), veh/h	241	3309		190	3334		125	1398		89	1384	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.7	10.2	0.0	68.3	7.5	0.0	70.2	67.1	0.0	70.5	66.0	0.0
Incr Delay (d2), s/veh	7.8	0.5	0.0	102.1	0.1	0.0	7.5	5.1	0.0	221.0	4.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	7.0	0.0	6.2	1.9	0.0	0.9	2.2	0.0	4.4	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.4	10.7	0.0	170.4	7.7	0.0	77.7	72.2	0.0	291.5	70.5	0.0
LnGrp LOS	E	B		F	A		E	E		F	E	
Approach Vol, veh/h	1701				784				161		264	
Approach Delay, s/veh	15.6				51.9				73.7		172.6	
Approach LOS	B				D				E		F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.0	106.4	8.9	15.7	13.2	107.2	10.5	14.1				
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	6.5	6.1				
Max Green Setting (Gmax), s	4.5	47.4	5.6	60.3	10.8	45.1	4.0	60.9				
Max Q Clear Time (g_c+10), s	4.5	23.9	4.0	8.0	7.7	8.0	6.0	6.9				
Green Ext Time (p_c), s	0.0	11.9	0.0	1.4	0.1	3.9	0.0	1.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			42.9									
HCM 7th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

IPC 20 CEQA Analysis
17: Lammers Road & Old Schulte Road

Existing Plus Background Conditions

Timing Plan: PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	281	604	186	119	211	106
Future Volume (veh/h)	281	604	186	119	211	106
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1678	1752	1752	1870	1870
Adj Flow Rate, veh/h	316	679	209	134	237	119
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	15	15	10	10	2	2
Cap, veh/h	743	662	243	745	273	137
Arrive On Green	0.47	0.47	0.15	0.43	0.23	0.23
Sat Flow, veh/h	1598	1422	1668	1752	1174	590
Grp Volume(v), veh/h	316	679	209	134	0	356
Grp Sat Flow(s), veh/h/ln	1598	1422	1668	1752	0	1764
Q Serve(g_s), s	13.1	46.3	12.2	4.7	0.0	19.3
Cycle Q Clear(g_c), s	13.1	46.3	12.2	4.7	0.0	19.3
Prop In Lane	1.00	1.00	1.00			0.33
Lane Grp Cap(c), veh/h	743	662	243	745	0	410
V/C Ratio(X)	0.43	1.03	0.86	0.18	0.00	0.87
Avail Cap(c_a), veh/h	743	662	374	1106	0	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	26.6	41.5	17.8	0.0	36.7
Incr Delay (d2), s/veh	0.4	41.9	11.9	0.1	0.0	8.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	7.7	5.7	1.9	0.0	9.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	18.1	68.5	53.4	17.9	0.0	44.7
LnGrp LOS	B	F	D	B		D
Approach Vol, veh/h	995			343	356	
Approach Delay, s/veh	52.5			39.5	44.7	
Approach LOS	D			D	D	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	48.5			51.0	19.2	29.3
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	62.8			46.3	22.3	35.8
Max Q Clear Time (g_c+I1), s	6.7			48.3	14.2	21.3
Green Ext Time (p_c), s	0.8			0.0	0.4	1.8
Intersection Summary						
HCM 7th Control Delay, s/veh			48.2			
HCM 7th LOS			D			

IPC 20 CEQA Analysis
18: Lammers Road & Valpico Road

Existing Plus Background Conditions
Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	11.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	9	0	249	0	10	7	688	22	1
Future Vol, veh/h	0	0	0	9	0	249	0	10	7	688	22	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	0	0	0	10	0	280	0	11	8	773	25	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1583	1590	25	1586	1587	15	26	0	0	19	0	0
Stage 1	1571	1571	-	15	15	-	-	-	-	-	-	-
Stage 2	11	19	-	1571	1572	-	-	-	-	-	-	-
Critical Hdwy	7.2	6.6	6.3	7.2	6.6	6.3	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.2	5.6	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.2	5.6	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.59	4.09	3.39	3.59	4.09	3.39	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	84	103	1028	84	104	1042	1538	-	-	1547	-	-
Stage 1	133	164	-	984	867	-	-	-	-	-	-	-
Stage 2	989	864	-	133	164	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	30	51	1028	41	51	1042	1538	-	-	1547	-	-
Mov Cap-2 Maneuver	30	51	-	41	51	-	-	-	-	-	-	-
Stage 1	65	81	-	984	867	-	-	-	-	-	-	-
Stage 2	723	864	-	65	81	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	17.92	0	9.32
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1538	-	-	- 564	1524	-	-
HCM Lane V/C Ratio	-	-	-	- 0.514	0.5	-	-
HCM Control Delay (s/veh)	0	-	-	0 17.9	9.6	0	-
HCM Lane LOS	A	-	-	A C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	- 2.9	2.9	-	-

C. Existing (2011) Plus Approved CRSP Projects Plus Project Conditions Synchro Outputs

DRAFT

IPC 20 CEQA Analysis

Existing Plus Background Plus Project Conditions

1: International Parkway & WB 205 On Ramp/WB 205 Off Ramp

Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰	↰↰	↰	↰↰			↰↰↰	↰
Traffic Volume (veh/h)	0	0	0	855	1	245	47	206	0	0	511	307
Future Volume (veh/h)	0	0	0	855	1	245	47	206	0	0	511	307
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No				No	
Adj Sat Flow, veh/h/ln				1752	1752	1752	1752	1752	0	0	1752	1752
Adj Flow Rate, veh/h				961	1	275	53	231	0	0	574	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				10	10	10	10	10	0	0	10	10
Cap, veh/h				1017	1	1595	66	1001	0	0	1038	
Arrive On Green				0.61	0.61	0.61	0.04	0.30	0.00	0.00	0.22	0.00
Sat Flow, veh/h				1667	2	2613	1668	3416	0	0	4940	1485
Grp Volume(v), veh/h				962	0	275	53	231	0	0	574	0
Grp Sat Flow(s),veh/h/ln				1668	0	1306	1668	1664	0	0	1594	1485
Q Serve(g_s), s				47.8	0.0	4.1	2.8	4.7	0.0	0.0	9.6	0.0
Cycle Q Clear(g_c), s				47.8	0.0	4.1	2.8	4.7	0.0	0.0	9.6	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1018	0	1595	66	1001	0	0	1038	
V/C Ratio(X)				0.94	0.00	0.17	0.81	0.23	0.00	0.00	0.55	
Avail Cap(c_a), veh/h				1075	0	1684	74	1001	0	0	1038	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				16.1	0.0	7.6	42.9	23.6	0.0	0.0	31.4	0.0
Incr Delay (d2), s/veh				15.5	0.0	0.1	42.2	0.5	0.0	0.0	2.1	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				20.0	0.0	1.1	1.9	1.9	0.0	0.0	3.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				31.7	0.0	7.7	85.1	24.2	0.0	0.0	33.5	0.0
LnGrp LOS				C		A	F	C			C	
Approach Vol, veh/h					1237			284			574	
Approach Delay, s/veh					26.3			35.5			33.5	
Approach LOS					C			D			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		31.1			7.6	23.5		58.9				
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0				
Max Green Setting (Gmax), s		24.0			4.0	16.0		58.0				
Max Q Clear Time (g_c+I1), s		6.7			4.8	11.6		49.8				
Green Ext Time (p_c), s		1.3			0.0	1.5		5.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				29.5								
HCM 7th LOS				C								
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	66	0	0	0	0	193	444	0	1099	0
Future Volume (veh/h)	60	0	66	0	0	0	0	193	444	0	1099	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752				0	1752	1752	0	1752	1752
Adj Flow Rate, veh/h	67	0	74				0	217	499	0	1235	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10				0	10	10	0	10	10
Cap, veh/h	275	0	122				0	2463	1098	0	2463	
Arrive On Green	0.08	0.00	0.08				0.00	0.74	0.74	0.00	1.00	0.00
Sat Flow, veh/h	3337	0	1485				0	3416	1485	0	3416	1485
Grp Volume(v), veh/h	67	0	74				0	217	499	0	1235	0
Grp Sat Flow(s),veh/h/ln	1668	0	1485				0	1664	1485	0	1664	1485
Q Serve(g_s), s	0.8	0.0	2.2				0.0	0.8	5.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	2.2				0.0	0.8	5.9	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	275	0	122				0	2463	1098	0	2463	
V/C Ratio(X)	0.24	0.00	0.61				0.00	0.09	0.45	0.00	0.50	
Avail Cap(c_a), veh/h	1186	0	528				0	2463	1098	0	2463	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.96	0.96	0.00	0.78	0.00
Uniform Delay (d), s/veh	19.3	0.0	19.9				0.0	1.6	2.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	4.8				0.0	0.1	1.3	0.0	0.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.8				0.0	0.1	0.7	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	0.0	24.7				0.0	1.7	3.6	0.0	0.6	0.0
LnGrp LOS	B		C					A	A	A		
Approach Vol, veh/h	141						716			1235		
Approach Delay, s/veh	22.4						3.0			0.6		
Approach LOS	C						A			A		
Timer - Assigned Phs												
	2			4			6					
Phs Duration (G+Y+Rc), s	37.3			7.7			37.3					
Change Period (Y+Rc), s	4.0			4.0			4.0					
Max Green Setting (Gmax), s	21.0			16.0			21.0					
Max Q Clear Time (g_c+l1), s	7.9			4.2			2.0					
Green Ext Time (p_c), s	2.8			0.3			9.2					
Intersection Summary												
HCM 7th Control Delay, s/veh	2.9											
HCM 7th LOS	A											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	0	23	28	0	29	57	555	32	34	1059	68
Future Volume (veh/h)	51	0	23	28	0	29	57	555	32	34	1059	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	57	0	26	31	0	33	64	624	36	38	1190	76
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	208	113	101	87	289	245	122	1680	749	111	1635	729
Arrive On Green	0.07	0.00	0.07	0.03	0.00	0.16	0.07	0.50	0.50	0.07	0.49	0.49
Sat Flow, veh/h	1289	1664	1485	3237	1752	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	57	0	26	31	0	33	64	624	36	38	1190	76
Grp Sat Flow(s),veh/h/ln	1289	1664	1485	1618	1752	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	2.6	0.0	1.0	0.6	0.0	1.1	2.2	6.8	0.7	1.3	17.0	1.6
Cycle Q Clear(g_c), s	2.6	0.0	1.0	0.6	0.0	1.1	2.2	6.8	0.7	1.3	17.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	113	101	87	289	245	122	1680	749	111	1635	729
V/C Ratio(X)	0.27	0.00	0.26	0.36	0.00	0.13	0.52	0.37	0.05	0.34	0.73	0.10
Avail Cap(c_a), veh/h	464	444	397	216	690	585	641	2961	1321	203	2067	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	26.5	28.6	0.0	21.4	26.7	9.0	7.5	26.7	12.1	8.2
Incr Delay (d2), s/veh	0.7	0.0	1.3	0.9	0.0	0.2	4.9	0.2	0.0	0.7	1.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.4	0.2	0.0	0.4	1.0	1.8	0.2	0.5	4.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.9	0.0	27.8	29.6	0.0	21.6	31.6	9.2	7.6	27.4	13.3	8.3
LnGrp LOS	C		C	C		C	C	A	A	C	B	A
Approach Vol, veh/h	83			64			724			1304		
Approach Delay, s/veh	27.9			25.5			11.1			13.4		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	9.4	36.0	5.8	8.7	10.2	35.2	14.5					
Change Period (Y+Rc), s	5.4	5.8	4.2	* 4.6	5.8	5.8	4.6					
Max Green Setting (Gmax), s	7.3	53.3	4.0	* 16	23.0	37.2	23.6					
Max Q Clear Time (g_c+I), s	13.3	8.8	2.6	4.6	4.2	19.0	3.1					
Green Ext Time (p_c), s	0.0	6.7	0.0	0.2	0.2	10.5	0.1					

Intersection Summary

HCM 7th Control Delay, s/veh	13.5
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1	5	31	22	302	54	319	74	491	583	0
Future Volume (veh/h)	32	1	5	31	22	302	54	319	74	491	583	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	36	1	6	35	25	339	61	358	83	552	655	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	49	270	229	48	269	401	70	1586	707	607	1090	924
Arrive On Green	0.03	0.15	0.15	0.03	0.15	0.15	0.04	0.48	0.48	0.19	0.62	0.00
Sat Flow, veh/h	1668	1752	1485	1668	1752	2613	1668	3328	1483	3237	1752	1485
Grp Volume(v), veh/h	36	1	6	35	25	339	61	358	83	552	655	0
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1306	1668	1664	1483	1618	1752	1485
Q Serve(g_s), s	2.6	0.1	0.4	2.5	1.5	15.1	4.4	7.6	3.7	20.0	27.1	0.0
Cycle Q Clear(g_c), s	2.6	0.1	0.4	2.5	1.5	15.1	4.4	7.6	3.7	20.0	27.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	270	229	48	269	401	70	1586	707	607	1090	924
V/C Ratio(X)	0.74	0.00	0.03	0.73	0.09	0.84	0.88	0.23	0.12	0.91	0.60	0.00
Avail Cap(c_a), veh/h	70	467	396	70	467	697	70	1586	707	647	1090	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	0.63	0.63	0.00
Uniform Delay (d), s/veh	57.8	43.0	43.1	57.8	43.6	49.4	57.2	18.4	17.4	47.7	13.7	0.0
Incr Delay (d2), s/veh	21.8	0.0	0.0	18.6	0.1	4.7	67.4	0.3	0.3	11.3	1.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.2	1.3	0.6	5.1	3.1	2.9	1.3	8.8	9.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.6	43.0	43.2	76.5	43.7	54.1	124.6	18.8	17.8	59.0	15.2	0.0
LnGrp LOS	E	D	D	E	D	D	F	B	B	E	B	
Approach Vol, veh/h	43			399			502			1207		
Approach Delay, s/veh	73.7			55.4			31.5			35.3		
Approach LOS	E			E			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	80.5	7.4	23.1	26.5	63.0	7.5	23.0				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	59.6	5.0	32.0	24.0	40.6	5.0	32.0				
Max Q Clear Time (g_c+I), s	10.4	29.1	4.5	2.4	22.0	9.6	4.6	17.1				
Green Ext Time (p_c), s	0.0	4.4	0.0	0.0	0.5	2.5	0.0	1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	38.9											
HCM 7th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												

IPC 20 CEQA Analysis
5: International Pkwy & Old Schulte Road

Existing Plus Background Plus Project Conditions
Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	17	46	304	47	203	66	191	196	226	198	36
Future Volume (veh/h)	16	17	46	304	47	203	66	191	196	226	198	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1106	1660	1752	1060	1589	1678	1106	1660	1752	1106	1660	1752
Adj Flow Rate, veh/h	18	19	52	342	53	228	74	215	220	254	222	40
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	15	15	15	10	10	10	10	10	10
Cap, veh/h	70	113	101	1148	934	930	70	365	303	136	365	172
Arrive On Green	0.07	0.07	0.07	0.59	0.59	0.59	0.07	0.12	0.12	0.07	0.12	0.12
Sat Flow, veh/h	1054	1660	1485	1958	1589	1422	1054	3153	2613	2044	3153	1485
Grp Volume(v), veh/h	18	19	52	342	53	228	74	215	220	254	222	40
Grp Sat Flow(s),veh/h/ln	1054	1660	1485	979	1589	1422	1054	1577	1306	1022	1577	1485
Q Serve(g_s), s	1.9	1.3	4.1	10.5	1.7	7.9	8.0	7.8	9.8	8.0	8.0	2.9
Cycle Q Clear(g_c), s	1.9	1.3	4.1	10.5	1.7	7.9	8.0	7.8	9.8	8.0	8.0	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	113	101	1148	934	930	70	365	303	136	365	172
V/C Ratio(X)	0.26	0.17	0.52	0.30	0.06	0.25	1.05	0.59	0.73	1.86	0.61	0.23
Avail Cap(c_a), veh/h	70	279	250	1148	934	930	70	1056	875	136	1056	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	52.7	54.0	12.4	10.6	8.5	56.0	50.3	51.2	56.0	50.5	48.2
Incr Delay (d2), s/veh	1.9	0.7	4.0	0.2	0.0	0.1	122.9	1.5	3.3	415.4	1.6	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	1.6	2.2	0.6	2.2	4.5	3.1	3.3	9.9	3.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.1	53.4	58.0	12.7	10.6	8.7	178.9	51.9	54.6	471.4	52.1	48.9
LnGrp LOS	E	D	E	B	B	A	F	D	D	F	D	D
Approach Vol, veh/h	89			623			509			516		
Approach Delay, s/veh	56.5			11.0			71.5			258.2		
Approach LOS	E			B			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	2.0	19.7	74.3	14.0	12.0	19.7	12.0	76.3				
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	40.2	40.2	32.0	20.2	8.0	40.2	8.0	44.2				
Max Q Clear Time (g_c+10), s	11.8	11.8	12.5	6.1	10.0	10.0	3.9	9.9				
Green Ext Time (p_c), s	0.0	2.1	1.7	0.1	0.0	1.4	0.0	1.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	104.5											
HCM 7th LOS	F											
Notes												
User approved pedestrian interval to be less than phase max green.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			↑	↑		4	↑			
Traffic Volume (veh/h)	15	180	0	0	307	241	53	0	273	0	0	0
Future Volume (veh/h)	15	180	0	0	307	241	53	0	273	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1752	1752	0	0	1752	1752	1678	1678	1678			
Adj Flow Rate, veh/h	17	202	0	0	345	271	60	0	0			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	10	10	0	0	10	10	15	15	15			
Cap, veh/h	40	479	0	0	413	350	426	0				
Arrive On Green	0.30	0.30	0.00	0.00	0.24	0.24	0.27	0.00	0.00			
Sat Flow, veh/h	135	1610	0	0	1752	1485	1598	0	1422			
Grp Volume(v), veh/h	219	0	0	0	345	271	60	0	0			
Grp Sat Flow(s), veh/h/ln	1745	0	0	0	1752	1485	1598	0	1422			
Q Serve(g_s), s	6.0	0.0	0.0	0.0	11.2	10.2	1.7	0.0	0.0			
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.0	11.2	10.2	1.7	0.0	0.0			
Prop In Lane	0.08		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	520	0	0	0	413	350	426	0				
V/C Ratio(X)	0.42	0.00	0.00	0.00	0.84	0.77	0.14	0.00				
Avail Cap(c_a), veh/h	520	0	0	0	467	396	426	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	16.9	0.0	0.0	0.0	21.8	21.4	16.8	0.0	0.0			
Incr Delay (d2), s/veh	2.5	0.0	0.0	0.0	11.4	8.3	0.7	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	0.0	5.5	4.1	0.7	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.4	0.0	0.0	0.0	33.2	29.7	17.5	0.0	0.0			
LnGrp LOS	B				C	C	B					
Approach Vol, veh/h	219			616			60					
Approach Delay, s/veh	19.4			31.7			17.5					
Approach LOS	B			C			B					
Timer - Assigned Phs	2			6			8					
Phs Duration (G+Y+Rc), s	21.9			18.1			20.0					
Change Period (Y+Rc), s	4.0			4.0			4.0					
Max Green Setting (Gmax), s	16.0			16.0			16.0					
Max Q Clear Time (g_c+I1), s	8.0			13.2			3.7					
Green Ext Time (p_c), s	0.7			0.9			0.2					

Intersection Summary

HCM 7th Control Delay, s/veh	27.7
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑		↑						↑	↑
Traffic Volume (veh/h)	0	32	12	154	206	0	0	0	0	161	1	11
Future Volume (veh/h)	0	32	12	154	206	0	0	0	0	161	1	11
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1752	1752	1752	1752	0				1678	1678	1678
Adj Flow Rate, veh/h	0	36	13	173	231	0				181	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	10	10	10	10	0				15	15	15
Cap, veh/h	0	65	55	192	257	0				796	4	
Arrive On Green	0.00	0.04	0.04	0.26	0.26	0.00				0.50	0.50	0.00
Sat Flow, veh/h	0	1752	1485	734	981	0				1589	9	1422
Grp Volume(v), veh/h	0	36	13	404	0	0				182	0	0
Grp Sat Flow(s),veh/h/ln	0	1752	1485	1715	0	0				1598	0	1422
Q Serve(g_s), s	0.0	1.2	0.5	13.6	0.0	0.0				3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.2	0.5	13.6	0.0	0.0				3.8	0.0	0.0
Prop In Lane	0.00		1.00	0.43		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	65	55	449	0	0				800	0	
V/C Ratio(X)	0.00	0.55	0.24	0.90	0.00	0.00				0.23	0.00	
Avail Cap(c_a), veh/h	0	467	396	457	0	0				800	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.50	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	28.4	28.1	21.4	0.0	0.0				8.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.1	2.2	11.6	0.0	0.0				0.7	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.2	6.4	0.0	0.0				1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	35.5	30.2	33.0	0.0	0.0				9.1	0.0	0.0
LnGrp LOS		D	C	C						A		
Approach Vol, veh/h		49			404						182	
Approach Delay, s/veh		34.1			33.0						9.1	
Approach LOS		C			C						A	
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				6.2		34.0		19.7				
Change Period (Y+Rc), s				4.0		4.0		4.0				
Max Green Setting (Gmax), s				16.0		16.0		16.0				
Max Q Clear Time (g_c+l1), s				3.2		5.8		15.6				
Green Ext Time (p_c), s				0.1		0.7		0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh			26.2									
HCM 7th LOS			C									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

IPC 20 CEQA Analysis
8: Hopkins Rd & Promontory Pkwy

Existing Plus Background Plus Project Conditions
Timing Plan: AM PEAK HOUR



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (veh/h)	425	130	34	316	39	9
Future Volume (veh/h)	425	130	34	316	39	9
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	478	146	38	355	44	10
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	838	374	255	838	907	807
Arrive On Green	0.25	0.25	0.25	0.25	0.54	0.54
Sat Flow, veh/h	3416	1485	750	3416	1668	1485
Grp Volume(v), veh/h	478	146	38	355	44	10
Grp Sat Flow(s), veh/h/ln	1664	1485	750	1664	1668	1485
Q Serve(g_s), s	5.6	3.7	2.1	4.0	0.6	0.1
Cycle Q Clear(g_c), s	5.6	3.7	7.7	4.0	0.6	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	838	374	255	838	907	807
V/C Ratio(X)	0.57	0.39	0.15	0.42	0.05	0.01
Avail Cap(c_a), veh/h	1361	607	373	1361	907	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.98	0.98	1.00	1.00
Uniform Delay (d), s/veh	14.7	14.0	18.1	14.1	4.8	4.7
Incr Delay (d2), s/veh	0.4	0.4	0.3	0.3	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.1	0.3	1.3	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.1	14.4	18.4	14.4	4.9	4.7
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	624			393	54	
Approach Delay, s/veh	14.9			14.8	4.9	
Approach LOS	B			B	A	
Timer - Assigned Phs	2			4		8
Phs Duration (G+Y+Rc), s	29.1			15.9		15.9
Change Period (Y+Rc), s	4.6			4.6		4.6
Max Green Setting (Gmax), s	17.4			18.4		18.4
Max Q Clear Time (g_c+I1), s	2.6			7.6		9.7
Green Ext Time (p_c), s	0.1			2.7		1.6
Intersection Summary						
HCM 7th Control Delay, s/veh			14.4			
HCM 7th LOS			B			

IPC 20 CEQA Analysis
9: Hansen Rd & Promontory Pkwy

Existing Plus Background Plus Project Conditions
Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	192	84	11	166	38	105	47	35	23	60	39
Future Volume (veh/h)	50	192	84	11	166	38	105	47	35	23	60	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	56	216	94	12	187	43	118	53	39	26	67	44
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	96	711	317	26	571	255	151	952	425	52	755	337
Arrive On Green	0.06	0.21	0.21	0.02	0.17	0.17	0.09	0.29	0.29	0.03	0.23	0.23
Sat Flow, veh/h	1668	3328	1485	1668	3328	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	56	216	94	12	187	43	118	53	39	26	67	44
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1668	1664	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	1.3	2.2	2.2	0.3	2.0	1.0	2.8	0.5	0.8	0.6	0.6	1.0
Cycle Q Clear(g_c), s	1.3	2.2	2.2	0.3	2.0	1.0	2.8	0.5	0.8	0.6	0.6	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	711	317	26	571	255	151	952	425	52	755	337
V/C Ratio(X)	0.58	0.30	0.30	0.46	0.33	0.17	0.78	0.06	0.09	0.50	0.09	0.13
Avail Cap(c_a), veh/h	205	3060	1365	205	3060	1365	368	2693	1201	245	2448	1092
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	13.5	13.5	19.9	14.8	14.4	18.2	10.6	10.7	19.4	12.4	12.6
Incr Delay (d2), s/veh	5.5	0.2	0.5	12.2	0.3	0.3	8.5	0.0	0.1	7.2	0.1	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	0.6	0.2	0.6	0.3	1.2	0.1	0.2	0.3	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.2	13.7	14.0	32.1	15.2	14.7	26.7	10.6	10.8	26.6	12.5	12.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h	366			242			210			137		
Approach Delay, s/veh	15.4			15.9			19.7			15.3		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.6	13.4	5.3	17.5	6.3	11.7	7.7	15.1				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	5.0	37.5	6.0	33.0	5.0	37.5	9.0	30.0				
Max Q Clear Time (g_c+I2), s	12.3	4.2	2.6	2.8	3.3	4.0	4.8	3.0				
Green Ext Time (p_c), s	0.0	1.7	0.0	0.4	0.0	1.3	0.1	0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	16.5											
HCM 7th LOS	B											
Notes												
User approved pedestrian interval to be less than phase max green.												

IPC 20 CEQA Analysis
10: Hansen Rd & Hopkins Rd

Existing Plus Background Plus Project Conditions

Timing Plan: AM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	5	12	11	2	22	41	97	25	66	132	5
Future Volume (veh/h)	5	5	12	11	2	22	41	97	25	66	132	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	6	6	13	12	2	25	46	109	28	74	148	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	13	188	407	24	43	540	66	1085	484	93	1140	508
Arrive On Green	0.01	0.38	0.38	0.01	0.39	0.39	0.04	0.33	0.33	0.06	0.34	0.34
Sat Flow, veh/h	1668	493	1067	1668	111	1390	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	6	0	19	12	0	27	46	109	28	74	148	6
Grp Sat Flow(s),veh/h/ln	1668	0	1560	1668	0	1502	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	0.3	0.0	0.6	0.6	0.0	0.9	2.3	1.9	1.1	3.6	2.5	0.2
Cycle Q Clear(g_c), s	0.3	0.0	0.6	0.6	0.0	0.9	2.3	1.9	1.1	3.6	2.5	0.2
Prop In Lane	1.00		0.68	1.00		0.93	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	13	0	595	24	0	583	66	1085	484	93	1140	508
V/C Ratio(X)	0.46	0.00	0.03	0.49	0.00	0.05	0.70	0.10	0.06	0.79	0.13	0.01
Avail Cap(c_a), veh/h	101	0	595	101	0	583	141	1085	484	161	1140	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	0.0	16.0	40.5	0.0	15.8	39.3	19.5	19.2	38.6	18.7	18.0
Incr Delay (d2), s/veh	23.4	0.0	0.1	14.7	0.0	0.1	12.6	0.2	0.2	14.0	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.3	0.0	0.3	1.1	0.7	0.4	1.8	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.4	0.0	16.1	55.2	0.0	15.9	51.9	19.6	19.4	52.6	18.8	18.0
LnGrp LOS	E		B	E		B	D	B	B	D	B	B
Approach Vol, veh/h	25				39				183		228	
Approach Delay, s/veh	27.7				28.0				27.7		29.8	
Approach LOS	C				C				C		C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.2	36.2	8.6	32.8	4.6	36.8	7.3	34.2				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	5.0	31.6	8.0	27.0	5.0	31.6	7.0	28.0				
Max Q Clear Time (g_c+I2), s	12.6	2.6	5.6	3.9	2.3	2.9	4.3	4.5				
Green Ext Time (p_c), s	0.0	0.1	0.0	0.6	0.0	0.1	0.0	0.8				
Intersection Summary												
HCM 7th Control Delay, s/veh			28.7									
HCM 7th LOS			C									

IPC 20 CEQA Analysis
11: Old Schulte Road & Hansen Rd

Existing Plus Background Plus Project Conditions

Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	172	15	2	393	96	24	3	7	82	2	73
Future Volume (veh/h)	75	172	15	2	393	96	24	3	7	82	2	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	84	193	17	2	442	108	27	3	8	92	2	82
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	15	15	15	15	15	15	10	10	10	10	10	10
Cap, veh/h	121	1082	917	8	964	817	77	37	100	128	210	178
Arrive On Green	0.08	0.64	0.64	0.00	0.57	0.57	0.05	0.09	0.09	0.08	0.12	0.12
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1668	422	1127	1668	1752	1485
Grp Volume(v), veh/h	84	193	17	2	442	108	27	0	11	92	2	82
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1668	0	1549	1668	1752	1485
Q Serve(g_s), s	5.6	5.1	0.5	0.1	16.7	3.8	1.7	0.0	0.7	5.9	0.1	5.7
Cycle Q Clear(g_c), s	5.6	5.1	0.5	0.1	16.7	3.8	1.7	0.0	0.7	5.9	0.1	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		1.00
Lane Grp Cap(c), veh/h	121	1082	917	8	964	817	77	0	137	128	210	178
V/C Ratio(X)	0.70	0.18	0.02	0.26	0.46	0.13	0.35	0.00	0.08	0.72	0.01	0.46
Avail Cap(c_a), veh/h	131	1082	917	131	964	817	137	0	422	197	541	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	7.8	7.0	54.5	13.5	10.8	50.9	0.0	46.0	49.6	42.7	45.1
Incr Delay (d2), s/veh	13.6	0.4	0.0	15.0	1.4	0.3	2.7	0.0	0.4	7.3	0.0	2.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.7	0.1	0.1	5.9	1.2	0.8	0.0	0.3	2.7	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	63.3	8.2	7.1	69.6	14.9	11.1	53.6	0.0	46.4	56.9	42.7	47.8
LnGrp LOS	E	A	A	E	B	B	D		D	E	D	D
Approach Vol, veh/h	294			552			38			176		
Approach Delay, s/veh	23.9			14.4			51.5			52.5		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	77.4	12.5	15.6	12.3	69.7	9.1	19.0				
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	9.0	* 38	13.0	30.0	9.0	37.7	9.0	34.0				
Max Q Clear Time (g_c+I2), s	12.5	7.1	7.9	2.7	7.6	18.7	3.7	7.7				
Green Ext Time (p_c), s	0.0	1.6	0.1	0.0	0.0	3.9	0.0	0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	24.7											
HCM 7th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection

Intersection Delay, s/veh 7.9

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	76	2	13	33	5	4
Future Vol, veh/h	76	2	13	33	5	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	85	2	15	37	6	4
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	8	7.8	7.7
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	4	76	2	13	33
LT Vol	5	0	0	0	13	0
Through Vol	0	0	76	0	0	33
RT Vol	0	4	0	2	0	0
Lane Flow Rate	6	4	85	2	15	37
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.009	0.005	0.112	0.003	0.021	0.049
Departure Headway (Hd)	5.517	4.315	4.712	4.012	5.229	4.729
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	653	834	762	892	685	757
Service Time	3.217	2.015	2.436	1.735	2.96	2.459
HCM Lane V/C Ratio	0.009	0.005	0.112	0.002	0.022	0.049
HCM Control Delay, s/veh	8.3	7	8	6.7	8.1	7.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.4	0	0.1	0.2

IPC 20 CEQA Analysis
13: Old Schulte Road & Bud Lyons Wy

Existing Plus Background Plus Project Conditions

Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	205	0	0	475	23	0	0	0	7	0	27
Future Volume (veh/h)	65	205	0	0	475	23	0	0	0	7	0	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	0	1752
Adj Flow Rate, veh/h	73	230	0	0	534	26	0	0	0	8	0	30
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	0	10
Cap, veh/h	88	1526		2	1360	1152	31	2	0	13	0	0
Arrive On Green	0.05	0.87	0.00	0.00	0.78	0.78	0.00	0.00	0.00	0.01	0.00	0.00
Sat Flow, veh/h	1668	1752	1485	1668	1752	1485	1668	1752	0	1668	8	
Grp Volume(v), veh/h	73	230	0	0	534	26	0	0	0	8	95.6	
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1485	1668	1752	0	1668	F	
Q Serve(g_s), s	4.1	1.9	0.0	0.0	9.3	0.4	0.0	0.0	0.0	0.5		
Cycle Q Clear(g_c), s	4.1	1.9	0.0	0.0	9.3	0.4	0.0	0.0	0.0	0.5		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		
Lane Grp Cap(c), veh/h	88	1526		2	1360	1152	31	2	0	13		
V/C Ratio(X)	0.83	0.15		0.00	0.39	0.02	0.00	0.00	0.00	0.60		
Avail Cap(c_a), veh/h	88	1526		70	1360	1152	70	570	0	70		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	0.00	0.00	0.90	0.90	0.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	44.6	0.9	0.0	0.0	3.4	2.4	0.0	0.0	0.0	47.0		
Incr Delay (d2), s/veh	45.5	0.2	0.0	0.0	0.8	0.0	0.0	0.0	0.0	48.7		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.7	0.1	0.0	0.0	1.9	0.1	0.0	0.0	0.0	0.4		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	90.1	1.1	0.0	0.0	4.2	2.5	0.0	0.0	0.0	95.6		
LnGrp LOS	F	A			A	A				F		
Approach Vol, veh/h	303			560			0					
Approach Delay, s/veh	22.6			4.1			0.0					
Approach LOS	C			A								
Timer - Assigned Phs	1	2	3		5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	89.2	5.8		9.0	80.2	5.8	0.0				
Change Period (Y+Rc), s	4.0	6.5	4.0		4.0	6.5	5.0	4.6				
Max Green Setting (Gmax), s	4.0	36.0	4.0		5.0	35.0	4.0	30.9				
Max Q Clear Time (g_c+I10), s	4.0	3.9	0.0		6.1	11.3	2.5	0.0				
Green Ext Time (p_c), s	0.0	1.7	0.0		0.0	4.7	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	11.4											
HCM 7th LOS	B											
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	7	18	19	21	29
Future Vol, veh/h	9	7	18	19	21	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	10	8	20	21	23	32
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	98	39	54	0	-	0
Stage 1	39	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.5	6.3	4.2	-	-	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	2.29	-	-	-
Pot Cap-1 Maneuver	881	1011	1501	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	943	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	870	1011	1501	-	-	-
Mov Cap-2 Maneuver	870	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	943	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s/v	8.96	3.61		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1501	-	926	-	-	
HCM Lane V/C Ratio	0.013	-	0.019	-	-	
HCM Control Delay (s/veh)	7.4	-	9	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	108	2	2	190	28	2	2	2	11	2	17
Future Volume (veh/h)	9	108	2	2	190	28	2	2	2	11	2	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1441	714	1900	1856	1900	1159	1900	1411	1900	1976	1900
Adj Flow Rate, veh/h	10	116	2	2	204	30	2	2	2	12	2	18
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	31	80	0	3	0	50	0	33	0	0	0
Cap, veh/h	19	286	5	6	307	45	78	78	78	88	15	131
Arrive On Green	0.01	0.20	0.20	0.00	0.19	0.19	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1810	1412	24	1810	1581	233	588	588	588	662	110	992
Grp Volume(v), veh/h	10	0	118	2	0	234	6	0	0	32	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1436	1810	0	1814	1765	0	0	1764	0	0
Q Serve(g_s), s	0.2	0.0	2.2	0.0	0.0	3.6	0.1	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	2.2	0.0	0.0	3.6	0.1	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.13	0.33		0.33	0.37		0.56
Lane Grp Cap(c), veh/h	19	0	291	6	0	352	234	0	0	234	0	0
V/C Ratio(X)	0.52	0.00	0.41	0.33	0.00	0.66	0.03	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	240	0	809	240	0	1021	994	0	0	935	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.9	0.0	10.5	15.0	0.0	11.2	11.4	0.0	0.0	11.6	0.0	0.0
Incr Delay (d2), s/veh	19.9	0.0	0.9	29.6	0.0	2.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.4	0.1	0.0	1.0	0.0	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.7	0.0	11.4	44.6	0.0	13.4	11.4	0.0	0.0	11.8	0.0	0.0
LnGrp LOS	C		B	D		B	B			B		
Approach Vol, veh/h	128			236			6			32		
Approach Delay, s/veh	13.2			13.7			11.4			11.8		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	8.0		4.1	10.1	8.0		4.3	9.9				
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0		4.0	4.0				
Max Green Setting (Gmax), s	17.0		4.0	17.0	16.0		4.0	17.0				
Max Q Clear Time (g_c+I1), s	2.1		2.0	4.2	2.5		2.2	5.6				
Green Ext Time (p_c), s	0.0		0.0	0.3	0.1		0.0	0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	13.3											
HCM 7th LOS	B											

IPC 20 CEQA Analysis
16: Lammers Road & Eleventh St

Existing Plus Background Plus Project Conditions

Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	382	89	457	1183	78	120	140	559	53	120	76
Future Volume (veh/h)	23	382	89	457	1183	78	120	140	559	53	120	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	26	429	0	513	1329	0	135	157	0	60	135	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	64	2752		380	3219		127	250		99	221	
Arrive On Green	0.02	0.58	0.00	0.12	0.67	0.00	0.04	0.08	0.00	0.03	0.07	0.00
Sat Flow, veh/h	3237	4782	1485	3237	4782	1485	3237	3328	1485	3237	3328	1485
Grp Volume(v), veh/h	26	429	0	513	1329	0	135	157	0	60	135	0
Grp Sat Flow(s),veh/h/ln	1618	1594	1485	1618	1594	1485	1618	1664	1485	1618	1664	1485
Q Serve(g_s), s	0.9	4.8	0.0	13.5	14.5	0.0	4.5	5.3	0.0	2.1	4.5	0.0
Cycle Q Clear(g_c), s	0.9	4.8	0.0	13.5	14.5	0.0	4.5	5.3	0.0	2.1	4.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	2752		380	3219		127	250		99	221	
V/C Ratio(X)	0.41	0.16		1.35	0.41		1.07	0.63		0.61	0.61	
Avail Cap(c_a), veh/h	113	2752		380	3219		127	926		141	941	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.7	11.4	0.0	50.8	8.5	0.0	55.3	51.6	0.0	55.1	52.2	0.0
Incr Delay (d2), s/veh	4.2	0.1	0.0	174.1	0.4	0.0	98.7	3.7	0.0	2.2	3.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.6	0.0	14.5	4.3	0.0	3.5	2.3	0.0	0.9	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.9	11.5	0.0	224.9	8.9	0.0	154.0	55.3	0.0	57.3	56.1	0.0
LnGrp LOS	E	B		F	A		F	E		E	E	
Approach Vol, veh/h	455				1842		292		195			
Approach Delay, s/veh	14.3				69.0		100.9		56.5			
Approach LOS	B				E		F		E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	72.3	10.0	13.7	7.8	83.5	9.0	14.7				
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1				
Max Green Setting (Gmax), s	13.5	41.3	4.5	32.5	4.0	50.8	5.0	32.0				
Max Q Clear Time (g_c+Tb), s	15.5	6.8	6.5	6.5	2.9	16.5	4.1	7.3				
Green Ext Time (p_c), s	0.0	2.8	0.0	1.1	0.0	11.2	0.0	1.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	62.6											
HCM 7th LOS	E											
Notes												
User approved pedestrian interval to be less than phase max green.												
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

IPC 20 CEQA Analysis
17: Lammers Road & Old Schulte Road

Existing Plus Background Plus Project Conditions
Timing Plan: AM PEAK HOUR



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	155	418	490	260	78
Future Volume (veh/h)	39	155	418	490	260	78
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1678	1752	1752	1870	1870
Adj Flow Rate, veh/h	44	174	470	551	292	88
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	15	15	10	10	2	2
Cap, veh/h	247	219	538	1170	370	112
Arrive On Green	0.15	0.15	0.32	0.67	0.27	0.27
Sat Flow, veh/h	1598	1422	1668	1752	1380	416
Grp Volume(v), veh/h	44	174	470	551	0	380
Grp Sat Flow(s), veh/h/ln	1598	1422	1668	1752	0	1796
Q Serve(g_s), s	1.5	7.2	16.3	9.3	0.0	12.0
Cycle Q Clear(g_c), s	1.5	7.2	16.3	9.3	0.0	12.0
Prop In Lane	1.00	1.00	1.00			0.23
Lane Grp Cap(c), veh/h	247	219	538	1170	0	482
V/C Ratio(X)	0.18	0.79	0.87	0.47	0.00	0.79
Avail Cap(c_a), veh/h	529	471	1133	2538	0	1245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.5	25.0	19.6	4.9	0.0	20.8
Incr Delay (d2), s/veh	0.3	6.4	4.6	0.3	0.0	2.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.8	6.2	2.1	0.0	4.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	22.9	31.3	24.2	5.2	0.0	23.7
LnGrp LOS	C	C	C	A		C
Approach Vol, veh/h	218			1021	380	
Approach Delay, s/veh	29.6			13.9	23.7	
Approach LOS	C			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		47.1		14.2	24.5	22.6
Change Period (Y+Rc), s		6.2		4.7	4.7	6.2
Max Green Setting (Gmax), s		88.8		20.3	41.6	42.5
Max Q Clear Time (g_c+l1), s		11.3		9.2	18.3	14.0
Green Ext Time (p_c), s		4.1		0.5	1.5	2.4
Intersection Summary						
HCM 7th Control Delay, s/veh			18.4			
HCM 7th LOS			B			

IPC 20 CEQA Analysis
18: Lammers Road & Valpico Road

Existing Plus Background Plus Project Conditions
Timing Plan: AM PEAK HOUR

Intersection												
Int Delay, s/veh	14.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⬇			⬆			⬆			⬆	
Traffic Vol, veh/h	1	0	0	6	0	665	0	21	8	325	15	0
Future Vol, veh/h	1	0	0	6	0	665	0	21	8	325	15	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	1	0	0	7	0	747	0	24	9	365	17	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	771	780	17	775	775	28	17	0	0	33	0	0
Stage 1	747	747	-	28	28	-	-	-	-	-	-	-
Stage 2	24	33	-	747	747	-	-	-	-	-	-	-
Critical Hdwy	7.2	6.6	6.3	7.2	6.6	6.3	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.2	5.6	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.2	5.6	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.59	4.09	3.39	3.59	4.09	3.39	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	308	318	1039	305	320	1024	1550	-	-	1529	-	-
Stage 1	393	408	-	969	856	-	-	-	-	-	-	-
Stage 2	974	852	-	393	408	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	63	241	1039	232	243	1024	1550	-	-	1529	-	-
Mov Cap-2 Maneuver	63	241	-	232	243	-	-	-	-	-	-	-
Stage 1	298	310	-	969	856	-	-	-	-	-	-	-
Stage 2	264	852	-	298	310	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s/v63.01			19		0		7.73					
HCM LOS	F		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1550	-	-	63	994	1515	-	-				
HCM Lane V/C Ratio	-	-	-	0.018	0.758	0.239	-	-				
HCM Control Delay (s/veh)	0	-	-	63	19	8.1	0	-				
HCM Lane LOS	A	-	-	F	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	7.5	0.9	-	-				

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	1	40	35	5	14
Future Vol, veh/h	10	1	40	35	5	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	11	1	43	38	5	15

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	89	63	0	0	82
Stage 1	63	-	-	-	-
Stage 2	26	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2
Critical Hdwy Stg 1	5.5	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29
Pot Cap-1 Maneuver	893	980	-	-	1467
Stage 1	940	-	-	-	-
Stage 2	976	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	890	980	-	-	1467
Mov Cap-2 Maneuver	890	-	-	-	-
Stage 1	940	-	-	-	-
Stage 2	973	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.07	0	1.96
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	897	1467
HCM Lane V/C Ratio	-	-	0.013	0.004
HCM Control Delay (s/veh)	-	-	9.1	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Vol, veh/h	10	2	7	34	5	9
Future Vol, veh/h	10	2	7	34	5	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	11	2	8	37	5	10

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	47	26	0
Stage 1	26	-	-
Stage 2	21	-	-
Critical Hdwy	6.5	6.3	-
Critical Hdwy Stg 1	5.5	-	-
Critical Hdwy Stg 2	5.5	-	-
Follow-up Hdwy	3.59	3.39	-
Pot Cap-1 Maneuver	943	1027	-
Stage 1	976	-	-
Stage 2	982	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	940	1027	-
Mov Cap-2 Maneuver	940	-	-
Stage 1	976	-	-
Stage 2	978	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.83	0	2.64
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	953	1514
HCM Lane V/C Ratio	-	-	0.014	0.004
HCM Control Delay (s/veh)	-	-	8.8	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	1.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	52	29	12	37	9	4
Future Vol, veh/h	52	29	12	37	9	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	57	32	13	40	10	4
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	88	0	139	72
Stage 1	-	-	-	-	72	-
Stage 2	-	-	-	-	66	-
Critical Hdwy	-	-	4.2	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	2.29	-	3.59	3.39
Pot Cap-1 Maneuver	-	-	1459	-	836	968
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	936	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1459	-	829	968
Mov Cap-2 Maneuver	-	-	-	-	829	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	928	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		1.83		9.22	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	867	-	-	1459	-	
HCM Lane V/C Ratio	0.016	-	-	0.009	-	
HCM Control Delay (s/veh)	9.2	-	-	7.5	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

IPC 20 CEQA Analysis
22: Lammers Road & Promontory Extension

Existing Plus Background Plus Project Conditions
Timing Plan: AM PEAK HOUR

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	330	26	52	462	291	375
Future Volume (veh/h)	330	26	52	462	291	375
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	359	28	57	502	316	408
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	412	367	70	1070	345	446
Arrive On Green	0.25	0.25	0.04	0.61	0.50	0.50
Sat Flow, veh/h	1668	1485	1668	1752	694	896
Grp Volume(v), veh/h	359	28	57	502	0	724
Grp Sat Flow(s),veh/h/ln	1668	1485	1668	1752	0	1590
Q Serve(g_s), s	11.6	0.8	1.9	8.8	0.0	23.6
Cycle Q Clear(g_c), s	11.6	0.8	1.9	8.8	0.0	23.6
Prop In Lane	1.00	1.00	1.00			0.56
Lane Grp Cap(c), veh/h	412	367	70	1070	0	791
V/C Ratio(X)	0.87	0.08	0.81	0.47	0.00	0.91
Avail Cap(c_a), veh/h	474	422	119	1121	0	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.3	16.2	26.7	6.0	0.0	13.0
Incr Delay (d2), s/veh	14.5	0.1	19.8	0.3	0.0	16.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.8	1.1	1.9	0.0	10.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	34.8	16.3	46.5	6.3	0.0	30.0
LnGrp LOS	C	B	D	A		C
Approach Vol, veh/h	387			559	724	
Approach Delay, s/veh	33.5			10.4	30.0	
Approach LOS	C			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		38.4		17.9	6.4	32.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		36.0		16.0	4.0	28.0
Max Q Clear Time (g_c+l1), s		10.8		13.6	3.9	25.6
Green Ext Time (p_c), s		3.0		0.3	0.0	1.2
Intersection Summary						
HCM 7th Control Delay, s/veh			24.2			
HCM 7th LOS			C			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰	↰↰	↰	↰↰			↰↰↰	↰
Traffic Volume (veh/h)	0	0	0	513	0	255	93	564	0	0	373	86
Future Volume (veh/h)	0	0	0	513	0	255	93	564	0	0	373	86
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1752	1752	1752	1752	1752	0	0	1752	1752
Adj Flow Rate, veh/h				576	0	287	104	634	0	0	419	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				10	10	10	10	10	0	0	10	10
Cap, veh/h				652	0	1021	130	1584	0	0	1584	
Arrive On Green				0.39	0.00	0.39	0.08	0.48	0.00	0.00	0.33	0.00
Sat Flow, veh/h				1668	0	2613	1668	3416	0	0	4940	1485
Grp Volume(v), veh/h				576	0	287	104	634	0	0	419	0
Grp Sat Flow(s),veh/h/ln				1668	0	1306	1668	1664	0	0	1594	1485
Q Serve(g_s), s				19.3	0.0	4.5	3.7	7.4	0.0	0.0	3.9	0.0
Cycle Q Clear(g_c), s				19.3	0.0	4.5	3.7	7.4	0.0	0.0	3.9	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				652	0	1021	130	1584	0	0	1584	
V/C Ratio(X)				0.88	0.00	0.28	0.80	0.40	0.00	0.00	0.26	
Avail Cap(c_a), veh/h				723	0	1132	139	1584	0	0	1584	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.97	0.97	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				17.0	0.0	12.5	27.2	10.2	0.0	0.0	14.7	0.0
Incr Delay (d2), s/veh				11.7	0.0	0.1	25.4	0.7	0.0	0.0	0.4	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.5	0.0	1.2	2.3	2.5	0.0	0.0	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				28.7	0.0	12.7	52.6	10.9	0.0	0.0	15.1	0.0
LnGrp LOS				C		B	D	B			B	
Approach Vol, veh/h					863			738			419	
Approach Delay, s/veh					23.3			16.8			15.1	
Approach LOS					C			B			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		32.6			8.7	23.9		27.4				
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0				
Max Green Setting (Gmax), s		26.0			5.0	17.0		26.0				
Max Q Clear Time (g_c+I1), s		9.4			5.7	5.9		21.3				
Green Ext Time (p_c), s		4.0			0.0	2.1		2.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				19.2								
HCM 7th LOS				B								
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	5	58	0	0	0	0	394	1115	0	682	0
Future Volume (veh/h)	263	5	58	0	0	0	0	394	1115	0	682	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No						No				No	
Adj Sat Flow, veh/h/ln	1752	1752	1752				0	1752	1752	0	1752	1752
Adj Flow Rate, veh/h	300	0	65				0	443	1253	0	766	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10				0	10	10	0	10	10
Cap, veh/h	391	0	174				0	2642	1179	0	2642	
Arrive On Green	0.12	0.00	0.12				0.00	0.79	0.79	0.00	0.79	0.00
Sat Flow, veh/h	3337	0	1485				0	3416	1485	0	3416	1485
Grp Volume(v), veh/h	300	0	65				0	443	1253	0	766	0
Grp Sat Flow(s),veh/h/ln	1668	0	1485				0	1664	1485	0	1664	1485
Q Serve(g_s), s	7.8	0.0	3.6				0.0	2.8	71.4	0.0	5.5	0.0
Cycle Q Clear(g_c), s	7.8	0.0	3.6				0.0	2.8	71.4	0.0	5.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	391	0	174				0	2642	1179	0	2642	
V/C Ratio(X)	0.77	0.00	0.37				0.00	0.17	1.06	0.00	0.29	
Avail Cap(c_a), veh/h	593	0	264				0	2642	1179	0	2642	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.64	0.64	0.00	0.97	0.00
Uniform Delay (d), s/veh	38.5	0.0	36.7				0.0	2.2	9.3	0.0	2.5	0.0
Incr Delay (d2), s/veh	3.3	0.0	1.3				0.0	0.1	40.1	0.0	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.0	1.4				0.0	0.6	26.1	0.0	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.8	0.0	38.0				0.0	2.3	49.4	0.0	2.8	0.0
LnGrp LOS	D		D					A	F		A	
Approach Vol, veh/h	365						1696			766		
Approach Delay, s/veh	41.1						37.1			2.8		
Approach LOS	D						D			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	75.4			14.6			75.4					
Change Period (Y+Rc), s	4.0			4.0			4.0					
Max Green Setting (Gmax), s	66.0			16.0			66.0					
Max Q Clear Time (g_c+l1), s	73.4			9.8			7.5					
Green Ext Time (p_c), s	0.0			0.7			6.6					
Intersection Summary												
HCM 7th Control Delay, s/veh			28.3									
HCM 7th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	5	39	41	5	39	54	1374	46	48	620	69
Future Volume (veh/h)	90	5	39	41	5	39	54	1374	46	48	620	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	101	6	44	46	6	44	61	1544	52	54	697	78
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	230	177	158	106	341	289	76	1852	826	66	1894	845
Arrive On Green	0.11	0.11	0.11	0.03	0.19	0.19	0.05	0.56	0.56	0.04	0.57	0.57
Sat Flow, veh/h	1269	1664	1485	3237	1752	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	101	6	44	46	6	44	61	1544	52	54	697	78
Grp Sat Flow(s),veh/h/ln	1269	1664	1485	1618	1752	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	5.8	0.2	2.1	1.1	0.2	1.9	2.7	29.0	1.2	2.4	8.6	1.8
Cycle Q Clear(g_c), s	5.8	0.2	2.1	1.1	0.2	1.9	2.7	29.0	1.2	2.4	8.6	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	177	158	106	341	289	76	1852	826	66	1894	845
V/C Ratio(X)	0.44	0.03	0.28	0.43	0.02	0.15	0.80	0.83	0.06	0.81	0.37	0.09
Avail Cap(c_a), veh/h	364	352	314	171	547	464	155	2027	904	102	1983	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	30.3	31.1	35.8	24.6	25.2	35.7	13.9	7.7	36.0	8.9	7.4
Incr Delay (d2), s/veh	1.3	0.1	0.9	1.0	0.0	0.2	17.6	3.1	0.0	14.1	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.1	0.8	0.4	0.1	0.7	1.4	9.1	0.4	1.2	2.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.1	30.3	32.0	36.9	24.6	25.5	53.3	17.0	7.7	50.1	9.0	7.5
LnGrp LOS	C	C	C	D	C	C	D	B	A	D	A	A
Approach Vol, veh/h	151			96			1657			829		
Approach Delay, s/veh	33.3			30.9			18.1			11.6		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	47.8	6.7	12.6	7.4	48.8	19.3						
Change Period (Y+Rc), s	5.4	5.8	4.2	* 4.6	4.0	5.8	4.6					
Max Green Setting (Gmax), s	4.6	46.0	4.0	* 16	7.0	45.0	23.6					
Max Q Clear Time (g_c+14.4), s	14.4	31.0	3.1	7.8	4.7	10.6	3.9					
Green Ext Time (p_c), s	0.0	11.0	0.0	0.3	0.0	7.6	0.1					

Intersection Summary

HCM 7th Control Delay, s/veh	17.4
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	3	5	96	12	749	28	677	43	336	415	5
Future Volume (veh/h)	65	3	5	96	12	749	28	677	43	336	415	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	73	3	6	108	13	842	31	761	48	378	466	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	70	467	396	125	526	784	45	1320	588	351	838	709
Arrive On Green	0.04	0.27	0.27	0.08	0.30	0.30	0.03	0.40	0.40	0.11	0.48	0.48
Sat Flow, veh/h	1668	1752	1485	1668	1752	2613	1668	3328	1483	3237	1752	1484
Grp Volume(v), veh/h	73	3	6	108	13	842	31	761	48	378	466	6
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1306	1668	1664	1483	1618	1752	1484
Q Serve(g_s), s	5.0	0.2	0.4	7.7	0.6	36.0	2.2	21.5	2.4	13.0	22.7	0.3
Cycle Q Clear(g_c), s	5.0	0.2	0.4	7.7	0.6	36.0	2.2	21.5	2.4	13.0	22.7	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	467	396	125	526	784	45	1320	588	351	838	709
V/C Ratio(X)	1.05	0.01	0.02	0.86	0.02	1.07	0.69	0.58	0.08	1.08	0.56	0.01
Avail Cap(c_a), veh/h	70	467	396	125	526	784	70	1320	588	351	838	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	57.5	32.3	32.4	54.9	29.6	42.0	57.9	28.3	22.6	53.5	22.3	16.4
Incr Delay (d2), s/veh	122.5	0.0	0.0	36.6	0.0	51.2	17.4	1.8	0.3	69.5	2.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.1	0.1	4.5	0.3	16.9	1.1	8.5	0.9	8.5	9.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	180.0	32.3	32.4	91.5	29.6	93.2	75.3	30.2	22.8	123.0	24.8	16.4
LnGrp LOS	F	C	C	F	C	F	E	C	C	F	C	B
Approach Vol, veh/h	82			963			840			850		
Approach Delay, s/veh	163.8			92.1			31.4			68.4		
Approach LOS	F			F			C			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	63.2	13.0	36.6	17.0	53.4	9.0	40.6				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	55.6	9.0	32.0	13.0	47.6	5.0	36.0				
Max Q Clear Time (g_c+14.2), s	14.2	24.7	9.7	2.4	15.0	23.5	7.0	38.0				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.0	0.0	5.2	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	68.3											
HCM 7th LOS	E											
Notes												
User approved pedestrian interval to be less than phase max green.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	35	99	256	33	293	59	220	354	218	234	18
Future Volume (veh/h)	56	35	99	256	33	293	59	220	354	218	234	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1106	1660	1752	1060	1589	1678	1106	1660	1752	1106	1660	1752
Adj Flow Rate, veh/h	63	39	111	288	37	329	66	247	398	245	263	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	15	15	15	10	10	10	10	10	10
Cap, veh/h	70	179	160	928	819	827	70	594	492	136	594	280
Arrive On Green	0.07	0.11	0.11	0.47	0.52	0.52	0.07	0.19	0.19	0.07	0.19	0.19
Sat Flow, veh/h	1054	1660	1485	1958	1589	1422	1054	3153	2613	2044	3153	1485
Grp Volume(v), veh/h	63	39	111	288	37	329	66	247	398	245	263	20
Grp Sat Flow(s),veh/h/ln	1054	1660	1485	979	1589	1422	1054	1577	1306	1022	1577	1485
Q Serve(g_s), s	7.1	2.6	8.7	10.9	1.4	15.1	7.5	8.3	17.5	8.0	8.9	1.3
Cycle Q Clear(g_c), s	7.1	2.6	8.7	10.9	1.4	15.1	7.5	8.3	17.5	8.0	8.9	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	179	160	928	819	827	70	594	492	136	594	280
V/C Ratio(X)	0.90	0.22	0.69	0.31	0.05	0.40	0.94	0.42	0.81	1.80	0.44	0.07
Avail Cap(c_a), veh/h	70	431	386	928	819	827	70	1161	962	136	1161	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	48.9	51.6	19.5	14.4	13.7	55.8	42.9	46.6	56.0	43.1	40.1
Incr Delay (d2), s/veh	72.7	0.6	5.3	0.3	0.0	0.3	86.4	0.5	3.2	386.6	0.5	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	1.1	3.4	2.4	0.5	4.5	3.6	3.2	5.7	9.3	3.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	128.3	49.5	56.9	19.7	14.5	14.0	142.1	43.4	49.9	442.6	43.7	40.2
LnGrp LOS	F	D	E	B	B	B	F	D	D	F	D	D
Approach Vol, veh/h	213			654			711			528		
Approach Delay, s/veh	76.7			16.5			56.2			228.7		
Approach LOS	E			B			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.4	60.9	18.7	12.0	28.4	12.0	67.6					
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	44.2	17.0	31.2	8.0	44.2	8.0	40.2					
Max Q Clear Time (g_c+1.0), s	19.5	12.9	10.7	9.5	10.9	9.1	17.1					
Green Ext Time (p_c), s	0.0	3.1	0.5	0.5	0.0	1.7	0.0	1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	89.2											
HCM 7th LOS	F											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↑	↗		↰	↗			
Traffic Volume (veh/h)	8	459	0	0	363	226	6	1	171	0	0	0
Future Volume (veh/h)	8	459	0	0	363	226	6	1	171	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1752	1752	0	0	1752	1752	1678	1678	1678			
Adj Flow Rate, veh/h	9	516	0	0	408	254	7	1	0			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	10	10	0	0	10	10	15	15	15			
Cap, veh/h	11	635	0	0	452	383	300	43				
Arrive On Green	0.37	0.37	0.00	0.00	0.26	0.26	0.21	0.21	0.00			
Sat Flow, veh/h	30	1720	0	0	1752	1485	1406	201	1422			
Grp Volume(v), veh/h	525	0	0	0	408	254	8	0	0			
Grp Sat Flow(s),veh/h/ln	1750	0	0	0	1752	1485	1607	0	1422			
Q Serve(g_s), s	20.3	0.0	0.0	0.0	16.9	11.5	0.3	0.0	0.0			
Cycle Q Clear(g_c), s	20.3	0.0	0.0	0.0	16.9	11.5	0.3	0.0	0.0			
Prop In Lane	0.02		0.00	0.00		1.00	0.87		1.00			
Lane Grp Cap(c), veh/h	646	0	0	0	452	383	343	0				
V/C Ratio(X)	0.81	0.00	0.00	0.00	0.90	0.66	0.02	0.00				
Avail Cap(c_a), veh/h	646	0	0	0	467	396	343	0				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	21.3	0.0	0.0	0.0	26.9	24.9	23.3	0.0	0.0			
Incr Delay (d2), s/veh	8.6	0.0	0.0	0.0	20.4	4.0	0.1	0.0	0.0			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	9.2	4.3	0.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.9	0.0	0.0	0.0	47.3	28.9	23.4	0.0	0.0			
LnGrp LOS	C				D	C	C					
Approach Vol, veh/h	525				662				8			
Approach Delay, s/veh	29.9				40.2				23.4			
Approach LOS	C				D				C			
Timer - Assigned Phs	2				6				8			
Phs Duration (G+Y+Rc), s	31.7				23.3				20.0			
Change Period (Y+Rc), s	4.0				4.0				4.0			
Max Green Setting (Gmax), s	27.0				20.0				16.0			
Max Q Clear Time (g_c+I1), s	22.3				18.9				2.3			
Green Ext Time (p_c), s	1.4				0.4				0.0			
Intersection Summary												
HCM 7th Control Delay, s/veh			35.6									
HCM 7th LOS			D									
Notes												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑		↑						↑	↑
Traffic Volume (veh/h)	0	187	142	348	21	0	0	0	0	279	4	68
Future Volume (veh/h)	0	187	142	348	21	0	0	0	0	279	4	68
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1752	1752	1752	1752	0				1678	1678	1678
Adj Flow Rate, veh/h	0	210	160	391	24	0				313	4	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	10	10	10	10	0				15	15	15
Cap, veh/h	0	287	243	420	26	0				583	7	
Arrive On Green	0.00	0.16	0.16	0.27	0.27	0.00				0.37	0.37	0.00
Sat Flow, veh/h	0	1752	1485	1576	97	0				1579	20	1422
Grp Volume(v), veh/h	0	210	160	415	0	0				317	0	0
Grp Sat Flow(s),veh/h/ln	0	1752	1485	1673	0	0				1599	0	1422
Q Serve(g_s), s	0.0	6.8	6.1	14.5	0.0	0.0				9.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.8	6.1	14.5	0.0	0.0				9.4	0.0	0.0
Prop In Lane	0.00		1.00	0.94		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	287	243	446	0	0				591	0	
V/C Ratio(X)	0.00	0.73	0.66	0.93	0.00	0.00				0.54	0.00	
Avail Cap(c_a), veh/h	0	467	396	446	0	0				591	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.29	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	23.8	23.5	21.5	0.0	0.0				14.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.6	3.0	10.4	0.0	0.0				3.5	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	2.2	6.4	0.0	0.0				3.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	27.4	26.5	31.9	0.0	0.0				18.3	0.0	0.0
LnGrp LOS		C	C	C						B		
Approach Vol, veh/h		370			415						317	
Approach Delay, s/veh		27.0			31.9						18.3	
Approach LOS		C			C						B	
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				13.8		26.2		20.0				
Change Period (Y+Rc), s				4.0		4.0		4.0				
Max Green Setting (Gmax), s				16.0		16.0		16.0				
Max Q Clear Time (g_c+l1), s				8.8		11.4		16.5				
Green Ext Time (p_c), s				1.0		0.8		0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	26.4
HCM 7th LOS	C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

IPC 20 CEQA Analysis
8: Hopkins Rd & Promontory Pkwy

Existing Plus Background Plus Project Conditions
Timing Plan: PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	294	80	20	605	229	48
Future Volume (veh/h)	294	80	20	605	229	48
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	330	90	22	680	257	54
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	952	425	348	952	850	756
Arrive On Green	0.29	0.29	0.29	0.29	0.51	0.51
Sat Flow, veh/h	3416	1485	905	3416	1668	1485
Grp Volume(v), veh/h	330	90	22	680	257	54
Grp Sat Flow(s),veh/h/ln	1664	1485	905	1664	1668	1485
Q Serve(g_s), s	3.5	2.1	0.9	8.2	4.0	0.8
Cycle Q Clear(g_c), s	3.5	2.1	4.4	8.2	4.0	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	952	425	348	952	850	756
V/C Ratio(X)	0.35	0.21	0.06	0.71	0.30	0.07
Avail Cap(c_a), veh/h	1287	574	439	1287	850	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	12.7	12.2	14.5	14.4	6.4	5.6
Incr Delay (d2), s/veh	0.2	0.2	0.1	1.0	0.9	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.6	0.2	2.6	1.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	12.9	12.4	14.5	15.4	7.3	5.8
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	420			702	311	
Approach Delay, s/veh	12.8			15.4	7.1	
Approach LOS	B			B	A	
Timer - Assigned Phs	2		4		8	
Phs Duration (G+Y+Rc), s	27.5		17.5		17.5	
Change Period (Y+Rc), s	4.6		4.6		4.6	
Max Green Setting (Gmax), s	18.4		17.4		17.4	
Max Q Clear Time (g_c+I1), s	6.0		5.5		10.2	
Green Ext Time (p_c), s	0.7		1.8		2.6	
Intersection Summary						
HCM 7th Control Delay, s/veh		12.8				
HCM 7th LOS		B				

IPC 20 CEQA Analysis
9: Hansen Rd & Promontory Pkwy

Existing Plus Background Plus Project Conditions

Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	204	61	24	220	25	249	73	49	41	44	54
Future Volume (veh/h)	44	204	61	24	220	25	249	73	49	41	44	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	49	229	69	27	247	28	280	82	55	46	49	61
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	84	562	251	53	500	223	322	1180	526	80	698	311
Arrive On Green	0.05	0.17	0.17	0.03	0.15	0.15	0.19	0.35	0.35	0.05	0.21	0.21
Sat Flow, veh/h	1668	3328	1485	1668	3328	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	49	229	69	27	247	28	280	82	55	46	49	61
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1668	1664	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	1.3	2.9	1.9	0.7	3.2	0.8	7.6	0.8	1.2	1.3	0.6	1.6
Cycle Q Clear(g_c), s	1.3	2.9	1.9	0.7	3.2	0.8	7.6	0.8	1.2	1.3	0.6	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	84	562	251	53	500	223	322	1180	526	80	698	311
V/C Ratio(X)	0.58	0.41	0.28	0.51	0.49	0.13	0.87	0.07	0.10	0.57	0.07	0.20
Avail Cap(c_a), veh/h	179	2606	1162	215	2677	1194	322	2284	1019	250	2142	955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	17.3	16.9	22.2	18.2	17.2	18.2	10.0	10.1	21.7	14.8	15.2
Incr Delay (d2), s/veh	6.3	0.5	0.6	7.5	0.8	0.3	21.6	0.0	0.1	6.3	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.0	0.6	0.4	1.1	0.2	4.3	0.2	0.3	0.6	0.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.9	17.8	17.5	29.7	18.9	17.4	39.9	10.0	10.2	28.0	14.8	15.5
LnGrp LOS	C	B	B	C	B	B	D	A	B	C	B	B
Approach Vol, veh/h	347			302			417			156		
Approach Delay, s/veh	19.1			19.8			30.1			19.0		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	12.6	6.2	22.3	6.3	11.7	13.0	15.6				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	30.0	36.5	7.0	32.0	5.0	37.5	9.0	30.0				
Max Q Clear Time (g_c+I1), s	12.5	4.9	3.3	3.2	3.3	5.2	9.6	3.6				
Green Ext Time (p_c), s	0.0	1.7	0.0	0.6	0.0	1.7	0.0	0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	23.0											
HCM 7th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												

IPC 20 CEQA Analysis
10: Hansen Rd & Hopkins Rd

Existing Plus Background Plus Project Conditions

Timing Plan: PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	3	68	43	9	72	24	104	13	33	208	5
Future Volume (veh/h)	5	3	68	43	9	72	24	104	13	33	208	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	6	3	76	48	10	81	27	117	15	37	234	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	13	22	545	67	68	554	47	1080	482	58	1102	491
Arrive On Green	0.01	0.38	0.38	0.04	0.41	0.41	0.03	0.32	0.32	0.03	0.33	0.33
Sat Flow, veh/h	1668	57	1437	1668	166	1344	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	6	0	79	48	0	91	27	117	15	37	234	6
Grp Sat Flow(s),veh/h/ln	1668	0	1493	1668	0	1510	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	0.3	0.0	2.9	2.4	0.0	3.1	1.3	2.0	0.6	1.8	4.2	0.2
Cycle Q Clear(g_c), s	0.3	0.0	2.9	2.4	0.0	3.1	1.3	2.0	0.6	1.8	4.2	0.2
Prop In Lane	1.00		0.96	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	13	0	567	67	0	622	47	1080	482	58	1102	491
V/C Ratio(X)	0.46	0.00	0.14	0.71	0.00	0.15	0.58	0.11	0.03	0.64	0.21	0.01
Avail Cap(c_a), veh/h	100	0	567	140	0	622	120	1080	482	120	1102	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	0.0	16.9	39.5	0.0	15.3	40.0	19.7	19.2	39.7	20.0	18.7
Incr Delay (d2), s/veh	23.5	0.0	0.5	13.1	0.0	0.5	10.9	0.2	0.1	11.3	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.0	1.2	0.0	1.1	0.7	0.8	0.2	0.9	1.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.6	0.0	17.4	52.6	0.0	15.8	50.9	19.9	19.3	51.0	20.1	18.7
LnGrp LOS	E		B	D		B	D	B	B	D	C	B
Approach Vol, veh/h	85		139			159			277			
Approach Delay, s/veh	20.7		28.5			25.1			24.2			
Approach LOS	C		C			C			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	36.2	6.9	32.8	4.6	38.9	6.3	33.4				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	7.0	31.6	6.0	27.0	5.0	33.6	6.0	27.0				
Max Q Clear Time (g_c+I1), s	14.4	4.9	3.8	4.0	2.3	5.1	3.3	6.2				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.6	0.0	0.4	0.0	1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			24.9									
HCM 7th LOS			C									

11: Old Schulte Road & Hansen Rd

Timing Plan: PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	474	42	8	226	65	81	19	16	165	16	151
Future Volume (veh/h)	58	474	42	8	226	65	81	19	16	165	16	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	65	533	47	9	254	73	91	21	18	185	18	170
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	15	15	15	15	15	15	10	10	10	10	10	10
Cap, veh/h	113	969	821	31	883	749	128	79	68	213	248	210
Arrive On Green	0.07	0.58	0.58	0.02	0.53	0.53	0.08	0.09	0.09	0.13	0.14	0.14
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1668	871	747	1668	1752	1485
Grp Volume(v), veh/h	65	533	47	9	254	73	91	0	39	185	18	170
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1668	0	1617	1668	1752	1485
Q Serve(g_s), s	4.3	21.6	1.6	0.6	9.3	2.8	5.9	0.0	2.5	12.0	1.0	12.2
Cycle Q Clear(g_c), s	4.3	21.6	1.6	0.6	9.3	2.8	5.9	0.0	2.5	12.0	1.0	12.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	113	969	821	31	883	749	128	0	147	213	248	210
V/C Ratio(X)	0.58	0.55	0.06	0.29	0.29	0.10	0.71	0.00	0.27	0.87	0.07	0.81
Avail Cap(c_a), veh/h	145	969	821	131	883	749	137	0	397	243	541	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	49.5	14.4	10.2	53.2	14.5	13.0	49.6	0.0	46.6	47.1	41.0	45.8
Incr Delay (d2), s/veh	4.6	2.2	0.1	4.8	0.8	0.3	14.8	0.0	1.4	24.6	0.2	9.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	7.9	0.5	0.3	3.4	0.9	2.9	0.0	1.0	6.3	0.4	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.1	16.6	10.3	58.0	15.3	13.3	64.4	0.0	47.9	71.7	41.1	55.6
LnGrp LOS	D	B	B	E	B	B	E		D	E	D	E
Approach Vol, veh/h	645			336			130			373		
Approach Delay, s/veh	20.0			16.0			59.5			62.9		
Approach LOS	B			B			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	70.0	18.0	15.8	11.8	64.4	12.4	21.4				
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	9.0	* 38	16.0	27.0	10.0	36.7	9.0	34.0				
Max Q Clear Time (g_c+I2), s	12.6	23.6	14.0	4.5	6.3	11.3	7.9	14.2				
Green Ext Time (p_c), s	0.0	4.0	0.1	0.2	0.0	2.3	0.0	0.9				

Intersection Summary

HCM 7th Control Delay, s/veh	33.3
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection

Intersection Delay, s/veh 7.9

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	42	10	5	87	4	13
Future Vol, veh/h	42	10	5	87	4	13
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	47	11	6	98	4	15
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	7.6	8.2	7.4
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	13	42	10	5	87
LT Vol	4	0	0	0	5	0
Through Vol	0	0	42	0	0	87
RT Vol	0	13	0	10	0	0
Lane Flow Rate	4	15	47	11	6	98
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.007	0.018	0.062	0.013	0.008	0.128
Departure Headway (Hd)	5.565	4.363	4.753	4.052	5.232	4.732
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	647	825	752	880	684	758
Service Time	3.265	2.063	2.494	1.793	2.961	2.46
HCM Lane V/C Ratio	0.006	0.018	0.063	0.013	0.009	0.129
HCM Control Delay, s/veh	8.3	7.1	7.8	6.8	8	8.2
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.1	0.2	0	0	0.4

IPC 20 CEQA Analysis
13: Old Schulte Road & Bud Lyons Wy

Existing Plus Background Plus Project Conditions
Timing Plan: PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	632	0	0	238	12	0	0	0	29	0	71
Future Volume (veh/h)	33	632	0	0	238	12	0	0	0	29	0	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No				No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	0	1752
Adj Flow Rate, veh/h	37	710	0	0	267	13	0	0	0	33	0	80
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	0	10
Cap, veh/h	46	1525		1	1416	1200	88	1	0	107	0	0
Arrive On Green	0.03	0.87	0.00	0.00	0.81	0.81	0.00	0.00	0.00	0.06	0.00	0.00
Sat Flow, veh/h	1668	1752	1485	1668	1752	1485	1668	1752	0	1668	33	
Grp Volume(v), veh/h	37	710	0	0	267	13	0	0	0	33	58.7	
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1485	1668	1752	0	1668	E	
Q Serve(g_s), s	2.9	11.5	0.0	0.0	4.5	0.2	0.0	0.0	0.0	2.5		
Cycle Q Clear(g_c), s	2.9	11.5	0.0	0.0	4.5	0.2	0.0	0.0	0.0	2.5		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		
Lane Grp Cap(c), veh/h	46	1525		1	1416	1200	88	1	0	107		
V/C Ratio(X)	0.80	0.47		0.00	0.19	0.01	0.00	0.00	0.00	0.31		
Avail Cap(c_a), veh/h	83	1525		51	1416	1200	88	323	0	430		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.82	0.82	0.00	0.00	0.96	0.96	0.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	62.9	1.8	0.0	0.0	2.8	2.4	0.0	0.0	0.0	58.1		
Incr Delay (d2), s/veh	9.5	0.8	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.6		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.3	1.4	0.0	0.0	1.1	0.1	0.0	0.0	0.0	1.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.3	2.7	0.0	0.0	3.1	2.4	0.0	0.0	0.0	58.7		
LnGrp LOS	E	A			A	A				E		
Approach Vol, veh/h	747		280			0						
Approach Delay, s/veh	6.1		3.1			0.0						
Approach LOS	A		A									
Timer - Assigned Phs	1	2	3		5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	118.6	11.4		8.1	110.6	11.4	0.0				
Change Period (Y+Rc), s	4.5	5.5	4.5		4.5	5.5	3.0	4.5				
Max Green Setting (Gmax), s	4.0	51.0	4.0		6.5	48.5	33.5	24.0				
Max Q Clear Time (g_c+I10), s	13.5	13.5	0.0		4.9	6.5	4.5	0.0				
Green Ext Time (p_c), s	0.0	4.9	0.0		0.0	1.5	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	7.0
HCM 7th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	21	8	26	21	14
Future Vol, veh/h	34	21	8	26	21	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	37	23	9	28	23	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	76	30	38	0	-	0
Stage 1	30	-	-	-	-	-
Stage 2	46	-	-	-	-	-
Critical Hdwy	6.5	6.3	4.2	-	-	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	2.29	-	-	-
Pot Cap-1 Maneuver	908	1021	1522	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	902	1021	1522	-	-	-
Mov Cap-2 Maneuver	902	-	-	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s/v	9.07	1.74		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1522	-	944	-	-	
HCM Lane V/C Ratio	0.006	-	0.063	-	-	
HCM Control Delay (s/veh)	7.4	-	9.1	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	270	2	2	126	13	2	2	2	33	2	9
Future Volume (veh/h)	21	270	2	2	126	13	2	2	2	33	2	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1870	1159	1900	1781	1900	1900	1900	1767	1900	1976	1900
Adj Flow Rate, veh/h	27	346	3	3	162	17	3	3	3	42	3	12
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	0	2	50	0	8	0	0	0	9	0	0	0
Cap, veh/h	48	478	4	6	373	39	72	72	72	167	12	48
Arrive On Green	0.03	0.26	0.26	0.00	0.24	0.24	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1810	1851	16	1810	1585	166	588	588	588	1355	97	387
Grp Volume(v), veh/h	27	0	349	3	0	179	9	0	0	57	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1867	1810	0	1751	1765	0	0	1839	0	0
Q Serve(g_s), s	0.5	0.0	5.5	0.1	0.0	2.8	0.1	0.0	0.0	0.9	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	5.5	0.1	0.0	2.8	0.1	0.0	0.0	0.9	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.09	0.33		0.33	0.74		0.21
Lane Grp Cap(c), veh/h	48	0	482	6	0	412	217	0	0	226	0	0
V/C Ratio(X)	0.56	0.00	0.72	0.50	0.00	0.43	0.04	0.00	0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h	278	0	1034	223	0	916	869	0	0	905	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.6	0.0	11.0	16.2	0.0	10.6	12.6	0.0	0.0	12.9	0.0	0.0
Incr Delay (d2), s/veh	9.8	0.0	2.1	53.6	0.0	0.7	0.1	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.5	0.1	0.0	0.7	0.1	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.4	0.0	13.1	69.7	0.0	11.3	12.6	0.0	0.0	13.5	0.0	0.0
LnGrp LOS	C		B		E		B		B		B	
Approach Vol, veh/h	376				182		9				57	
Approach Delay, s/veh	14.0				12.3		12.6				13.5	
Approach LOS	B				B		B				B	
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	8.0		4.1		12.4		8.0		4.9		11.6	
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0		4.0		4.0	
Max Green Setting (Gmax), s	16.0		4.0		18.0		16.0		5.0		17.0	
Max Q Clear Time (g_c+I1), s	2.1		2.1		7.5		2.9		2.5		4.8	
Green Ext Time (p_c), s	0.0		0.0		0.9		0.2		0.0		0.4	
Intersection Summary												
HCM 7th Control Delay, s/veh			13.4									
HCM 7th LOS			B									

IPC 20 CEQA Analysis
16: Lammers Road & Eleventh St

Existing Plus Background Plus Project Conditions
Timing Plan: PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	1463	86	196	563	78	40	100	794	64	123	29
Future Volume (veh/h)	115	1463	86	196	563	78	40	100	794	64	123	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	129	1644	0	220	633	0	45	112	0	72	138	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	173	3316		190	3341		75	178		89	216	
Arrive On Green	0.05	0.69	0.00	0.06	0.70	0.00	0.02	0.05	0.00	0.03	0.06	0.00
Sat Flow, veh/h	3237	4782	1485	3237	4782	1485	3237	3328	1485	3237	3328	1485
Grp Volume(v), veh/h	129	1644	0	220	633	0	45	112	0	72	138	0
Grp Sat Flow(s),veh/h/ln	1618	1594	1485	1618	1594	1485	1618	1664	1485	1618	1664	1485
Q Serve(g_s), s	5.7	23.3	0.0	8.5	6.7	0.0	2.0	4.8	0.0	3.2	5.9	0.0
Cycle Q Clear(g_c), s	5.7	23.3	0.0	8.5	6.7	0.0	2.0	4.8	0.0	3.2	5.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	3316		190	3341		75	178		89	216	
V/C Ratio(X)	0.75	0.50		1.16	0.19		0.60	0.63		0.81	0.64	
Avail Cap(c_a), veh/h	241	3316		190	3341		125	1398		89	1384	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.7	10.4	0.0	68.3	7.6	0.0	70.2	67.2	0.0	70.1	66.1	0.0
Incr Delay (d2), s/veh	7.8	0.5	0.0	114.9	0.1	0.0	7.5	5.1	0.0	37.7	4.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	7.5	0.0	6.5	2.1	0.0	0.9	2.1	0.0	1.8	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.4	10.9	0.0	183.1	7.7	0.0	77.7	72.3	0.0	107.8	70.6	0.0
LnGrp LOS	E	B		F	A		E	E		F	E	
Approach Vol, veh/h	1773			853			157			210		
Approach Delay, s/veh	15.6			53.0			73.9			83.4		
Approach LOS	B			D			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.0	106.6	8.9	15.5	13.2	107.4	10.5	13.9				
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	6.5	6.1				
Max Green Setting (Gmax), s	4.5	47.4	5.6	60.3	10.8	45.1	4.0	60.9				
Max Q Clear Time (g_c+10), s	10.5	25.3	4.0	7.9	7.7	8.7	5.2	6.8				
Green Ext Time (p_c), s	0.0	12.1	0.0	1.4	0.1	4.4	0.0	1.0				

Intersection Summary

HCM 7th Control Delay, s/veh	34.1
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

IPC 20 CEQA Analysis
17: Lammers Road & Old Schulte Road

Existing Plus Background Plus Project Conditions
Timing Plan: PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	600	199	168	286	32
Future Volume (veh/h)	75	600	199	168	286	32
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1678	1752	1752	1870	1870
Adj Flow Rate, veh/h	84	674	224	189	321	36
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	15	15	10	10	2	2
Cap, veh/h	742	660	258	747	372	42
Arrive On Green	0.46	0.46	0.15	0.43	0.23	0.23
Sat Flow, veh/h	1598	1422	1668	1752	1652	185
Grp Volume(v), veh/h	84	674	224	189	0	357
Grp Sat Flow(s), veh/h/ln	1598	1422	1668	1752	0	1837
Q Serve(g_s), s	3.0	46.3	13.1	6.9	0.0	18.6
Cycle Q Clear(g_c), s	3.0	46.3	13.1	6.9	0.0	18.6
Prop In Lane	1.00	1.00	1.00			0.10
Lane Grp Cap(c), veh/h	742	660	258	747	0	413
V/C Ratio(X)	0.11	1.02	0.87	0.25	0.00	0.86
Avail Cap(c_a), veh/h	742	660	373	1103	0	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	26.7	41.2	18.4	0.0	37.2
Incr Delay (d2), s/veh	0.1	40.5	14.0	0.2	0.0	7.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	35.5	6.3	2.7	0.0	8.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.2	67.3	55.2	18.6	0.0	44.1
LnGrp LOS	B	F	E	B		D
Approach Vol, veh/h	758			413	357	
Approach Delay, s/veh	61.5			38.4	44.1	
Approach LOS	E			D	D	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	48.8			51.0	20.1	28.6
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	62.8			46.3	22.3	35.8
Max Q Clear Time (g_c+l1), s	8.9			48.3	15.1	20.6
Green Ext Time (p_c), s	1.1			0.0	0.4	1.8
Intersection Summary						
HCM 7th Control Delay, s/veh			51.2			
HCM 7th LOS			D			

IPC 20 CEQA Analysis
18: Lammers Road & Valpico Road

Existing Plus Background Plus Project Conditions
Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	14.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	9	0	307	0	14	7	755	26	1
Future Vol, veh/h	0	0	0	9	0	307	0	14	7	755	26	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	0	0	0	10	0	345	0	16	8	848	29	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1742	1750	30	1746	1747	20	30	0	0	24	0	0
Stage 1	1726	1726	-	20	20	-	-	-	-	-	-	-
Stage 2	16	24	-	1726	1727	-	-	-	-	-	-	-
Critical Hdwy	7.2	6.6	6.3	7.2	6.6	6.3	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.2	5.6	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.2	5.6	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.59	4.09	3.39	3.59	4.09	3.39	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	65	82	1022	64	82	1036	1532	-	-	1541	-	-
Stage 1	108	137	-	979	863	-	-	-	-	-	-	-
Stage 2	984	860	-	108	137	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	19	36	1022	28	36	1036	1532	-	-	1541	-	-
Mov Cap-2 Maneuver	19	36	-	28	36	-	-	-	-	-	-	-
Stage 1	47	60	-	979	863	-	-	-	-	-	-	-
Stage 2	656	860	-	47	60	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	26.09	0	9.81
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1532	-	-	-	515	1515	-
HCM Lane V/C Ratio	-	-	-	-	0.689	0.551	-
HCM Control Delay (s/veh)	0	-	-	0	26.1	10.2	0
HCM Lane LOS	A	-	-	A	D	B	A
HCM 95th %tile Q(veh)	0	-	-	-	5.3	3.5	-

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Vol, veh/h	38	5	21	15	2	48
Future Vol, veh/h	38	5	21	15	2	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	41	5	23	16	2	52

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	88	31	0
Stage 1	31	-	-
Stage 2	57	-	-
Critical Hdwy	6.5	6.3	-
Critical Hdwy Stg 1	5.5	-	-
Critical Hdwy Stg 2	5.5	-	-
Follow-up Hdwy	3.59	3.39	-
Pot Cap-1 Maneuver	894	1021	-
Stage 1	971	-	-
Stage 2	946	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	893	1021	-
Mov Cap-2 Maneuver	893	-	-
Stage 1	971	-	-
Stage 2	945	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.19	0	0.29
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	906	1521
HCM Lane V/C Ratio	-	-	0.052	0.001
HCM Control Delay (s/veh)	-	-	9.2	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	4.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	37	6	11	15	2	13
Future Vol, veh/h	37	6	11	15	2	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	40	7	12	16	2	14
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	39	20	0	0	28	0
Stage 1	20	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	953	1035	-	-	1535	-
Stage 1	982	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	952	1035	-	-	1535	-
Mov Cap-2 Maneuver	952	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	8.93	0	0.98			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	963	1535	-	
HCM Lane V/C Ratio	-	-	0.049	0.001	-	
HCM Control Delay (s/veh)	-	-	8.9	7.3	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	44	11	6	61	32	13
Future Vol, veh/h	44	11	6	61	32	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	48	12	7	66	35	14
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	60	0	133	54
Stage 1	-	-	-	-	54	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.2	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	2.29	-	3.59	3.39
Pot Cap-1 Maneuver	-	-	1494	-	842	991
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	924	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1494	-	838	991
Mov Cap-2 Maneuver	-	-	-	-	838	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	920	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.66		9.35	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	877	-	-	1494	-	
HCM Lane V/C Ratio	0.056	-	-	0.004	-	
HCM Control Delay (s/veh)	9.3	-	-	7.4	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	

IPC 20 CEQA Analysis
22: Lammers Road & Promontory Extension

Existing Plus Background Plus Project Conditions
Timing Plan: PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	708	57	30	194	236	169
Future Volume (veh/h)	708	57	30	194	236	169
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	770	62	33	211	257	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	815	725	43	729	326	233
Arrive On Green	0.49	0.49	0.03	0.42	0.34	0.34
Sat Flow, veh/h	1668	1485	1668	1752	950	680
Grp Volume(v), veh/h	770	62	33	211	0	441
Grp Sat Flow(s),veh/h/ln	1668	1485	1668	1752	0	1629
Q Serve(g_s), s	36.9	1.9	1.7	6.7	0.0	20.5
Cycle Q Clear(g_c), s	36.9	1.9	1.7	6.7	0.0	20.5
Prop In Lane	1.00	1.00	1.00			0.42
Lane Grp Cap(c), veh/h	815	725	43	729	0	559
V/C Ratio(X)	0.94	0.09	0.77	0.29	0.00	0.79
Avail Cap(c_a), veh/h	933	830	79	729	0	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.4	11.5	40.7	16.3	0.0	24.9
Incr Delay (d2), s/veh	16.5	0.1	25.0	1.0	0.0	10.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.7	2.2	0.9	2.6	0.0	9.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.9	11.5	65.7	17.3	0.0	35.6
LnGrp LOS	D	B	E	B		D
Approach Vol, veh/h	832			244	441	
Approach Delay, s/veh	35.1			23.8	35.6	
Approach LOS	D			C	D	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	39.0		45.1		6.1	32.9
Change Period (Y+Rc), s	4.0		4.0		4.0	4.0
Max Green Setting (Gmax), s	35.0		47.0		4.0	27.0
Max Q Clear Time (g_c+I1), s	8.7		38.9		3.7	22.5
Green Ext Time (p_c), s	1.1		2.2		0.0	1.1
Intersection Summary						
HCM 7th Control Delay, s/veh			33.4			
HCM 7th LOS			C			

D. Existing (2011) Plus Approved CRSP Projects Plus Project Conditions Improvements Synchro Outputs

DRAFT

IPC 20 CEQA Analysis Existing Plus Background Plus Project with Improvement Conditions
 4: International Pkwy & Promontory Pkwy Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	1	5	31	22	302	54	319	74	491	583	0
Future Volume (veh/h)	32	1	5	31	22	302	54	319	74	491	583	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	36	1	6	35	25	339	61	358	83	552	655	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	53	246	208	52	245	757	77	1646	734	485	1049	889
Arrive On Green	0.03	0.14	0.14	0.03	0.14	0.14	0.05	0.49	0.49	0.15	0.60	0.00
Sat Flow, veh/h	1668	1752	1485	1668	1752	2613	1668	3328	1483	3237	1752	1485
Grp Volume(v), veh/h	36	1	6	35	25	339	61	358	83	552	655	0
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1306	1668	1664	1483	1618	1752	1485
Q Serve(g_s), s	2.1	0.0	0.3	2.1	1.2	10.6	3.6	6.1	3.0	15.0	24.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.3	2.1	1.2	10.6	3.6	6.1	3.0	15.0	24.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	246	208	52	245	757	77	1646	734	485	1049	889
V/C Ratio(X)	0.68	0.00	0.03	0.67	0.10	0.45	0.80	0.22	0.11	1.14	0.62	0.00
Avail Cap(c_a), veh/h	100	561	475	83	543	1202	83	1646	734	485	1049	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	0.63	0.63	0.00
Uniform Delay (d), s/veh	47.9	37.0	37.1	47.9	37.5	29.0	47.2	14.3	13.5	42.5	12.9	0.0
Incr Delay (d2), s/veh	14.4	0.0	0.1	13.5	0.2	0.4	37.8	0.3	0.3	77.1	1.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.1	1.0	0.5	3.3	2.3	2.2	1.0	10.9	8.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.3	37.0	37.2	61.5	37.7	29.4	85.0	14.6	13.8	119.6	14.6	0.0
LnGrp LOS	E	D	D	E	D	C	F	B	B	F	B	
Approach Vol, veh/h	43			399			502			1207		
Approach Delay, s/veh	58.2			32.7			23.0			62.7		
Approach LOS	E			C			C			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	65.7	7.1	18.6	19.0	55.3	7.2	18.6				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	39.6	5.0	32.0	15.0	29.6	6.0	31.0				
Max Q Clear Time (g_c+l1), s	5.6	26.0	4.1	2.3	17.0	8.1	4.1	12.6				
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.0	2.3	0.0	1.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				47.8								
HCM 7th LOS				D								
Notes												
User approved pedestrian interval to be less than phase max green.												

IPC 20 CEQA Analysis Existing Plus Background Plus Project with Improvement Conditions
 4: International Pkwy & Promontory Pkwy Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	3	5	96	12	749	28	677	43	336	415	5
Future Volume (veh/h)	65	3	5	96	12	749	28	677	43	336	415	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	73	3	6	108	13	842	31	761	48	378	466	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	91	487	412	132	529	1142	45	1181	526	436	811	687
Arrive On Green	0.05	0.28	0.28	0.08	0.30	0.30	0.03	0.35	0.35	0.13	0.46	0.46
Sat Flow, veh/h	1668	1752	1485	1668	1752	2613	1668	3328	1482	3237	1752	1484
Grp Volume(v), veh/h	73	3	6	108	13	842	31	761	48	378	466	6
Grp Sat Flow(s),veh/h/ln	1668	1752	1485	1668	1752	1306	1668	1664	1482	1618	1752	1484
Q Serve(g_s), s	5.2	0.1	0.4	7.6	0.6	32.1	2.2	22.9	2.6	13.7	23.4	0.3
Cycle Q Clear(g_c), s	5.2	0.1	0.4	7.6	0.6	32.1	2.2	22.9	2.6	13.7	23.4	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	487	412	132	529	1142	45	1181	526	436	811	687
V/C Ratio(X)	0.80	0.01	0.01	0.82	0.02	0.74	0.69	0.64	0.09	0.87	0.57	0.01
Avail Cap(c_a), veh/h	111	487	412	228	590	1232	83	1181	526	512	811	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	56.1	31.3	31.4	54.4	29.4	28.1	57.9	32.4	25.8	50.9	23.6	17.4
Incr Delay (d2), s/veh	27.7	0.0	0.0	9.7	0.0	1.8	17.4	2.7	0.3	12.5	2.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.1	0.1	3.5	0.3	10.0	1.1	9.3	1.0	6.2	9.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.8	31.4	31.4	64.1	29.4	29.9	75.3	35.1	26.1	63.4	26.4	17.4
LnGrp LOS	F	C	C	E	C	C	E	D	C	E	C	B
Approach Vol, veh/h	82			963			840			850		
Approach Delay, s/veh	78.0			33.7			36.1			42.8		
Approach LOS	E			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	61.3	13.5	37.9	20.2	48.4	10.6	40.9				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	6.0	47.2	16.4	32.0	19.0	34.2	8.0	40.4				
Max Q Clear Time (g_c+I1), s	4.2	25.4	9.6	2.4	15.7	24.9	7.2	34.1				
Green Ext Time (p_c), s	0.0	2.6	0.1	0.0	0.4	3.3	0.0	2.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	38.6											
HCM 7th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												

E. Existing (2024) Conditions Synchro Outputs

DRAFT

HCM 7th Signalized Intersection Summary

3: International Pkwy & Daylight Rd

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 		 	 
Traffic Volume (veh/h)	18	13	459	13	65	949
Future Volume (veh/h)	18	13	459	13	65	949
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1648	981	1203	1100	1604	1648
Adj Flow Rate, veh/h	20	14	499	14	71	1032
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	17	62	47	54	20	17
Cap, veh/h	99	27	880	359	184	2089
Arrive On Green	0.03	0.03	0.38	0.38	0.12	0.67
Sat Flow, veh/h	3045	831	2347	932	1527	3214
Grp Volume(v), veh/h	20	14	499	14	71	1032
Grp Sat Flow(s),veh/h/ln	1522	831	1143	932	1527	1566
Q Serve(g_s), s	0.2	0.6	5.7	0.3	1.4	5.4
Cycle Q Clear(g_c), s	0.2	0.6	5.7	0.3	1.4	5.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	99	27	880	359	184	2089
V/C Ratio(X)	0.20	0.52	0.57	0.04	0.39	0.49
Avail Cap(c_a), veh/h	1903	520	3036	1238	899	4158
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	15.8	8.1	6.4	13.5	2.8
Incr Delay (d2), s/veh	0.4	5.6	0.8	0.1	0.5	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.8	0.0	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.1	21.5	8.9	6.5	14.0	3.0
LnGrp LOS	B	C	A	A	B	A
Approach Vol, veh/h	34		513			1103
Approach Delay, s/veh	18.3		8.8			3.7
Approach LOS	B		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.4	18.6			28.0	5.3
Change Period (Y+Rc), s	5.4	5.8			5.8	4.2
Max Green Setting (Gmax), s	19.6	44.2			44.2	20.8
Max Q Clear Time (g_c+l1), s	3.4	7.7			7.4	2.6
Green Ext Time (p_c), s	0.1	5.1			12.1	0.0
Intersection Summary						
HCM 7th Control Delay, s/veh			5.6			
HCM 7th LOS			A			

HCM 7th Signalized Intersection Summary

4: International Pkwy & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	29	3	200	4	263	41	222	737	2
Future Volume (veh/h)	0	0	3	29	3	200	4	263	41	222	737	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1292	1411	1366	1530	1085	1500	1678	1648	1900
Adj Flow Rate, veh/h	0	0	3	32	3	220	4	289	45	244	810	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	41	33	36	25	55	27	15	17	0
Cap, veh/h	2	133	113	36	197	284	8	1277	787	302	1172	1145
Arrive On Green	0.00	0.00	0.07	0.03	0.14	0.14	0.01	0.62	0.62	0.10	0.71	0.71
Sat Flow, veh/h	1810	1900	1610	1231	1411	2038	1457	2061	1270	3100	1648	1609
Grp Volume(v), veh/h	0	0	3	32	3	220	4	289	45	244	810	2
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1231	1411	1019	1457	1031	1270	1550	1648	1609
Q Serve(g_s), s	0.0	0.0	0.2	2.6	0.2	10.4	0.3	6.2	1.4	7.7	27.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.2	2.6	0.2	10.4	0.3	6.2	1.4	7.7	27.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	133	113	36	197	284	8	1277	787	302	1172	1145
V/C Ratio(X)	0.00	0.00	0.03	0.88	0.02	0.77	0.52	0.23	0.06	0.81	0.69	0.00
Avail Cap(c_a), veh/h	90	608	515	62	452	652	73	1277	787	310	1172	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	0.0	0.0	43.3	48.4	37.1	41.5	49.6	8.4	7.5	44.2	8.2	4.2
Incr Delay (d2), s/veh	0.0	0.0	0.1	46.0	0.0	4.2	45.8	0.4	0.1	13.7	3.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.2	0.1	2.7	0.2	1.2	0.4	3.4	8.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	43.4	94.4	37.1	45.7	95.4	8.8	7.6	57.9	11.3	4.2
LnGrp LOS			D	F	D	D	F	A	A	E	B	A
Approach Vol, veh/h	3		255			338			1056			
Approach Delay, s/veh	43.4		51.7			9.7			22.1			
Approach LOS	D		D			A			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	76.9	6.9	11.6	13.7	67.7	0.0	18.5				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	39.6	5.0	32.0	10.0	34.6	5.0	32.0				
Max Q Clear Time (g_c+I2), s	12.3	29.9	4.6	2.2	9.7	8.2	0.0	12.4				
Green Ext Time (p_c), s	0.0	3.7	0.0	0.0	0.0	1.9	0.0	0.8				

Intersection Summary

HCM 7th Control Delay, s/veh 24.2
HCM 7th LOS C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

5: International Pkwy & Old Schulte Road

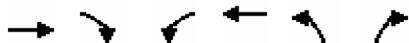
IPC 20 General Plan Analysis

Existing Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	10	177	659	132	118	30	91	118	60	604	18
Future Volume (veh/h)	13	10	177	659	132	118	30	91	118	60	604	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1060	1238	1767	1125	1617	1263	929	873	833	620	1688	1485
Adj Flow Rate, veh/h	14	10	184	686	138	123	31	95	123	62	629	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	15	40	9	8	13	43	29	66	72	62	8	28
Cap, veh/h	39	112	136	787	696	524	22	372	279	68	830	326
Arrive On Green	0.04	0.09	0.09	0.38	0.43	0.43	0.02	0.22	0.22	0.06	0.26	0.26
Sat Flow, veh/h	1009	1238	1497	2079	1617	1070	884	1659	1242	1145	3207	1259
Grp Volume(v), veh/h	14	10	184	686	138	123	31	95	123	62	629	19
Grp Sat Flow(s),veh/h/ln	1009	1238	1497	1039	1617	1070	884	830	621	572	1603	1259
Q Serve(g_s), s	1.1	0.6	7.2	24.3	4.2	5.3	2.0	3.7	6.8	4.3	14.3	0.9
Cycle Q Clear(g_c), s	1.1	0.6	7.2	24.3	4.2	5.3	2.0	3.7	6.8	4.3	14.3	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	112	136	787	696	524	22	372	279	68	830	326
V/C Ratio(X)	0.36	0.09	1.35	0.87	0.20	0.23	1.42	0.26	0.44	0.91	0.76	0.06
Avail Cap(c_a), veh/h	64	112	136	1158	946	689	56	774	579	173	1778	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	33.1	36.1	22.9	14.1	11.7	38.7	25.3	26.5	37.1	27.1	22.1
Incr Delay (d2), s/veh	5.4	0.3	199.9	6.1	0.1	0.2	250.8	0.4	1.1	32.4	1.4	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	10.0	5.9	1.4	1.1	1.9	0.7	1.0	0.9	5.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.6	33.4	235.9	29.0	14.2	11.9	289.5	25.7	27.6	69.5	28.5	22.2
LnGrp LOS	D	C	F	C	B	B	F	C	C	E	C	C
Approach Vol, veh/h	208			947			249			710		
Approach Delay, s/veh	213.2			24.6			59.5			32.0		
Approach LOS	F			C			E			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	23.6	34.0	13.0	6.0	26.3	7.1	40.0				
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	12.0	37.0	44.2	7.2	5.0	44.0	5.0	46.4				
Max Q Clear Time (g_c+I), s	10.3	8.8	26.3	9.2	4.0	16.3	3.1	7.3				
Green Ext Time (p_c), s	0.1	1.1	3.7	0.0	0.0	4.2	0.0	1.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	49.7											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary 8: Hopkins Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	214	41	3	179	56	9
Future Volume (veh/h)	214	41	3	179	56	9
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1722	1070	1900	1485	966	1737
Adj Flow Rate, veh/h	285	55	4	239	75	12
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	12	56	0	28	63	11
Cap, veh/h	479	133	187	413	647	1035
Arrive On Green	0.15	0.15	0.15	0.15	0.70	0.70
Sat Flow, veh/h	3358	907	1057	2896	920	1472
Grp Volume(v), veh/h	285	55	4	239	75	12
Grp Sat Flow(s),veh/h/ln	1636	907	1057	1411	920	1472
Q Serve(g_s), s	5.0	3.4	0.2	4.8	1.6	0.1
Cycle Q Clear(g_c), s	5.0	3.4	5.2	4.8	1.6	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	479	133	187	413	647	1035
V/C Ratio(X)	0.60	0.41	0.02	0.58	0.12	0.01
Avail Cap(c_a), veh/h	1631	452	559	1406	647	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.96	0.96	1.00	1.00
Uniform Delay (d), s/veh	24.3	23.7	26.8	24.3	2.9	2.7
Incr Delay (d2), s/veh	1.0	1.8	0.0	1.2	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.7	0.1	1.6	0.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	25.4	25.4	26.8	25.5	3.3	2.7
LnGrp LOS	C	C	C	C	A	A
Approach Vol, veh/h	340			243	87	
Approach Delay, s/veh	25.4			25.5	3.2	
Approach LOS	C			C	A	
Timer - Assigned Phs	2		4		8	
Phs Duration (G+Y+Rc), s	47.5		13.5		13.5	
Change Period (Y+Rc), s	4.6		4.6		4.6	
Max Green Setting (Gmax), s	21.4		30.4		30.4	
Max Q Clear Time (g_c+l1), s	3.6		7.0		7.2	
Green Ext Time (p_c), s	0.2		2.0		1.5	
Intersection Summary						
HCM 7th Control Delay, s/veh		22.6				
HCM 7th LOS		C				

HCM 7th Signalized Intersection Summary

9: Hansen Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	47	35	7	18	0	154	2	22	2	0	3
Future Volume (veh/h)	2	47	35	7	18	0	154	2	22	2	0	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1559	1767	1263	1248	1900	1500	1159	1559	1900	1900	1900
Adj Flow Rate, veh/h	3	71	53	11	27	0	233	3	33	3	0	5
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	0	23	9	43	44	0	27	50	23	0	0	0
Cap, veh/h	7	557	281	17	470	319	290	654	392	7	354	158
Arrive On Green	0.00	0.19	0.19	0.01	0.20	0.00	0.20	0.30	0.30	0.00	0.00	0.10
Sat Flow, veh/h	1810	2962	1497	1203	2371	1610	1428	2202	1321	1810	3610	1610
Grp Volume(v), veh/h	3	71	53	11	27	0	233	3	33	3	0	5
Grp Sat Flow(s),veh/h/ln	1810	1481	1497	1203	1186	1610	1428	1101	1321	1810	1805	1610
Q Serve(g_s), s	0.1	0.7	1.1	0.3	0.3	0.0	5.8	0.0	0.7	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.1	0.7	1.1	0.3	0.3	0.0	5.8	0.0	0.7	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	7	557	281	17	470	319	290	654	392	7	354	158
V/C Ratio(X)	0.40	0.13	0.19	0.63	0.06	0.00	0.80	0.00	0.08	0.40	0.00	0.03
Avail Cap(c_a), veh/h	972	3181	1608	646	2553	1733	767	2365	1419	972	3877	1729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.5	12.6	12.7	18.3	12.1	0.0	14.1	9.2	9.4	18.5	0.0	15.2
Incr Delay (d2), s/veh	31.8	0.1	0.3	32.4	0.1	0.0	5.2	0.0	0.1	31.8	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.3	0.2	0.1	0.0	1.7	0.0	0.1	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.3	12.7	13.1	50.6	12.2	0.0	19.4	9.2	9.5	50.3	0.0	15.3
LnGrp LOS	D	B	B	D	B		B	A	A	D		B
Approach Vol, veh/h	127		38			269			8			
Approach Delay, s/veh	13.7		23.3			18.0			28.4			
Approach LOS	B		C			B			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	11.7	4.2	16.9	4.2	12.1	11.6	9.5				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.1	20.0	40.0				
Max Q Clear Time (g_c+I2), s	12.3	3.1	2.1	2.7	2.1	2.3	7.8	2.1				
Green Ext Time (p_c), s	0.0	0.6	0.0	0.1	0.0	0.1	0.5	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	17.4
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

10: Hansen Rd & Hopkins Rd

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	16	16	1	20	7	23	85	4	2	38	11
Future Volume (veh/h)	4	16	16	1	20	7	23	85	4	2	38	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1159	966	1337	418	1011	1900	1381	1663	1530	1900	1470	1085
Adj Flow Rate, veh/h	6	23	23	1	28	10	32	120	6	3	54	15
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	50	63	38	100	60	0	35	16	25	0	29	55
Cap, veh/h	9	195	195	1	309	110	40	1127	462	7	923	304
Arrive On Green	0.01	0.44	0.44	0.00	0.43	0.43	0.03	0.36	0.36	0.00	0.33	0.33
Sat Flow, veh/h	1104	443	443	398	711	254	1316	3159	1296	1810	2793	919
Grp Volume(v), veh/h	6	0	46	1	0	38	32	120	6	3	54	15
Grp Sat Flow(s),veh/h/ln	1104	0	887	398	0	965	1316	1580	1296	1810	1397	919
Q Serve(g_s), s	0.5	0.0	2.9	0.1	0.0	2.2	2.3	2.4	0.3	0.2	1.2	1.0
Cycle Q Clear(g_c), s	0.5	0.0	2.9	0.1	0.0	2.2	2.3	2.4	0.3	0.2	1.2	1.0
Prop In Lane	1.00		0.50	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	9	0	390	1	0	419	40	1127	462	7	923	304
V/C Ratio(X)	0.70	0.00	0.12	1.83	0.00	0.09	0.80	0.11	0.01	0.41	0.06	0.05
Avail Cap(c_a), veh/h	107	0	390	38	0	419	212	1127	462	175	923	304
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	15.4	46.5	0.0	15.5	44.9	20.0	19.4	46.3	21.3	21.2
Incr Delay (d2), s/veh	70.9	0.0	0.6	976.0	0.0	0.4	30.0	0.2	0.1	33.5	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.6	0.2	0.0	0.5	1.0	0.8	0.1	0.1	0.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	117.0	0.0	16.0	1022.5	0.0	16.0	74.9	20.2	19.4	79.8	21.3	21.3
LnGrp LOS	F		B	F		B	E	C	B	E	C	C
Approach Vol, veh/h	52		39			158			72			
Approach Delay, s/veh	27.6		41.8			31.3			23.7			
Approach LOS	C		D			C			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.1	45.6	4.4	39.0	4.7	45.0	6.8	36.6				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	4.0	40.4	9.0	33.2	9.0	40.4	15.0	27.2				
Max Q Clear Time (g_c+I12), s	4.9	4.9	2.2	4.4	2.5	4.2	4.3	3.2				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.7	0.0	0.2	0.0	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	30.3
HCM 7th LOS	C

HCM 7th Signalized Intersection Summary

11: Old Schulte Road & Hansen Rd

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	33	18	25	953	38	12	8	6	8	9	15
Future Volume (veh/h)	12	33	18	25	953	38	12	8	6	8	9	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	670	1040	581	1900	1841	1707	789	1337	1900	1337	1411	1411
Adj Flow Rate, veh/h	12	34	19	26	982	39	12	8	6	8	9	15
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	83	58	89	0	4	13	75	38	0	38	33	33
Cap, veh/h	16	744	352	76	1349	1060	18	49	37	22	88	75
Arrive On Green	0.02	0.72	0.72	0.04	0.73	0.73	0.02	0.07	0.07	0.02	0.06	0.06
Sat Flow, veh/h	638	1040	492	1810	1841	1447	751	709	532	1273	1411	1196
Grp Volume(v), veh/h	12	34	19	26	982	39	12	0	14	8	9	15
Grp Sat Flow(s),veh/h/ln	638	1040	492	1810	1841	1447	751	0	1241	1273	1411	1196
Q Serve(g_s), s	2.4	1.3	1.5	1.8	39.7	1.0	2.1	0.0	1.4	0.8	0.8	1.5
Cycle Q Clear(g_c), s	2.4	1.3	1.5	1.8	39.7	1.0	2.1	0.0	1.4	0.8	0.8	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	16	744	352	76	1349	1060	18	0	86	22	88	75
V/C Ratio(X)	0.77	0.05	0.05	0.34	0.73	0.04	0.66	0.00	0.16	0.36	0.10	0.20
Avail Cap(c_a), veh/h	69	744	352	195	1349	1060	81	0	327	137	371	315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.68	0.68	0.68	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	5.5	5.5	60.5	9.9	4.8	62.9	0.0	56.9	63.2	57.5	57.9
Incr Delay (d2), s/veh	55.2	0.1	0.3	1.8	2.4	0.0	33.4	0.0	1.2	9.6	0.7	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	0.2	0.9	13.2	0.3	0.6	0.0	0.5	0.3	0.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	118.3	5.6	5.8	62.3	12.3	4.8	96.3	0.0	58.2	72.8	58.2	59.7
LnGrp LOS	F	A	A	E	B	A	F		E	E	E	E
Approach Vol, veh/h	65			1047			26			32		
Approach Delay, s/veh	26.4			13.3			75.8			62.6		
Approach LOS	C			B			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	99.5	6.3	14.8	7.2	101.8	7.2	13.9				
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	14.0	* 48	14.0	34.2	14.0	47.5	14.0	34.2				
Max Q Clear Time (g_c+I), s	13.8	3.5	2.8	3.4	4.4	41.7	4.1	3.5				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	3.9	0.0	0.1				

Intersection Summary

HCM 7th Control Delay, s/veh 16.8
HCM 7th LOS B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection

Intersection Delay, s/veh 8.1

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	19	8	13	7	28	143
Future Vol, veh/h	19	8	13	7	28	143
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	11	75	15	14	7	6
Mvmt Flow	27	11	19	10	40	204
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	8.3	8.5	8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	143	19	8	13	7
LT Vol	28	0	0	0	13	0
Through Vol	0	0	19	0	0	7
RT Vol	0	143	0	8	0	0
Lane Flow Rate	40	204	27	11	19	10
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.058	0.228	0.04	0.018	0.03	0.015
Departure Headway (Hd)	5.233	4.015	5.267	5.657	5.849	5.329
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	678	883	684	636	616	676
Service Time	3.013	1.795	2.969	3.359	3.549	3.03
HCM Lane V/C Ratio	0.059	0.231	0.039	0.017	0.031	0.015
HCM Control Delay, s/veh	8.3	8	8.2	8.5	8.7	8.1
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.9	0.1	0.1	0.1	0

HCM 7th Signalized Intersection Summary

13: Old Schulte Road & Bud Lyons Wy

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	31	5	1	984	127	4	0	0	19	0	4
Future Volume (veh/h)	3	31	5	1	984	127	4	0	0	19	0	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	418	1470	418	418	1856	1811	418	1900	1900	1426	0	789
Adj Flow Rate, veh/h	3	34	0	1	1070	138	4	0	0	21	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	100	29	100	100	3	6	100	0	0	32	0	75
Cap, veh/h	1	1265		0	1593	1317	10	1	0	22	0	0
Arrive On Green	0.00	0.86	0.00	0.00	0.86	0.86	0.02	0.00	0.00	0.02	0.00	0.00
Sat Flow, veh/h	398	1470	354	398	1856	1535	398	1900	0	1358	21	
Grp Volume(v), veh/h	3	34	0	1	1070	138	4	0	0	21	151.7	
Grp Sat Flow(s), veh/h/ln	398	1470	354	398	1856	1535	398	1900	0	1358	F	
Q Serve(g_s), s	0.4	0.4	0.0	0.1	24.5	1.8	1.3	0.0	0.0	2.0		
Cycle Q Clear(g_c), s	0.4	0.4	0.0	0.1	24.5	1.8	1.3	0.0	0.0	2.0		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		
Lane Grp Cap(c), veh/h	1	1265		0	1593	1317	10	1	0	22		
V/C Ratio(X)	2.38	0.03		2.30	0.67	0.10	0.41	0.00	0.00	0.94		
Avail Cap(c_a), veh/h	34	1265		34	1593	1317	81	358	0	214		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	63.3	1.3	0.0	63.4	3.0	1.4	61.1	0.0	0.0	62.4		
Incr Delay (d2), s/veh	965.1	0.0	0.0	1298.5	2.3	0.2	35.4	0.0	0.0	89.3		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	0.2	4.1	0.4	0.2	0.0	0.0	1.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	1028.4	1.3	0.0	1361.9	5.3	1.6	96.5	0.0	0.0	151.7		
LnGrp LOS	F	A		F	A	A	F			F		
Approach Vol, veh/h	37			1209			4					
Approach Delay, s/veh	84.6			6.0			96.5					
Approach LOS	F			A			F					
Timer - Assigned Phs	1	2	3		5	6	7	8				
Phs Duration (G+Y+Rc), s	4.1	115.8	7.1		4.4	115.5	7.1	0.0				
Change Period (Y+Rc), s	4.0	6.5	4.0		4.0	6.5	5.0	4.6				
Max Green Setting (Gmax), s	1.0	38.5	26.0		11.0	38.5	20.0	23.9				
Max Q Clear Time (g_c+I1), s	1.0	2.4	3.3		2.4	26.5	4.0	0.0				
Green Ext Time (p_c), s	0.0	0.2	0.0		0.0	8.0	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 11.0
HCM 7th LOS B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th TWSC
15: Private Driveway/Pavillion Pkwy & Old Schulte Road

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	52	3	6	1108	0	5	0	2	0	0	0
Future Vol, veh/h	0	52	3	6	1108	0	5	0	2	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	380	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	29	33	17	2	0	80	0	0	0	0	0
Mvmt Flow	0	56	3	6	1191	0	5	0	2	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1191	0	0	59	0	0	1262	1262	58	1260	1263	1191
Stage 1	-	-	-	-	-	-	58	58	-	1204	1204	-
Stage 2	-	-	-	-	-	-	1204	1204	-	56	59	-
Critical Hdwy	4.1	-	-	4.27	-	-	7.9	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.353	-	-	4.22	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	593	-	-	1454	-	-	102	171	1014	149	171	230
Stage 1	-	-	-	-	-	-	790	851	-	227	259	-
Stage 2	-	-	-	-	-	-	158	259	-	961	850	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	593	-	-	1454	-	-	102	171	1014	148	170	230
Mov Cap-2 Maneuver	-	-	-	-	-	-	102	171	-	148	170	-
Stage 1	-	-	-	-	-	-	790	851	-	226	258	-
Stage 2	-	-	-	-	-	-	158	258	-	959	850	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			0.04			32.73			0		
HCM LOS							D			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	137	593	-	-	1454	-	-	-
HCM Lane V/C Ratio	0.055	-	-	-	0.004	-	-	-
HCM Control Delay (s/veh)	32.7	0	-	-	7.5	-	-	0
HCM Lane LOS	D	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	-

HCM 7th Signalized Intersection Summary

16: Lammers Road & Eleventh St

IPC 20 General Plan Analysis

Existing Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	255	58	476	441	103	43	172	415	42	240	59
Future Volume (veh/h)	23	255	58	476	441	103	43	172	415	42	240	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1856	1826	1870	1870	1870	1826	1870	1856	1870	1856	1826
Adj Flow Rate, veh/h	27	297	0	553	513	0	50	200	0	49	279	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	3	5	2	2	2	5	2	3	2	3	5
Cap, veh/h	72	2620		456	3209		96	398		98	394	
Arrive On Green	0.02	0.52	0.00	0.13	0.63	0.00	0.03	0.11	0.00	0.03	0.11	0.00
Sat Flow, veh/h	3510	5066	1547	3456	5106	1585	3374	3554	1572	3456	3526	1547
Grp Volume(v), veh/h	27	297	0	553	513	0	50	200	0	49	279	0
Grp Sat Flow(s),veh/h/ln	1755	1689	1547	1728	1702	1585	1687	1777	1572	1728	1763	1547
Q Serve(g_s), s	0.8	3.3	0.0	14.5	4.6	0.0	1.6	5.8	0.0	1.5	8.4	0.0
Cycle Q Clear(g_c), s	0.8	3.3	0.0	14.5	4.6	0.0	1.6	5.8	0.0	1.5	8.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	2620		456	3209		96	398		98	394	
V/C Ratio(X)	0.38	0.11		1.21	0.16		0.52	0.50		0.50	0.71	
Avail Cap(c_a), veh/h	622	2620		456	3209		291	772		770	766	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	53.2	13.6	0.0	47.8	8.4	0.0	52.7	46.0	0.0	52.7	47.1	0.0
Incr Delay (d2), s/veh	3.2	0.1	0.0	115.1	0.1	0.0	4.3	1.4	0.0	1.5	3.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.2	0.0	13.3	1.5	0.0	0.7	2.6	0.0	0.7	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.4	13.7	0.0	162.8	8.5	0.0	57.0	47.4	0.0	54.2	50.5	0.0
LnGrp LOS	E	B		F	A		E	D		D	D	
Approach Vol, veh/h	324			1066			250			328		
Approach Delay, s/veh	17.3			88.6			49.3			51.0		
Approach LOS	B			F			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	63.0	8.6	18.4	7.7	75.2	8.6	18.4				
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1				
Max Green Setting (Gmax), s	14.5	23.9	9.5	23.9	19.5	13.9	24.5	23.9				
Max Q Clear Time (g_c+I1), s	16.5	5.3	3.6	10.4	2.8	6.6	3.5	7.8				
Green Ext Time (p_c), s	0.0	1.6	0.0	1.9	0.0	1.8	0.1	1.3				

Intersection Summary

HCM 7th Control Delay, s/veh	65.6
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary 17: Lammers Road & Old Schulte Road

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	48	402	587	299	358
Future Volume (veh/h)	39	48	402	587	299	358
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1500	1870	1885	1856	1856
Adj Flow Rate, veh/h	44	55	457	667	340	407
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	15	27	2	1	3	3
Cap, veh/h	162	129	306	1381	377	451
Arrive On Green	0.10	0.10	0.17	0.73	0.49	0.49
Sat Flow, veh/h	1598	1271	1781	1885	769	921
Grp Volume(v), veh/h	44	55	457	667	0	747
Grp Sat Flow(s), veh/h/ln	1598	1271	1781	1885	0	1690
Q Serve(g_s), s	1.7	2.7	11.3	9.6	0.0	26.6
Cycle Q Clear(g_c), s	1.7	2.7	11.3	9.6	0.0	26.6
Prop In Lane	1.00	1.00	1.00			0.54
Lane Grp Cap(c), veh/h	162	129	306	1381	0	827
V/C Ratio(X)	0.27	0.43	1.49	0.48	0.00	0.90
Avail Cap(c_a), veh/h	614	489	306	1541	0	970
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.3	27.8	27.3	3.6	0.0	15.4
Incr Delay (d2), s/veh	0.9	2.2	239.1	0.3	0.0	10.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	24.7	1.9	0.0	10.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	28.2	30.0	266.3	3.9	0.0	25.8
LnGrp LOS	C	C	F	A		C
Approach Vol, veh/h	99			1124	747	
Approach Delay, s/veh	29.2			110.6	25.8	
Approach LOS	C			F	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	54.4			11.4	16.0	38.4
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	53.8			25.3	11.3	37.8
Max Q Clear Time (g_c+l1), s	11.6			4.7	13.3	28.6
Green Ext Time (p_c), s		5.1		0.2	0.0	3.6
Intersection Summary						
HCM 7th Control Delay, s/veh			74.3			
HCM 7th LOS			E			

HCM 7th TWSC
18: Lammers Road & Valpico Road

IPC 20 General Plan Analysis
Existing Conditions AM Peak Hour

Intersection												
Int Delay, s/veh	9.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	15	0	312	0	220	46	192	84	0
Future Vol, veh/h	0	0	0	15	0	312	0	220	46	192	84	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	13	0	4	0	1	9	12	4	0
Mvmt Flow	0	0	0	19	0	395	0	278	58	243	106	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	871	929	106	900	900	308	106	0	0	337	0	0
Stage 1	592	592	-	308	308	-	-	-	-	-	-	-
Stage 2	278	337	-	592	592	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.5	6.24	4.1	-	-	4.22	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4	3.336	2.2	-	-	2.308	-	-
Pot Cap-1 Maneuver	274	270	953	248	280	728	1497	-	-	1169	-	-
Stage 1	496	497	-	679	664	-	-	-	-	-	-	-
Stage 2	732	645	-	474	497	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	97	210	953	193	218	728	1497	-	-	1169	-	-
Mov Cap-2 Maneuver	97	210	-	193	218	-	-	-	-	-	-	-
Stage 1	386	387	-	679	664	-	-	-	-	-	-	-
Stage 2	335	645	-	369	387	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s/v	0		19.98		0		6.18					
HCM LOS	A		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1497	-	-	-	646	1100	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	0.641	0.208	-	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	0	20	8.9	0	-	-	-	-	-
HCM Lane LOS	A	-	-	A	C	A	A	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	4.6	0.8	-	-	-	-	-	-

HCM 7th Signalized Intersection Summary

3: International Pkwy & Daylight Rd

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour

												
Movement	WBL	WBR	NBT	NBR	SBL	SBT						
Lane Configurations												
Traffic Volume (veh/h)	16	9	694	18	67	431						
Future Volume (veh/h)	16	9	694	18	67	431						
Initial Q (Qb), veh	0	0	0	0	0	0						
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00						
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00							
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00						
Work Zone On Approach	No		No			No						
Adj Sat Flow, veh/h/ln	1900	1411	1678	1411	1693	1426						
Adj Flow Rate, veh/h	19	11	826	21	80	513						
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84						
Percent Heavy Veh, %	0	33	15	33	14	32						
Cap, veh/h	101	34	1547	580	98	1884						
Arrive On Green	0.03	0.03	0.49	0.49	0.06	0.70						
Sat Flow, veh/h	3510	1196	3272	1196	1612	2780						
Grp Volume(v), veh/h	19	11	826	21	80	513						
Grp Sat Flow(s), veh/h/ln	1755	1196	1594	1196	1612	1354						
Q Serve(g_s), s	0.2	0.3	6.5	0.3	1.8	2.6						
Cycle Q Clear(g_c), s	0.2	0.3	6.5	0.3	1.8	2.6						
Prop In Lane	1.00	1.00		1.00	1.00							
Lane Grp Cap(c), veh/h	101	34	1547	580	98	1884						
V/C Ratio(X)	0.19	0.32	0.53	0.04	0.81	0.27						
Avail Cap(c_a), veh/h	2014	686	3887	1458	872	3303						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00						
Uniform Delay (d), s/veh	17.2	17.3	6.5	4.9	16.8	2.1						
Incr Delay (d2), s/veh	0.3	2.0	0.4	0.0	6.0	0.1						
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.1	0.1	1.0	0.1	0.7	0.0						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.5	19.2	6.9	4.9	22.8	2.2						
LnGrp LOS	B	B	A	A	C	A						
Approach Vol, veh/h	30		847			593						
Approach Delay, s/veh	18.1		6.8			5.0						
Approach LOS	B		A			A						
Timer - Assigned Phs	1	2			6	8						
Phs Duration (G+Y+Rc), s	7.6	23.4			31.0	5.2						
Change Period (Y+Rc), s	5.4	5.8			5.8	4.2						
Max Green Setting (Gmax), s	19.6	44.2			44.2	20.8						
Max Q Clear Time (g_c+I1), s	3.8	8.5			4.6	2.3						
Green Ext Time (p_c), s	0.1	9.1			5.2	0.0						
Intersection Summary												
HCM 7th Control Delay, s/veh			6.3									
HCM 7th LOS			A									

HCM 7th Signalized Intersection Summary

4: International Pkwy & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1	5	30	0	185	6	494	27	165	279	4
Future Volume (veh/h)	2	1	5	30	0	185	6	494	27	165	279	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1900	1870	1589	1900	1544	1826	1885	1292	1366	1544	1900
Adj Flow Rate, veh/h	2	1	6	37	0	226	7	602	33	201	340	5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	5	0	2	21	0	24	5	1	41	36	24	0
Cap, veh/h	5	161	134	49	217	263	15	2152	658	248	1066	1111
Arrive On Green	0.00	0.08	0.08	0.03	0.00	0.11	0.01	0.60	0.60	0.10	0.69	0.69
Sat Flow, veh/h	1739	1900	1585	1513	1900	2303	1739	3582	1094	2525	1544	1609
Grp Volume(v), veh/h	2	1	6	37	0	226	7	602	33	201	340	5
Grp Sat Flow(s),veh/h/ln	1739	1900	1585	1513	1900	1152	1739	1791	1094	1262	1544	1609
Q Serve(g_s), s	0.1	0.0	0.3	2.4	0.0	9.6	0.4	8.1	1.2	7.8	8.7	0.1
Cycle Q Clear(g_c), s	0.1	0.0	0.3	2.4	0.0	9.6	0.4	8.1	1.2	7.8	8.7	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	161	134	49	217	263	15	2152	658	248	1066	1111
V/C Ratio(X)	0.43	0.01	0.04	0.76	0.00	0.86	0.46	0.28	0.05	0.81	0.32	0.00
Avail Cap(c_a), veh/h	504	217	181	439	217	263	191	2152	658	278	1066	1111
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	49.8	41.9	42.1	48.0	0.0	43.5	49.3	9.6	8.2	44.2	6.1	4.8
Incr Delay (d2), s/veh	51.2	0.0	0.1	21.3	0.0	23.9	19.6	0.3	0.1	14.7	0.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	1.2	0.0	3.6	0.3	2.8	0.3	2.8	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	101.0	41.9	42.2	69.3	0.0	67.5	68.9	9.9	8.4	58.9	6.9	4.8
LnGrp LOS	F	D	D	E		E	E	A	A	E	A	A
Approach Vol, veh/h	9			263			642			546		
Approach Delay, s/veh	55.2			67.7			10.5			26.0		
Approach LOS	E			E			B			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	74.8	7.2	13.1	13.8	65.9	4.3	16.0				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	1.0	30.2	29.0	11.4	11.0	30.2	29.0	11.4				
Max Q Clear Time (g_c+I2), s	12.4	10.7	4.4	2.3	9.8	10.1	2.1	11.6				
Green Ext Time (p_c), s	0.0	1.8	0.1	0.0	0.1	3.7	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 26.9
HCM 7th LOS C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

5: International Pkwy & Old Schulte Road

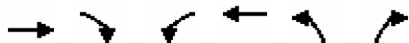
IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	27	66	108	27	108	48	265	231	94	185	14
Future Volume (veh/h)	36	27	66	108	27	108	48	265	231	94	185	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1144	1702	1856	947	1744	1455	947	1674	1648	854	1491	1055
Adj Flow Rate, veh/h	40	30	74	121	30	121	54	298	260	106	208	16
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	7	3	27	4	30	27	9	17	37	22	57
Cap, veh/h	75	118	109	981	977	790	58	444	343	127	440	139
Arrive On Green	0.07	0.07	0.07	0.56	0.56	0.56	0.06	0.14	0.14	0.08	0.16	0.16
Sat Flow, veh/h	1089	1702	1572	1750	1744	1233	902	3180	2458	1577	2833	894
Grp Volume(v), veh/h	40	30	74	121	30	121	54	298	260	106	208	16
Grp Sat Flow(s),veh/h/ln	1089	1702	1572	875	1744	1233	902	1590	1229	789	1417	894
Q Serve(g_s), s	4.6	2.2	6.0	4.2	1.0	5.1	7.7	11.6	13.2	8.6	8.7	2.0
Cycle Q Clear(g_c), s	4.6	2.2	6.0	4.2	1.0	5.1	7.7	11.6	13.2	8.6	8.7	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	118	109	981	977	790	58	444	343	127	440	139
V/C Ratio(X)	0.53	0.25	0.68	0.12	0.03	0.15	0.93	0.67	0.76	0.84	0.47	0.12
Avail Cap(c_a), veh/h	109	186	172	981	977	790	90	1106	855	158	985	311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	57.3	59.1	13.5	12.8	9.3	60.5	53.1	53.8	58.9	50.0	47.2
Incr Delay (d2), s/veh	5.7	1.1	7.2	0.1	0.0	0.1	55.1	1.8	3.4	26.1	0.8	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	1.0	2.6	0.8	0.4	1.3	2.6	4.6	4.2	2.1	3.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.1	58.4	66.3	13.6	12.8	9.4	115.6	54.9	57.3	85.1	50.8	47.6
LnGrp LOS	E	E	E	B	B	A	F	D	E	F	D	D
Approach Vol, veh/h	144			272			612			330		
Approach Delay, s/veh	64.1			11.6			61.3			61.7		
Approach LOS	E			B			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.4	23.9	76.8	14.8	12.4	26.0	13.0	78.6				
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	13.0	45.2	38.0	14.2	13.0	45.2	13.0	39.2				
Max Q Clear Time (g_c+110, s)	10.6	15.2	6.2	8.0	9.7	10.7	6.6	7.1				
Green Ext Time (p_c), s	0.1	2.9	0.6	0.1	0.0	1.3	0.0	0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh	51.7											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary 8: Hopkins Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	132	55	3	159	57	5
Future Volume (veh/h)	132	55	3	159	57	5
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1426	1144	418	1618	1352	714
Adj Flow Rate, veh/h	152	63	3	183	66	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	32	51	100	19	37	80
Cap, veh/h	764	273	570	867	90	42
Arrive On Green	0.28	0.28	0.28	0.28	0.07	0.07
Sat Flow, veh/h	2780	970	261	3156	1287	605
Grp Volume(v), veh/h	152	63	3	183	66	6
Grp Sat Flow(s),veh/h/ln	1354	970	261	1537	1287	605
Q Serve(g_s), s	0.6	0.7	0.1	0.6	0.7	0.1
Cycle Q Clear(g_c), s	0.6	0.7	0.7	0.6	0.7	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	764	273	570	867	90	42
V/C Ratio(X)	0.20	0.23	0.01	0.21	0.74	0.14
Avail Cap(c_a), veh/h	5804	2078	1055	6589	1942	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.9	3.9	4.2	3.9	6.5	6.2
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.1	11.1	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	4.0	4.3	4.2	4.0	17.5	7.7
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h	215			186	72	
Approach Delay, s/veh	4.1			4.0	16.7	
Approach LOS	A			A	B	
Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	8.6				8.6	5.6
Change Period (Y+Rc), s	4.6				4.6	4.6
Max Green Setting (Gmax), s	30.4				30.4	21.4
Max Q Clear Time (g_c+l1), s	2.7				2.7	2.7
Green Ext Time (p_c), s	1.2				1.2	0.1
Intersection Summary						
HCM 7th Control Delay, s/veh			6.0			
HCM 7th LOS			A			

HCM 7th Signalized Intersection Summary

9: Hansen Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	92	34	11	80	1	44	2	19	0	0	1
Future Volume (veh/h)	3	92	34	11	80	1	44	2	19	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1752	848	1633	1618	1900	1530	1900	1515	1900	1900	1900
Adj Flow Rate, veh/h	4	116	43	14	101	1	56	3	24	0	0	1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	10	71	18	19	0	25	0	26	0	0	0
Cap, veh/h	10	777	168	29	757	397	91	956	340	6	250	112
Arrive On Green	0.01	0.23	0.23	0.02	0.25	0.25	0.06	0.26	0.26	0.00	0.00	0.07
Sat Flow, veh/h	1810	3328	718	1555	3075	1610	1457	3610	1284	1810	3610	1610
Grp Volume(v), veh/h	4	116	43	14	101	1	56	3	24	0	0	1
Grp Sat Flow(s),veh/h/ln	1810	1664	718	1555	1537	1610	1457	1805	1284	1810	1805	1610
Q Serve(g_s), s	0.1	0.8	1.5	0.3	0.8	0.0	1.1	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.8	1.5	0.3	0.8	0.0	1.1	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	10	777	168	29	757	397	91	956	340	6	250	112
V/C Ratio(X)	0.40	0.15	0.26	0.49	0.13	0.00	0.62	0.00	0.07	0.00	0.00	0.01
Avail Cap(c_a), veh/h	1207	4439	958	1037	4111	2153	971	4814	1712	1207	4814	2147
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	9.1	9.4	14.6	8.8	8.5	13.7	8.1	8.3	0.0	0.0	13.0
Incr Delay (d2), s/veh	24.5	0.1	0.8	12.4	0.1	0.0	6.7	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.2	0.2	0.2	0.0	0.4	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.4	9.2	10.2	27.0	8.9	8.5	20.4	8.1	8.3	0.0	0.0	13.0
LnGrp LOS	D	A	B	C	A	A	C	A	A			B
Approach Vol, veh/h	163		116			83			1			
Approach Delay, s/veh	10.2		11.1			16.5			13.0			
Approach LOS	B		B			B			B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.6	11.7	0.0	13.7	4.2	12.1	5.9	7.9				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.1	20.0	40.0				
Max Q Clear Time (g_c+I2,3), s	12.3	3.5	0.0	2.4	2.1	2.8	3.1	2.0				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.1	0.0	0.6	0.1	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 11.9
HCM 7th LOS B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

10: Hansen Rd & Hopkins Rd

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	17	18	2	17	2	39	24	2	0	35	3
Future Volume (veh/h)	0	17	18	2	17	2	39	24	2	0	35	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	774	1574	1159	1722	1900	1589	1337	418	1900	1737	907
Adj Flow Rate, veh/h	0	20	21	2	20	2	45	28	2	0	41	3
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	76	22	50	12	0	21	38	100	0	11	67
Cap, veh/h	3	194	204	3	955	95	62	599	84	3	459	107
Arrive On Green	0.00	0.56	0.56	0.00	0.62	0.62	0.04	0.24	0.24	0.00	0.14	0.14
Sat Flow, veh/h	1810	346	363	1104	1540	154	1513	2540	354	1810	3300	769
Grp Volume(v), veh/h	0	0	41	2	0	22	45	28	2	0	41	3
Grp Sat Flow(s),veh/h/ln	1810	0	708	1104	0	1694	1513	1270	354	1810	1650	769
Q Serve(g_s), s	0.0	0.0	1.9	0.1	0.0	0.4	2.1	0.6	0.3	0.0	0.8	0.2
Cycle Q Clear(g_c), s	0.0	0.0	1.9	0.1	0.0	0.4	2.1	0.6	0.3	0.0	0.8	0.2
Prop In Lane	1.00		0.51	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3	0	398	3	0	1050	62	599	84	3	459	107
V/C Ratio(X)	0.00	0.00	0.10	0.67	0.00	0.02	0.72	0.05	0.02	0.00	0.09	0.03
Avail Cap(c_a), veh/h	226	0	398	138	0	1050	315	1172	163	226	1247	291
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	7.3	35.9	0.0	5.3	34.1	21.2	21.1	0.0	27.0	26.8
Incr Delay (d2), s/veh	0.0	0.0	0.5	135.5	0.0	0.0	14.5	0.0	0.1	0.0	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.3	0.1	0.0	0.1	1.0	0.2	0.0	0.0	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	7.9	171.3	0.0	5.3	48.6	21.3	21.2	0.0	27.1	26.9
LnGrp LOS			A	F		A	D	C	C		C	C
Approach Vol, veh/h	41		24			75			44			
Approach Delay, s/veh	7.9		19.1			37.7			27.1			
Approach LOS	A		B			D			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.2	45.0	0.0	22.8	0.0	49.2	7.0	15.8				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	4.0	40.4	9.0	33.2	9.0	40.4	15.0	27.2				
Max Q Clear Time (g_c+I1), s	3.9	3.9	0.0	2.6	0.0	2.4	4.1	2.8				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.2				

Intersection Summary

HCM 7th Control Delay, s/veh	26.1
HCM 7th LOS	C

HCM 7th Signalized Intersection Summary

11: Old Schulte Road & Hansen Rd

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	275	34	16	56	6	48	24	63	34	9	16
Future Volume (veh/h)	11	275	34	16	56	6	48	24	63	34	9	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1085	1796	1159	1530	1693	1900	1648	1781	1826	1811	1411	1441
Adj Flow Rate, veh/h	15	367	45	21	75	8	64	32	84	45	12	21
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	55	7	50	25	14	0	17	8	5	6	33	31
Cap, veh/h	30	1182	647	54	1127	1072	98	41	106	96	122	106
Arrive On Green	0.03	0.66	0.66	0.04	0.67	0.67	0.06	0.09	0.09	0.06	0.09	0.09
Sat Flow, veh/h	1033	1796	982	1457	1693	1610	1570	435	1141	1725	1411	1221
Grp Volume(v), veh/h	15	367	45	21	75	8	64	0	116	45	12	21
Grp Sat Flow(s),veh/h/ln	1033	1796	982	1457	1693	1610	1570	0	1576	1725	1411	1221
Q Serve(g_s), s	1.9	11.4	2.1	1.8	2.0	0.2	5.2	0.0	9.4	3.3	1.0	2.1
Cycle Q Clear(g_c), s	1.9	11.4	2.1	1.8	2.0	0.2	5.2	0.0	9.4	3.3	1.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	30	1182	647	54	1127	1072	98	0	147	96	122	106
V/C Ratio(X)	0.50	0.31	0.07	0.39	0.07	0.01	0.65	0.00	0.79	0.47	0.10	0.20
Avail Cap(c_a), veh/h	111	1182	647	157	1127	1072	169	0	415	186	371	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	9.5	8.0	61.2	7.6	7.3	59.6	0.0	57.7	59.5	54.7	55.2
Incr Delay (d2), s/veh	12.4	0.7	0.2	4.6	0.1	0.0	7.2	0.0	12.5	3.5	0.5	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.3	0.5	0.7	0.7	0.1	2.2	0.0	4.2	1.5	0.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.6	10.2	8.2	65.8	7.7	7.3	66.7	0.0	70.2	63.1	55.2	56.5
LnGrp LOS	E	B	A	E	A	A	E		E	E	E	E
Approach Vol, veh/h	427					104		180		78		
Approach Delay, s/veh	12.3					19.4		69.0		60.1		
Approach LOS	B					B		E		E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	92.1	12.1	17.0	7.8	93.1	11.2	17.9				
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	14.0	* 48	14.0	34.2	14.0	47.5	14.0	34.2				
Max Q Clear Time (g_c+I), s	13.8	13.4	7.2	4.1	3.9	4.0	5.3	11.4				
Green Ext Time (p_c), s	0.0	3.4	0.1	0.1	0.0	0.6	0.0	0.8				

Intersection Summary

HCM 7th Control Delay, s/veh 30.9
HCM 7th LOS C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection

Intersection Delay, s/veh 8.2

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	11	7	49	16	5	19
Future Vol, veh/h	11	7	49	16	5	19
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles, %	73	71	0	6	20	53
Mvmt Flow	16	10	71	23	7	28
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	8.5	8.2	8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	19	11	7	49	16
LT Vol	5	0	0	0	49	0
Through Vol	0	0	11	0	0	16
RT Vol	0	19	0	7	0	0
Lane Flow Rate	7	28	16	10	71	23
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.011	0.038	0.026	0.014	0.1	0.03
Departure Headway (Hd)	5.658	5.018	5.848	5.113	5.072	4.674
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	636	718	609	695	704	763
Service Time	3.358	2.718	3.614	2.878	2.819	2.421
HCM Lane V/C Ratio	0.011	0.039	0.026	0.014	0.101	0.03
HCM Control Delay, s/veh	8.4	7.9	8.8	8	8.4	7.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.1	0.1	0	0.3	0.1

HCM 7th Signalized Intersection Summary

13: Old Schulte Road & Bud Lyons Wy

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	353	7	0	59	12	8	0	0	43	0	11
Future Volume (veh/h)	11	353	7	0	59	12	8	0	0	43	0	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	952	1870	418	1900	1826	1648	418	1900	1900	1767	0	1767
Adj Flow Rate, veh/h	14	447	0	0	75	15	10	0	0	54	0	14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	64	2	100	0	5	17	100	0	0	9	0	9
Cap, veh/h	13	906		7	526	402	4	8	0	290	0	0
Arrive On Green	0.01	0.48	0.00	0.00	0.29	0.29	0.01	0.00	0.00	0.17	0.00	0.00
Sat Flow, veh/h	906	1870	354	1810	1826	1397	398	1900	0	1682	54	
Grp Volume(v), veh/h	14	447	0	0	75	15	10	0	0	54	8.9	
Grp Sat Flow(s), veh/h/ln	906	1870	354	1810	1826	1397	398	1900	0	1682	A	
Q Serve(g_s), s	0.4	4.0	0.0	0.0	0.8	0.2	0.3	0.0	0.0	0.7		
Cycle Q Clear(g_c), s	0.4	4.0	0.0	0.0	0.8	0.2	0.3	0.0	0.0	0.7		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		
Lane Grp Cap(c), veh/h	13	906		7	526	402	4	8	0	290		
V/C Ratio(X)	1.04	0.49		0.00	0.14	0.04	2.34	0.00	0.00	0.19		
Avail Cap(c_a), veh/h	384	2982		767	2911	2227	169	1841	0	2275		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	12.2	4.3	0.0	0.0	6.6	6.3	12.3	0.0	0.0	8.8		
Incr Delay (d2), s/veh	81.0	0.4	0.0	0.0	0.1	0.0	733.3	0.0	0.0	0.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.0	0.0	0.1	0.0	0.9	0.0	0.0	0.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	93.2	4.7	0.0	0.0	6.7	6.4	745.6	0.0	0.0	8.9		
LnGrp LOS	F	A			A	A	F			A		
Approach Vol, veh/h	461			90			10					
Approach Delay, s/veh	7.4			6.6			745.6					
Approach LOS	A			A			F					
Timer - Assigned Phs	1	2	3		5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	17.5	4.8		4.9	12.6	7.3	0.0				
Change Period (Y+Rc), s	4.5	5.5	4.5		4.5	5.5	3.0	4.5				
Max Green Setting (Gmax), s	10.5	39.5	10.5		10.5	39.5	33.5	24.0				
Max Q Clear Time (g_c+I), s	10.5	6.0	2.3		2.4	2.8	2.7	0.0				
Green Ext Time (p_c), s	0.0	2.5	0.0		0.0	0.4	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 19.4
HCM 7th LOS B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th TWSC
15: Private Driveway/Pavillion Pkwy & Old Schulte Road

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	393	6	2	65	0	4	0	11	0	0	0
Future Vol, veh/h	0	393	6	2	65	0	4	0	11	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	380	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	2	50	0	8	0	0	0	9	0	0	0
Mvmt Flow	0	504	8	3	83	0	5	0	14	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	83	0	0	512	0	0	596	596	508	592	600	83
Stage 1	-	-	-	-	-	-	508	508	-	88	88	-
Stage 2	-	-	-	-	-	-	88	88	-	504	512	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.29	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.381	3.5	4	3.3
Pot Cap-1 Maneuver	1526	-	-	1064	-	-	418	419	551	421	417	982
Stage 1	-	-	-	-	-	-	551	542	-	924	825	-
Stage 2	-	-	-	-	-	-	924	825	-	554	540	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1526	-	-	1064	-	-	417	418	551	409	416	982
Mov Cap-2 Maneuver	-	-	-	-	-	-	417	418	-	409	416	-
Stage 1	-	-	-	-	-	-	551	542	-	922	824	-
Stage 2	-	-	-	-	-	-	922	824	-	540	540	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			0.25			12.37			0		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	508	1526	-	-	1064	-	-	-
HCM Lane V/C Ratio	0.038	-	-	-	0.002	-	-	-
HCM Control Delay (s/veh)	12.4	0	-	-	8.4	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

HCM 7th Signalized Intersection Summary

16: Lammers Road & Eleventh St

IPC 20 General Plan Analysis

Existing Conditions PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	878	145	224	348	82	112	197	495	65	157	31
Future Volume (veh/h)	121	878	145	224	348	82	112	197	495	65	157	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1885	1885	1870	1870	1841	1885	1870	1870	1856	1885	1811
Adj Flow Rate, veh/h	141	1021	0	260	405	0	130	229	0	76	183	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	1	1	2	2	4	1	2	2	3	1	6
Cap, veh/h	235	1849		368	2031		215	408		161	358	
Arrive On Green	0.07	0.36	0.00	0.11	0.40	0.00	0.06	0.11	0.00	0.05	0.10	0.00
Sat Flow, veh/h	3456	5147	1598	3456	5106	1560	3483	3554	1585	3428	3582	1535
Grp Volume(v), veh/h	141	1021	0	260	405	0	130	229	0	76	183	0
Grp Sat Flow(s),veh/h/ln	1728	1716	1598	1728	1702	1560	1742	1777	1585	1714	1791	1535
Q Serve(g_s), s	2.5	9.9	0.0	4.5	3.2	0.0	2.3	3.8	0.0	1.3	3.0	0.0
Cycle Q Clear(g_c), s	2.5	9.9	0.0	4.5	3.2	0.0	2.3	3.8	0.0	1.3	3.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	1849		368	2031		215	408		161	358	
V/C Ratio(X)	0.60	0.55		0.71	0.20		0.60	0.56		0.47	0.51	
Avail Cap(c_a), veh/h	533	3371		582	3418		308	2310		275	2300	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.2	16.0	0.0	26.9	12.3	0.0	28.5	26.1	0.0	28.9	26.6	0.0
Incr Delay (d2), s/veh	2.5	0.4	0.0	0.9	0.1	0.0	2.7	1.2	0.0	2.1	1.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.3	0.0	1.7	1.0	0.0	0.9	1.5	0.0	0.6	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.7	16.3	0.0	27.8	12.3	0.0	31.2	27.3	0.0	31.1	27.7	0.0
LnGrp LOS	C	B		C	B		C	C		C	C	
Approach Vol, veh/h	1162			665			359			259		
Approach Delay, s/veh	18.1			18.4			28.7			28.7		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	28.5	9.4	12.3	9.7	30.9	8.4	13.3				
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1				
Max Green Setting (Gmax), s	10.5	40.8	5.5	40.0	9.6	41.7	5.0	40.5				
Max Q Clear Time (g_c+l1), s	6.5	11.9	4.3	5.0	4.5	5.2	3.3	5.8				
Green Ext Time (p_c), s	0.2	10.5	0.0	1.2	0.2	3.8	0.0	1.4				

Intersection Summary

HCM 7th Control Delay, s/veh	20.8
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary 17: Lammers Road & Old Schulte Road

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	144	237	41	396	436	31
Future Volume (veh/h)	144	237	41	396	436	31
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1841	1885	1900	1885	1856
Adj Flow Rate, veh/h	164	269	47	450	495	35
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	4	1	0	1	3
Cap, veh/h	413	359	122	1024	646	46
Arrive On Green	0.23	0.23	0.07	0.54	0.37	0.37
Sat Flow, veh/h	1795	1560	1795	1900	1740	123
Grp Volume(v), veh/h	164	269	47	450	0	530
Grp Sat Flow(s), veh/h/ln	1795	1560	1795	1900	0	1863
Q Serve(g_s), s	3.7	7.6	1.2	6.8	0.0	11.8
Cycle Q Clear(g_c), s	3.7	7.6	1.2	6.8	0.0	11.8
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	413	359	122	1024	0	691
V/C Ratio(X)	0.40	0.75	0.38	0.44	0.00	0.77
Avail Cap(c_a), veh/h	1522	1322	1141	2013	0	1974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.4	16.9	21.0	6.6	0.0	13.0
Incr Delay (d2), s/veh	0.6	3.1	2.0	0.3	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.5	0.5	1.8	0.0	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.0	20.0	23.0	6.9	0.0	14.9
LnGrp LOS	B	C	C	A		B
Approach Vol, veh/h	433			497	530	
Approach Delay, s/veh	18.5			8.4	14.9	
Approach LOS	B			A	B	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	31.6			15.6	7.9	23.7
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	50.0			40.0	30.0	50.0
Max Q Clear Time (g_c+l1), s	8.8			9.6	3.2	13.8
Green Ext Time (p_c), s	3.0			1.3	0.1	3.7
Intersection Summary						
HCM 7th Control Delay, s/veh			13.7			
HCM 7th LOS			B			

HCM 7th TWSC
18: Lammers Road & Valpico Road

IPC 20 General Plan Analysis
Existing Conditions PM Peak Hour

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	10	0	193	0	105	14	352	129	0
Future Vol, veh/h	0	0	0	10	0	193	0	105	14	352	129	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	13	0	4	0	1	9	12	4	0
Mvmt Flow	0	0	0	13	0	244	0	133	18	446	163	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1187	1205	163	1196	1196	142	163	0	0	151	0	0
Stage 1	1054	1054	-	142	142	-	-	-	-	-	-	-
Stage 2	133	151	-	1054	1054	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.5	6.24	4.1	-	-	4.22	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4	3.336	2.2	-	-	2.308	-	-
Pot Cap-1 Maneuver	167	185	887	155	188	901	1428	-	-	1371	-	-
Stage 1	275	305	-	836	783	-	-	-	-	-	-	-
Stage 2	875	776	-	260	305	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	78	119	887	99	121	901	1428	-	-	1371	-	-
Mov Cap-2 Maneuver	78	119	-	99	121	-	-	-	-	-	-	-
Stage 1	177	196	-	836	783	-	-	-	-	-	-	-
Stage 2	638	776	-	167	196	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s/v	0		14.23		0		6.5					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1428	-	-	-	645	1247	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.398	0.325	-	-				
HCM Control Delay (s/veh)	0	-	-	0	14.2	8.9	0	-				
HCM Lane LOS	A	-	-	A	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	1.9	1.4	-	-				

3: International Pkwy & Daylight Rd Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.3	0.1	0.0	0.0	0.3	0.0	0.0
Total Del/Veh (s)	25.6	8.7	7.6	6.8	14.2	3.4	5.3
Vehicles Entered	19	16	408	13	68	1022	1546
Vehicles Exited	19	16	406	13	68	1021	1543
Hourly Exit Rate	19	16	406	13	68	1021	1543
Input Volume	18	13	460	13	65	1022	1591
% of Volume	107	121	88	98	105	100	97

4: International Pkwy & Promontory Pkwy Performance by movement

Movement	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.2	0.0	0.0	0.1	1.4	0.0	2.2	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.1	43.5	7.6	8.6	66.5	6.4	2.2	43.9	7.8	2.7	13.0
Vehicles Entered	1	20	28	185	3	223	39	195	767	4	1465
Vehicles Exited	1	21	28	185	3	222	39	195	772	4	1470
Hourly Exit Rate	1	21	28	185	3	222	39	195	772	4	1470
Input Volume	3	29	18	200	4	263	41	222	744	2	1526
% of Volume	33	72	158	93	75	84	95	88	104	200	96

5: International Pkwy & Old Schulte Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.8	0.2	3.9	4.9	3.1	10.8	0.0	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	56.9	59.3	16.2	218.7	57.2	29.5	58.0	11.7	3.4	84.4	129.7	56.2
Vehicles Entered	16	11	180	490	211	86	31	200	115	44	716	20
Vehicles Exited	16	11	182	454	209	83	31	199	116	42	665	19
Hourly Exit Rate	16	11	182	454	209	83	31	199	116	42	665	19
Input Volume	13	10	177	659	272	118	30	214	118	60	691	18
% of Volume	121	110	103	69	77	70	102	93	99	70	96	104

5: International Pkwy & Old Schulte Road Performance by movement

Movement	All
Denied Del/Veh (s)	2.2
Total Del/Veh (s)	107.9
Vehicles Entered	2120
Vehicles Exited	2027
Hourly Exit Rate	2027
Input Volume	2380
% of Volume	85

8: Hopkins Rd & Promontory Pkwy Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.6	0.2	0.1
Total Del/Veh (s)	23.6	5.2	26.2	23.5	4.8	1.4	20.0
Vehicles Entered	205	36	7	186	48	9	491
Vehicles Exited	205	36	7	190	48	9	495
Hourly Exit Rate	205	36	7	190	48	9	495
Input Volume	236	41	3	184	56	9	529
% of Volume	87	88	215	103	85	100	94

9: Hansen Rd & Promontory Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0	4.0	0.1	2.1	0.2	2.2	4.2	1.1
Total Del/Veh (s)	46.6	4.7	5.3	10.2	5.5	7.0	8.4	1.4	15.5	5.8
Vehicles Entered	1	153	38	7	23	159	2	26	3	412
Vehicles Exited	1	154	39	7	23	157	2	26	3	412
Hourly Exit Rate	1	154	39	7	23	157	2	26	3	412
Input Volume	2	186	35	7	18	154	2	22	2	431
% of Volume	44	83	111	97	128	102	89	120	133	96

10: Hansen Rd & Hopkins Rd Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	2.8	0.1	2.1	0.0	1.8	0.3
Total Del/Veh (s)	24.9	10.4	6.4	6.3	7.8	45.8	16.9	2.0	17.1	1.5	13.9
Vehicles Entered	2	25	19	39	3	12	75	2	39	16	232
Vehicles Exited	2	25	19	39	3	12	75	2	40	16	233
Hourly Exit Rate	2	25	19	39	3	12	75	2	40	16	233
Input Volume	4	24	16	36	7	23	85	4	40	11	253
% of Volume	53	104	117	107	43	52	88	53	101	142	92

11: Old Schulte Road & Hansen Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.2	4.1	0.2	0.4	0.0	0.0	0.0
Total Del/Veh (s)	54.4	1.3	1.4	63.6	9.2	3.5	68.8	86.0	10.0	60.0	16.6	16.6
Vehicles Entered	12	135	18	22	950	26	13	5	9	13	34	11
Vehicles Exited	12	137	18	23	959	26	13	5	9	13	34	11
Hourly Exit Rate	12	137	18	23	959	26	13	5	9	13	34	11
Input Volume	12	158	18	25	962	38	12	8	6	8	32	15
% of Volume	100	87	99	91	100	68	108	62	150	162	105	73

11: Old Schulte Road & Hansen Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	11.3
Vehicles Entered	1248
Vehicles Exited	1260
Hourly Exit Rate	1260
Input Volume	1294
% of Volume	97

12: Bud Lyons Wy & Hopkins Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	1.0	4.2	0.1	1.5	0.0	0.1	0.5
Total Del/Veh (s)	7.7	2.4	4.4	7.6	4.1	0.0	2.4	3.2
Vehicles Entered	16	8	12	6	26	3	143	214
Vehicles Exited	16	8	12	6	26	3	143	214
Hourly Exit Rate	16	8	12	6	26	3	143	214
Input Volume	22	8	13	7	28	2	143	224
% of Volume	72	100	92	86	93	133	100	96

13: Old Schulte Road & Bud Lyons Wy Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBL	SBL	SBT	SBR	All
Denied Del/Veh (s)		0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.1
Total Del/Veh (s)	38.7	3.0	2.7	8.5	6.7	72.8	69.5	0.0	10.7	8.8
Vehicles Entered	0	49	3	954	127	5	19	72	2	1231
Vehicles Exited	1	49	3	956	126	5	18	72	2	1232
Hourly Exit Rate	1	49	3	956	126	5	18	72	2	1232
Input Volume	3	39	5	996	127	4	19	78	4	1276
% of Volume	33	125	60	96	99	125	96	92	50	97

15: Private Driveway/Pavillion Pkwy & Old Schulte Road Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.8	0.5	0.1	0.1	0.5
Total Del/Veh (s)	3.4	0.6	6.2	5.7	25.0	2.3	5.7
Vehicles Entered	54	7	8	1069	6	3	1147
Vehicles Exited	54	7	8	1064	7	3	1143
Hourly Exit Rate	54	7	8	1064	7	3	1143
Input Volume	52	3	6	1108	5	2	1176
% of Volume	103	233	133	96	140	150	97

16: Lammers Road & Eleventh St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1
Total Del/Veh (s)	49.0	19.9	2.7	49.1	11.5	6.4	45.3	44.3	3.0	53.3	40.8	2.9
Vehicles Entered	24	256	53	460	462	106	36	161	405	41	246	68
Vehicles Exited	24	257	53	474	466	108	37	162	404	45	246	68
Hourly Exit Rate	24	257	53	474	466	108	37	162	404	45	246	68
Input Volume	23	255	58	476	441	103	43	172	415	42	240	59
% of Volume	103	101	91	100	106	105	86	94	97	107	102	115

16: Lammers Road & Eleventh St Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	25.0
Vehicles Entered	2318
Vehicles Exited	2344
Hourly Exit Rate	2344
Input Volume	2328
% of Volume	101

17: Lammers Road & Old Schulte Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	1.6	92.5	93.1	0.6	0.7	52.6
Total Del/Veh (s)	28.9	7.3	198.6	63.7	20.1	17.8	73.6
Vehicles Entered	46	53	383	559	319	384	1744
Vehicles Exited	47	52	373	566	321	375	1734
Hourly Exit Rate	47	52	373	566	321	375	1734
Input Volume	39	48	402	588	299	358	1734
% of Volume	121	108	93	96	107	105	100

18: Lammers Road & Valpico Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.5	0.2	0.3	0.2	0.0	0.0	0.2
Total Del/Veh (s)	20.1	14.5	5.0	3.8	6.1	3.1	8.4
Vehicles Entered	22	325	218	44	201	175	985
Vehicles Exited	21	326	215	44	201	173	980
Hourly Exit Rate	21	326	215	44	201	173	980
Input Volume	15	312	220	46	192	159	944
% of Volume	138	105	98	96	105	109	104

Total Zone Performance

Denied Del/Veh (s)	20.0
Total Del/Veh (s)	402.8
Vehicles Entered	5072
Vehicles Exited	948
Hourly Exit Rate	948
Input Volume	15687
% of Volume	6

F. Existing (2024) Plus Approved Projects Conditions Synchro Outputs

DRAFT

HCM 7th Signalized Intersection Summary

3: International Pkwy & Daylight Rd

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	0	8	20	0	13	32	574	15	68	1217	35
Future Volume (veh/h)	36	0	8	20	0	13	32	574	15	68	1217	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1648	1752	981	1752	1203	1100	1604	1648	1752
Adj Flow Rate, veh/h	39	0	9	22	0	14	35	624	16	74	1323	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	17	10	62	10	47	54	20	17	10
Cap, veh/h	221	80	71	65	283	135	280	912	372	139	1907	904
Arrive On Green	0.05	0.00	0.05	0.02	0.00	0.16	0.40	0.40	0.40	0.09	0.61	0.61
Sat Flow, veh/h	1311	1664	1485	3045	1752	831	374	2287	932	1527	3131	1485
Grp Volume(v), veh/h	39	0	9	22	0	14	35	624	16	74	1323	38
Grp Sat Flow(s),veh/h/ln	1311	1664	1485	1522	1752	831	374	1143	932	1527	1566	1485
Q Serve(g_s), s	1.3	0.0	0.3	0.3	0.0	0.7	3.2	10.2	0.5	2.1	13.0	0.5
Cycle Q Clear(g_c), s	1.3	0.0	0.3	0.3	0.0	0.7	6.6	10.2	0.5	2.1	13.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	80	71	65	283	135	280	912	372	139	1907	904
V/C Ratio(X)	0.18	0.00	0.13	0.34	0.00	0.10	0.13	0.68	0.04	0.53	0.69	0.04
Avail Cap(c_a), veh/h	621	587	524	269	912	433	320	1160	473	256	2486	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	0.0	20.7	21.9	0.0	16.2	11.5	11.3	8.3	19.7	6.0	3.6
Incr Delay (d2), s/veh	0.4	0.0	0.8	1.1	0.0	0.3	0.3	1.5	0.1	1.2	0.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.1	0.1	0.0	0.1	0.2	1.9	0.1	0.7	1.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.6	0.0	21.5	23.0	0.0	16.5	11.8	12.8	8.4	20.9	6.8	3.6
LnGrp LOS	C		C	C		B	B	B	A	C	A	A
Approach Vol, veh/h	48			36			675			1435		
Approach Delay, s/veh	21.5			20.5			12.6			7.4		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	9.5	23.9	5.2	6.8		33.4		11.9				
Change Period (Y+Rc), s	5.4	5.8	4.2	* 4.6		5.8		4.6				
Max Green Setting (Gmax), s	7.6	23.0	4.0	* 16		36.0		23.6				
Max Q Clear Time (g_c+I1), s	4.1	12.2	2.3	3.3		15.0		2.7				
Green Ext Time (p_c), s	0.0	4.4	0.0	0.1		12.6		0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 9.5
HCM 7th LOS A

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Summary

4: International Pkwy & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	9	3	51	6	237	58	357	118	355	842	2
Future Volume (veh/h)	25	9	3	51	6	237	58	357	118	355	842	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1292	1411	1366	1530	1085	1500	1678	1648	1900
Adj Flow Rate, veh/h	27	10	3	56	7	260	64	392	130	390	925	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	41	33	36	25	55	27	15	17	0
Cap, veh/h	52	270	229	62	231	333	75	816	503	501	834	814
Arrive On Green	0.03	0.14	0.14	0.05	0.16	0.16	0.05	0.40	0.40	0.16	0.51	0.51
Sat Flow, veh/h	1810	1900	1610	1231	1411	2038	1457	2061	1269	3100	1648	1609
Grp Volume(v), veh/h	27	10	3	56	7	260	64	392	130	390	925	2
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1231	1411	1019	1457	1031	1269	1550	1648	1609
Q Serve(g_s), s	1.1	0.3	0.1	3.3	0.3	9.0	3.2	10.4	5.1	8.9	37.2	0.0
Cycle Q Clear(g_c), s	1.1	0.3	0.1	3.3	0.3	9.0	3.2	10.4	5.1	8.9	37.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	270	229	62	231	333	75	816	503	501	834	814
V/C Ratio(X)	0.52	0.04	0.01	0.91	0.03	0.78	0.85	0.48	0.26	0.78	1.11	0.00
Avail Cap(c_a), veh/h	428	827	701	291	614	887	99	816	503	885	834	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	27.2	27.1	34.8	25.9	29.5	34.6	16.6	14.9	29.6	18.2	9.0
Incr Delay (d2), s/veh	7.7	0.1	0.0	34.2	0.1	4.0	38.6	0.4	0.3	2.7	65.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.2	0.0	1.5	0.1	2.3	1.9	2.2	1.4	3.2	26.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.9	27.3	27.1	69.0	25.9	33.5	73.2	17.0	15.2	32.2	83.9	9.0
LnGrp LOS	D	C	C	E	C	C	E	B	B	C	F	A
Approach Vol, veh/h	40			323			586			1317		
Approach Delay, s/veh	37.8			39.5			22.7			68.5		
Approach LOS	D			D			C			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	43.0	7.7	15.1	15.9	34.9	6.1	16.6				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	37.2	17.4	32.0	21.0	21.2	17.4	32.0				
Max Q Clear Time (g_c+I), s	15.2	39.2	5.3	2.3	10.9	12.4	3.1	11.0				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	1.0	1.9	0.0	1.0				

Intersection Summary

HCM 7th Control Delay, s/veh 52.0
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

5: International Pkwy & Old Schulte Road

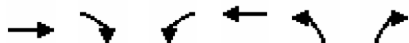
IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	10	177	680	132	194	30	250	263	256	683	18
Future Volume (veh/h)	13	10	177	680	132	194	30	250	263	256	683	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1060	1238	1767	1125	1617	1263	929	873	833	620	1688	1485
Adj Flow Rate, veh/h	14	10	184	708	138	202	31	260	274	267	711	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	15	40	9	8	13	43	29	66	72	62	8	28
Cap, veh/h	33	86	105	770	659	560	25	420	315	133	1096	430
Arrive On Green	0.03	0.07	0.07	0.37	0.41	0.41	0.03	0.25	0.25	0.12	0.34	0.34
Sat Flow, veh/h	1009	1238	1497	2079	1617	1070	884	1659	1242	1145	3207	1259
Grp Volume(v), veh/h	14	10	184	708	138	202	31	260	274	267	711	19
Grp Sat Flow(s),veh/h/ln	1009	1238	1497	1039	1617	1070	884	830	621	572	1603	1259
Q Serve(g_s), s	1.4	0.8	7.2	33.5	5.7	11.4	2.9	14.3	21.8	12.0	19.3	1.0
Cycle Q Clear(g_c), s	1.4	0.8	7.2	33.5	5.7	11.4	2.9	14.3	21.8	12.0	19.3	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	86	105	770	659	560	25	420	315	133	1096	430
V/C Ratio(X)	0.42	0.12	1.76	0.92	0.21	0.36	1.26	0.62	0.87	2.00	0.65	0.04
Avail Cap(c_a), veh/h	49	86	105	891	728	606	43	595	446	133	1368	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	45.0	48.0	31.0	19.8	14.4	50.1	34.1	36.9	45.6	28.7	22.7
Incr Delay (d2), s/veh	8.2	0.6	378.3	13.8	0.2	0.4	223.7	1.5	12.6	477.5	0.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	13.6	9.2	2.1	2.6	2.1	2.8	3.7	10.5	7.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.1	45.6	426.3	44.7	20.0	14.8	273.9	35.6	49.5	523.1	29.5	22.7
LnGrp LOS	E	D	F	D	B	B	F	D	D	F	C	C
Approach Vol, veh/h	208			1048			565			997		
Approach Delay, s/veh	383.2			35.7			55.4			161.5		
Approach LOS	F			D			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	31.9	42.2	13.0	6.9	41.1	7.4	47.8				
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	12.0	37.0	44.2	7.2	5.0	44.0	5.0	46.4				
Max Q Clear Time (g_c+Tb), s	14.0	23.8	35.5	9.2	4.9	21.3	3.4	13.4				
Green Ext Time (p_c), s	0.0	2.3	2.7	0.0	0.0	4.6	0.0	1.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	109.8											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 8: Hopkins Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	287	187	3	205	91	9
Future Volume (veh/h)	287	187	3	205	91	9
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1722	1070	1900	1485	966	1737
Adj Flow Rate, veh/h	383	249	4	273	121	12
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	12	56	0	28	63	11
Cap, veh/h	1086	301	315	937	476	761
Arrive On Green	0.33	0.33	0.33	0.33	0.52	0.52
Sat Flow, veh/h	3358	907	807	2896	920	1472
Grp Volume(v), veh/h	383	249	4	273	121	12
Grp Sat Flow(s),veh/h/ln	1636	907	807	1411	920	1472
Q Serve(g_s), s	5.4	15.4	0.2	4.4	4.5	0.2
Cycle Q Clear(g_c), s	5.4	15.4	5.6	4.4	4.5	0.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1086	301	315	937	476	761
V/C Ratio(X)	0.35	0.83	0.01	0.29	0.25	0.02
Avail Cap(c_a), veh/h	1631	452	449	1406	476	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.96	0.96	1.00	1.00
Uniform Delay (d), s/veh	15.4	18.8	17.5	15.1	8.2	7.2
Incr Delay (d2), s/veh	0.2	6.6	0.0	0.2	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.4	0.0	1.3	0.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.6	25.3	17.6	15.2	9.5	7.2
LnGrp LOS	B	C	B	B	A	A
Approach Vol, veh/h	632			277	133	
Approach Delay, s/veh	19.4			15.3	9.3	
Approach LOS	B			B	A	
Timer - Assigned Phs	2		4		8	
Phs Duration (G+Y+Rc), s	36.2		24.8		24.8	
Change Period (Y+Rc), s	4.6		4.6		4.6	
Max Green Setting (Gmax), s	21.4		30.4		30.4	
Max Q Clear Time (g_c+l1), s	6.5		17.4		7.6	
Green Ext Time (p_c), s	0.3		2.8		1.7	
Intersection Summary						
HCM 7th Control Delay, s/veh			17.0			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary

9: Hansen Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	94	35	7	32	0	154	2	28	2	0	3
Future Volume (veh/h)	2	94	35	7	32	0	154	2	28	2	0	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1559	1767	1263	1248	1900	1500	1159	1559	1900	1900	1900
Adj Flow Rate, veh/h	3	142	53	11	48	0	233	3	42	3	0	5
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	0	23	9	43	44	0	27	50	23	0	0	0
Cap, veh/h	7	545	275	17	461	313	289	685	411	7	407	182
Arrive On Green	0.00	0.18	0.18	0.01	0.19	0.00	0.20	0.31	0.31	0.00	0.00	0.11
Sat Flow, veh/h	1810	2962	1497	1203	2371	1610	1428	2202	1321	1810	3610	1610
Grp Volume(v), veh/h	3	142	53	11	48	0	233	3	42	3	0	5
Grp Sat Flow(s),veh/h/ln	1810	1481	1497	1203	1186	1610	1428	1101	1321	1810	1805	1610
Q Serve(g_s), s	0.1	1.6	1.1	0.3	0.6	0.0	5.9	0.0	0.9	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.1	1.6	1.1	0.3	0.6	0.0	5.9	0.0	0.9	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	7	545	275	17	461	313	289	685	411	7	407	182
V/C Ratio(X)	0.40	0.26	0.19	0.63	0.10	0.00	0.81	0.00	0.10	0.40	0.00	0.03
Avail Cap(c_a), veh/h	951	3115	1574	632	2499	1697	751	2316	1389	951	3796	1693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.9	13.3	13.1	18.6	12.6	0.0	14.5	9.0	9.3	18.9	0.0	15.0
Incr Delay (d2), s/veh	31.8	0.3	0.3	32.5	0.1	0.0	5.3	0.0	0.1	31.8	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	0.3	0.2	0.1	0.0	1.8	0.0	0.2	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.7	13.6	13.5	51.1	12.7	0.0	19.7	9.0	9.4	50.7	0.0	15.1
LnGrp LOS	D	B	B	D	B		B	A	A	D		B
Approach Vol, veh/h	198		59			278			8			
Approach Delay, s/veh	14.1		19.9			18.0			28.4			
Approach LOS	B		B			B			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	11.7	4.2	17.6	4.2	12.1	11.7	10.1				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.1	20.0	40.0				
Max Q Clear Time (g_c+I2), s	12.3	3.6	2.1	2.9	2.1	2.6	7.9	2.1				
Green Ext Time (p_c), s	0.0	1.1	0.0	0.1	0.0	0.3	0.5	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	17.0
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

10: Hansen Rd & Hopkins Rd

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	16	28	2	20	7	45	91	8	2	38	11
Future Volume (veh/h)	4	16	28	2	20	7	45	91	8	2	38	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1159	966	1337	418	1011	1900	1381	1663	1530	1900	1470	1085
Adj Flow Rate, veh/h	6	23	39	3	28	10	63	128	11	3	54	15
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	50	63	38	100	60	0	35	16	25	0	29	55
Cap, veh/h	9	141	239	2	309	110	74	1127	462	7	851	280
Arrive On Green	0.01	0.44	0.44	0.00	0.43	0.43	0.06	0.36	0.36	0.00	0.30	0.30
Sat Flow, veh/h	1104	322	546	398	711	254	1316	3159	1296	1810	2793	919
Grp Volume(v), veh/h	6	0	62	3	0	38	63	128	11	3	54	15
Grp Sat Flow(s),veh/h/ln	1104	0	868	398	0	965	1316	1580	1296	1810	1397	919
Q Serve(g_s), s	0.5	0.0	4.0	0.4	0.0	2.2	4.4	2.5	0.5	0.2	1.3	1.1
Cycle Q Clear(g_c), s	0.5	0.0	4.0	0.4	0.0	2.2	4.4	2.5	0.5	0.2	1.3	1.1
Prop In Lane	1.00		0.63	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	9	0	380	2	0	419	74	1127	462	7	851	280
V/C Ratio(X)	0.70	0.00	0.16	1.88	0.00	0.09	0.86	0.11	0.02	0.41	0.06	0.05
Avail Cap(c_a), veh/h	107	0	380	38	0	419	212	1127	462	175	851	280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	15.8	46.4	0.0	15.5	43.6	20.1	19.4	46.3	22.9	22.9
Incr Delay (d2), s/veh	70.9	0.0	0.9	693.1	0.0	0.4	23.0	0.2	0.1	33.5	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.9	0.3	0.0	0.5	1.9	0.9	0.2	0.1	0.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	117.0	0.0	16.8	739.5	0.0	16.0	66.6	20.3	19.5	79.8	23.0	23.0
LnGrp LOS	F		B	F		B	E	C	B	E	C	C
Approach Vol, veh/h	68		41			202			72			
Approach Delay, s/veh	25.6		68.9			34.7			25.3			
Approach LOS	C		E			C			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.4	45.3	4.4	39.0	4.7	45.0	9.2	34.2				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	4.0	40.4	9.0	33.2	9.0	40.4	15.0	27.2				
Max Q Clear Time (g_c+I2), s	4.0	6.0	2.2	4.5	2.5	4.2	6.4	3.3				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.7	0.0	0.2	0.1	0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			35.0									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary

11: Old Schulte Road & Hansen Rd

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	350	38	34	1042	67	19	8	6	36	9	16
Future Volume (veh/h)	16	350	38	34	1042	67	19	8	6	36	9	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	670	1040	581	1900	1841	1707	789	1337	1900	1337	1411	1411
Adj Flow Rate, veh/h	16	361	39	35	1074	69	20	8	6	37	9	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	83	58	89	0	4	13	75	38	0	38	33	33
Cap, veh/h	19	703	333	90	1279	1005	27	172	109	65	117	99
Arrive On Green	0.03	0.68	0.68	0.05	0.69	0.69	0.04	0.07	0.07	0.05	0.08	0.08
Sat Flow, veh/h	638	1040	492	1810	1841	1447	751	2540	1610	1273	1411	1196
Grp Volume(v), veh/h	16	361	39	35	1074	69	20	8	6	37	9	16
Grp Sat Flow(s),veh/h/ln	638	1040	492	1810	1841	1447	751	1270	1610	1273	1411	1196
Q Serve(g_s), s	3.2	22.4	3.6	2.4	55.6	2.0	3.4	0.4	0.5	3.7	0.8	1.6
Cycle Q Clear(g_c), s	3.2	22.4	3.6	2.4	55.6	2.0	3.4	0.4	0.5	3.7	0.8	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	19	703	333	90	1279	1005	27	172	109	65	117	99
V/C Ratio(X)	0.83	0.51	0.12	0.39	0.84	0.07	0.75	0.05	0.05	0.57	0.08	0.16
Avail Cap(c_a), veh/h	69	703	333	195	1279	1005	81	668	424	137	371	315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.7	10.5	7.4	59.9	14.6	6.4	62.1	56.7	56.7	60.3	55.0	55.4
Incr Delay (d2), s/veh	55.6	2.7	0.7	2.7	6.8	0.1	33.4	0.2	0.3	7.6	0.4	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.0	0.4	1.2	21.1	0.6	0.9	0.1	0.2	1.3	0.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	118.2	13.2	8.2	62.6	21.3	6.5	95.5	56.8	57.0	67.9	55.4	56.4
LnGrp LOS	F	B	A	E	C	A	F	E	E	E	E	E
Approach Vol, veh/h	416					1178		34		62		
Approach Delay, s/veh	16.7					21.7		79.6		63.1		
Approach LOS	B					C		E		E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	94.3	10.6	14.6	7.9	96.8	8.6	16.6				
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	14.0	* 48	14.0	34.2	14.0	47.5	14.0	34.2				
Max Q Clear Time (g_c+I), s	14.4	24.4	5.7	2.4	5.2	57.6	5.4	3.6				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.1				

Intersection Summary

HCM 7th Control Delay, s/veh 23.1
HCM 7th LOS C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th AWSC
12: Bud Lyons Wy & Hopkins Rd

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour

Intersection

Intersection Delay, s/veh 8.2

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	23	8	13	8	28	143
Future Vol, veh/h	23	8	13	8	28	143
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	11	75	15	14	7	6
Mvmt Flow	33	11	19	11	40	204
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	8.3	8.5	8.1
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	143	23	8	13	8
LT Vol	28	0	0	0	13	0
Through Vol	0	0	23	0	0	8
RT Vol	0	143	0	8	0	0
Lane Flow Rate	40	204	33	11	19	11
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.058	0.228	0.048	0.018	0.03	0.017
Departure Headway (Hd)	5.244	4.026	5.269	5.659	5.854	5.335
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	676	878	684	636	615	675
Service Time	3.031	1.813	2.97	3.36	3.555	3.035
HCM Lane V/C Ratio	0.059	0.232	0.048	0.017	0.031	0.016
HCM Control Delay, s/veh	8.4	8	8.2	8.5	8.7	8.1
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.9	0.2	0.1	0.1	0.1

HCM 7th Signalized Intersection Summary

13: Old Schulte Road & Bud Lyons Wy

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	306	77	81	1098	127	17	0	2	19	0	4
Future Volume (veh/h)	3	306	77	81	1098	127	17	0	2	19	0	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	418	1470	418	418	1856	1811	418	1900	1900	1426	1900	789
Adj Flow Rate, veh/h	3	333	84	88	1193	138	18	0	2	21	0	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	100	29	100	100	3	6	100	0	0	32	0	75
Cap, veh/h	1	1902	241	34	2694	1173	6	0	87	22	0	102
Arrive On Green	0.00	0.68	0.68	0.09	0.76	0.76	0.01	0.00	0.05	0.02	0.00	0.06
Sat Flow, veh/h	398	2793	354	398	3526	1535	398	0	1610	1358	0	1610
Grp Volume(v), veh/h	3	333	84	88	1193	138	18	0	2	21	0	4
Grp Sat Flow(s),veh/h/ln	398	1397	354	398	1763	1535	398	0	1610	1358	0	1610
Q Serve(g_s), s	0.4	5.5	12.6	11.0	15.3	3.0	1.9	0.0	0.1	2.0	0.0	0.3
Cycle Q Clear(g_c), s	0.4	5.5	12.6	11.0	15.3	3.0	1.9	0.0	0.1	2.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	1902	241	34	2694	1173	6	0	87	22	0	102
V/C Ratio(X)	2.38	0.18	0.35	2.55	0.44	0.12	3.05	0.00	0.02	0.94	0.00	0.04
Avail Cap(c_a), veh/h	34	1902	241	34	2694	1173	81	0	303	214	0	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.3	7.3	8.5	58.0	5.3	3.9	62.6	0.0	56.9	62.4	0.0	55.8
Incr Delay (d2), s/veh	965.1	0.2	3.9	775.8	0.5	0.2	1047.6	0.0	0.1	89.3	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.5	1.2	8.5	4.3	0.9	1.9	0.0	0.1	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	1028.4	7.5	12.4	833.8	5.9	4.1	1110.2	0.0	57.0	151.7	0.0	56.0
LnGrp LOS	F	A	B	F	A	A	F		E	F		E
Approach Vol, veh/h	420		1419				20			25		
Approach Delay, s/veh	15.8		57.0				1004.9			136.4		
Approach LOS	B		E				F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	93.0	5.9	13.2	4.4	103.6	7.1	12.0				
Change Period (Y+Rc), s	4.0	6.5	4.0	5.1	4.0	6.5	5.0	* 5.1				
Max Green Setting (Gmax), s	1.0	38.5	26.0	31.4	11.0	38.5	20.0	* 24				
Max Q Clear Time (g_c+113), s	13.0	14.6	3.9	2.3	2.4	17.3	4.0	2.1				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.0	0.0	11.6	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 59.0
HCM 7th LOS E

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	107	3	6	1296	3	5	0	2	10	0	0
Future Vol, veh/h	0	107	3	6	1296	3	5	0	2	10	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	380	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	29	33	17	2	0	80	0	0	0	0	0
Mvmt Flow	0	115	3	6	1394	3	5	0	2	11	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1397	0	0	118	0	0	1523	1526	117	1523	1526	1395
Stage 1	-	-	-	-	-	-	117	117	-	1408	1408	-
Stage 2	-	-	-	-	-	-	1406	1410	-	115	118	-
Critical Hdwy	4.1	-	-	4.27	-	-	7.9	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.9	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.9	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.353	-	-	4.22	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	496	-	-	1382	-	-	65	119	941	98	119	175
Stage 1	-	-	-	-	-	-	730	803	-	174	207	-
Stage 2	-	-	-	-	-	-	118	207	-	895	802	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	496	-	-	1382	-	-	64	118	941	97	118	175
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	118	-	97	118	-
Stage 1	-	-	-	-	-	-	730	803	-	173	206	-
Stage 2	-	-	-	-	-	-	117	206	-	893	802	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			0.04			49.84			46.64		
HCM LOS							E			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	88	496	-	-	1382	-	-	97				
HCM Lane V/C Ratio	0.086	-	-	-	0.005	-	-	0.111				
HCM Control Delay (s/veh)	49.8	0	-	-	7.6	-	-	46.6				
HCM Lane LOS	E	A	-	-	A	-	-	E				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.4				

HCM 7th Signalized Intersection Summary

16: Lammers Road & Eleventh St

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	275	58	480	497	103	43	172	432	42	240	59
Future Volume (veh/h)	23	275	58	480	497	103	43	172	432	42	240	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1856	1826	1870	1870	1870	1826	1870	1856	1870	1856	1826
Adj Flow Rate, veh/h	27	320	0	558	578	0	50	200	0	49	279	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	3	5	2	2	2	5	2	3	2	3	5
Cap, veh/h	72	2620		456	3209		96	398		98	394	
Arrive On Green	0.02	0.52	0.00	0.13	0.63	0.00	0.03	0.11	0.00	0.03	0.11	0.00
Sat Flow, veh/h	3510	5066	1547	3456	5106	1585	3374	3554	1572	3456	3526	1547
Grp Volume(v), veh/h	27	320	0	558	578	0	50	200	0	49	279	0
Grp Sat Flow(s),veh/h/ln	1755	1689	1547	1728	1702	1585	1687	1777	1572	1728	1763	1547
Q Serve(g_s), s	0.8	3.6	0.0	14.5	5.2	0.0	1.6	5.8	0.0	1.5	8.4	0.0
Cycle Q Clear(g_c), s	0.8	3.6	0.0	14.5	5.2	0.0	1.6	5.8	0.0	1.5	8.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	2620		456	3209		96	398		98	394	
V/C Ratio(X)	0.38	0.12		1.22	0.18		0.52	0.50		0.50	0.71	
Avail Cap(c_a), veh/h	622	2620		456	3209		291	772		770	766	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	53.2	13.7	0.0	47.8	8.6	0.0	52.7	46.0	0.0	52.7	47.1	0.0
Incr Delay (d2), s/veh	3.2	0.1	0.0	119.5	0.1	0.0	4.3	1.4	0.0	1.5	3.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.3	0.0	13.6	1.7	0.0	0.7	2.6	0.0	0.7	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.4	13.8	0.0	167.2	8.7	0.0	57.0	47.4	0.0	54.2	50.5	0.0
LnGrp LOS	E	B		F	A		E	D		D	D	
Approach Vol, veh/h	347			1136			250			328		
Approach Delay, s/veh	17.1			86.6			49.3			51.0		
Approach LOS	B			F			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	63.0	8.6	18.4	7.7	75.2	8.6	18.4				
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1				
Max Green Setting (Gmax), s	14.5	23.9	9.5	23.9	19.5	13.9	24.5	23.9				
Max Q Clear Time (g_c+I1), s	16.5	5.6	3.6	10.4	2.8	7.2	3.5	7.8				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.9	0.0	1.9	0.1	1.3				

Intersection Summary

HCM 7th Control Delay, s/veh 64.7
HCM 7th LOS E

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary 17: Lammers Road & Old Schulte Road

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	100	562	658	323	389
Future Volume (veh/h)	55	100	562	658	323	389
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1500	1870	1885	1856	1856
Adj Flow Rate, veh/h	62	114	639	748	367	442
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	15	27	2	1	3	3
Cap, veh/h	185	147	271	1390	400	481
Arrive On Green	0.12	0.12	0.15	0.74	0.52	0.52
Sat Flow, veh/h	1598	1271	1781	1885	766	923
Grp Volume(v), veh/h	62	114	639	748	0	809
Grp Sat Flow(s), veh/h/ln	1598	1271	1781	1885	0	1689
Q Serve(g_s), s	2.6	6.5	11.3	12.8	0.0	32.6
Cycle Q Clear(g_c), s	2.6	6.5	11.3	12.8	0.0	32.6
Prop In Lane	1.00	1.00	1.00			0.55
Lane Grp Cap(c), veh/h	185	147	271	1390	0	881
V/C Ratio(X)	0.34	0.78	2.35	0.54	0.00	0.92
Avail Cap(c_a), veh/h	409	326	271	1528	0	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	31.9	31.4	4.2	0.0	16.3
Incr Delay (d2), s/veh	1.1	8.5	620.5	0.3	0.0	12.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	51.4	3.0	0.0	13.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	31.2	40.3	651.9	4.6	0.0	28.3
LnGrp LOS	C	D	F	A		C
Approach Vol, veh/h	176			1387	809	
Approach Delay, s/veh	37.1			302.8	28.3	
Approach LOS	D			F	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	60.9			13.3	16.0	44.9
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	60.1			19.0	11.3	44.1
Max Q Clear Time (g_c+l1), s	14.8			8.5	13.3	34.6
Green Ext Time (p_c), s	6.2			0.3	0.0	4.1
Intersection Summary						
HCM 7th Control Delay, s/veh			189.5			
HCM 7th LOS			F			

HCM 7th TWSC
18: Lammers Road & Valpico Road

IPC 20 General Plan Analysis
Existing Plus Approved Conditions AM Peak Hour

Intersection												
Int Delay, s/veh	43.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	15	0	530	0	233	46	264	88	0
Future Vol, veh/h	0	0	0	15	0	530	0	233	46	264	88	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	13	0	4	0	1	9	12	4	0
Mvmt Flow	0	0	0	19	0	671	0	295	58	334	111	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1075	1133	111	1104	1104	324	111	0	0	353	0	0
Stage 1	780	780	-	324	324	-	-	-	-	-	-	-
Stage 2	295	353	-	780	780	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.5	6.24	4.1	-	-	4.22	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4	3.336	2.2	-	-	2.308	-	-
Pot Cap-1 Maneuver	199	205	947	179	213	712	1491	-	-	1152	-	-
Stage 1	391	409	-	666	653	-	-	-	-	-	-	-
Stage 2	718	634	-	372	409	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	8	141	947	124	147	712	1491	-	-	1152	-	-
Mov Cap-2 Maneuver	8	141	-	124	147	-	-	-	-	-	-	-
Stage 1	270	282	-	666	653	-	-	-	-	-	-	-
Stage 2	42	634	-	257	282	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s/v	0		89.26		0		7.05					
HCM LOS	A		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1491	-	-	-	630	1081	-	-				
HCM Lane V/C Ratio	-	-	-	-	1.095	0.29	-	-				
HCM Control Delay (s/veh)	0	-	-	0	89.3	9.4	0	-				
HCM Lane LOS	A	-	-	A	F	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	20.2	1.2	-	-				

HCM 7th Signalized Intersection Summary

3: International Pkwy & Daylight Rd

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	0	9	22	0	9	35	998	24	71	597	51
Future Volume (veh/h)	53	0	9	22	0	9	35	998	24	71	597	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1900	1752	1411	1752	1678	1411	1693	1426	1752
Adj Flow Rate, veh/h	58	0	10	26	0	11	38	1188	29	85	711	55
Peak Hour Factor	0.92	0.92	0.92	0.84	0.92	0.84	0.92	0.84	0.84	0.84	0.84	0.92
Percent Heavy Veh, %	10	10	10	0	10	33	10	15	33	14	32	10
Cap, veh/h	220	95	85	85	291	198	442	1442	541	103	1693	928
Arrive On Green	0.06	0.00	0.06	0.02	0.00	0.17	0.45	0.45	0.45	0.06	0.62	0.62
Sat Flow, veh/h	1315	1664	1485	3510	1752	1196	657	3188	1196	1612	2709	1485
Grp Volume(v), veh/h	58	0	10	26	0	11	38	1188	29	85	711	55
Grp Sat Flow(s), veh/h/ln	1315	1664	1485	1755	1752	1196	657	1594	1196	1612	1354	1485
Q Serve(g_s), s	2.2	0.0	0.3	0.4	0.0	0.4	1.7	16.2	0.7	2.6	6.6	0.7
Cycle Q Clear(g_c), s	2.2	0.0	0.3	0.4	0.0	0.4	1.7	16.2	0.7	2.6	6.6	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	95	85	85	291	198	442	1442	541	103	1693	928
V/C Ratio(X)	0.26	0.00	0.12	0.31	0.00	0.06	0.09	0.82	0.05	0.82	0.42	0.06
Avail Cap(c_a), veh/h	568	536	478	282	832	568	462	1539	577	214	1962	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	22.2	23.8	0.0	17.5	7.9	11.9	7.6	23.0	4.7	3.6
Incr Delay (d2), s/veh	0.6	0.0	0.6	0.7	0.0	0.1	0.1	3.8	0.1	6.1	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.1	0.1	0.0	0.1	0.2	4.6	0.1	1.0	0.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.7	0.0	22.9	24.6	0.0	17.6	8.0	15.7	7.7	29.1	5.0	3.7
LnGrp LOS	C		C	C		B	A	B	A	C	A	A
Approach Vol, veh/h	68			37			1255			851		
Approach Delay, s/veh	23.6			22.5			15.3			7.3		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	8.6	28.3	5.4	7.4		36.9		12.8				
Change Period (Y+Rc), s	5.4	5.8	4.2	* 4.6		5.8		4.6				
Max Green Setting (Gmax), s	6.6	24.0	4.0	* 16		36.0		23.6				
Max Q Clear Time (g_c+I1), s	4.6	18.2	2.4	4.2		8.6		2.4				
Green Ext Time (p_c), s	0.0	4.3	0.0	0.1		7.3		0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	12.6
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Summary

4: International Pkwy & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	19	5	148	1	374	34	616	68	245	407	4
Future Volume (veh/h)	57	19	5	148	1	374	34	616	68	245	407	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1900	1870	1589	1900	1544	1826	1885	1292	1366	1544	1900
Adj Flow Rate, veh/h	70	23	6	180	1	456	41	751	83	299	496	5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	5	0	2	21	0	24	5	1	41	36	24	0
Cap, veh/h	89	266	222	203	423	513	54	1572	480	338	837	872
Arrive On Green	0.05	0.14	0.14	0.13	0.22	0.22	0.03	0.44	0.44	0.13	0.54	0.54
Sat Flow, veh/h	1739	1900	1585	1513	1900	2303	1739	3582	1094	2525	1544	1609
Grp Volume(v), veh/h	70	23	6	180	1	456	41	751	83	299	496	5
Grp Sat Flow(s),veh/h/ln	1739	1900	1585	1513	1900	1152	1739	1791	1094	1262	1544	1609
Q Serve(g_s), s	4.8	1.3	0.4	14.0	0.0	23.0	2.8	17.9	5.5	14.0	26.0	0.2
Cycle Q Clear(g_c), s	4.8	1.3	0.4	14.0	0.0	23.0	2.8	17.9	5.5	14.0	26.0	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	266	222	203	423	513	54	1572	480	338	837	872
V/C Ratio(X)	0.79	0.09	0.03	0.89	0.00	0.89	0.76	0.48	0.17	0.88	0.59	0.01
Avail Cap(c_a), veh/h	145	507	423	227	633	768	72	1572	480	358	837	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	56.3	44.9	44.6	51.1	36.3	45.2	57.7	23.9	20.4	51.0	18.6	12.6
Incr Delay (d2), s/veh	14.0	0.1	0.0	27.1	0.0	7.8	26.9	1.0	0.8	20.5	2.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.6	0.2	6.8	0.0	7.0	1.6	7.4	1.5	5.3	9.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.2	45.1	44.6	78.2	36.3	53.0	84.6	25.0	21.2	71.5	21.5	12.7
LnGrp LOS	E	D	D	E	D	D	F	C	C	E	C	B
Approach Vol, veh/h	99			637			875			800		
Approach Delay, s/veh	62.8			60.1			27.4			40.1		
Approach LOS	E			E			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	70.8	20.1	21.4	20.1	58.5	10.1	31.3				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	46.6	18.0	32.0	17.0	34.6	10.0	40.0				
Max Q Clear Time (g_c+I), s	14.8	28.0	16.0	3.3	16.0	19.9	6.8	25.0				
Green Ext Time (p_c), s	0.0	2.8	0.1	0.1	0.1	4.4	0.0	1.7				

Intersection Summary

HCM 7th Control Delay, s/veh 41.7
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

5: International Pkwy & Old Schulte Road

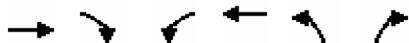
IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	27	66	163	27	215	48	376	246	152	379	14
Future Volume (veh/h)	36	27	66	163	27	215	48	376	246	152	379	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1144	1702	1856	947	1744	1455	947	1674	1648	854	1491	1055
Adj Flow Rate, veh/h	40	30	74	183	30	242	54	422	276	171	426	16
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	7	3	27	4	30	27	9	17	37	22	57
Cap, veh/h	75	176	162	831	887	751	58	545	421	158	586	185
Arrive On Green	0.07	0.10	0.10	0.47	0.51	0.51	0.06	0.17	0.17	0.10	0.21	0.21
Sat Flow, veh/h	1089	1702	1572	1750	1744	1233	902	3180	2458	1577	2833	894
Grp Volume(v), veh/h	40	30	74	183	30	242	54	422	276	171	426	16
Grp Sat Flow(s),veh/h/ln	1089	1702	1572	875	1744	1233	902	1590	1229	789	1417	894
Q Serve(g_s), s	4.6	2.1	5.8	8.0	1.1	12.4	7.7	16.5	13.6	13.0	18.2	1.9
Cycle Q Clear(g_c), s	4.6	2.1	5.8	8.0	1.1	12.4	7.7	16.5	13.6	13.0	18.2	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	176	162	831	887	751	58	545	421	158	586	185
V/C Ratio(X)	0.53	0.17	0.46	0.22	0.03	0.32	0.93	0.77	0.66	1.08	0.73	0.09
Avail Cap(c_a), veh/h	109	186	172	831	887	751	90	1106	855	158	985	311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	53.2	54.9	20.0	16.0	12.4	60.5	51.5	50.3	58.5	48.1	41.6
Incr Delay (d2), s/veh	5.7	0.5	2.0	0.2	0.0	0.2	55.1	2.4	1.7	95.9	1.7	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	0.9	2.3	1.6	0.4	3.2	2.6	6.6	4.2	4.6	6.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.1	53.7	56.8	20.2	16.0	12.6	115.6	53.9	52.0	154.4	49.9	41.8
LnGrp LOS	E	D	E	C	B	B	F	D	D	F	D	D
Approach Vol, veh/h	144			455			752			613		
Approach Delay, s/veh	58.2			15.9			57.6			78.8		
Approach LOS	E			B			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	28.1	65.7	19.2	12.4	32.7	13.0	71.9				
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	13.0	45.2	38.0	14.2	13.0	45.2	13.0	39.2				
Max Q Clear Time (g_c+1.5), s	11.5	18.5	10.0	7.8	9.7	20.2	6.6	14.4				
Green Ext Time (p_c), s	0.0	3.8	1.0	0.1	0.0	2.7	0.0	0.9				
Intersection Summary												
HCM 7th Control Delay, s/veh	54.6											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary 8: Hopkins Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↑	↑	↑↑↑	↑↑	↑↑
Traffic Volume (veh/h)	178	148	3	223	301	5
Future Volume (veh/h)	178	148	3	223	301	5
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1426	1144	418	1618	1352	714
Adj Flow Rate, veh/h	205	170	3	256	346	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	32	51	100	19	37	80
Cap, veh/h	822	294	341	933	427	201
Arrive On Green	0.30	0.30	0.30	0.30	0.33	0.33
Sat Flow, veh/h	2780	970	225	3156	1287	605
Grp Volume(v), veh/h	205	170	3	256	346	6
Grp Sat Flow(s),veh/h/ln	1354	970	225	1537	1287	605
Q Serve(g_s), s	1.4	3.7	0.3	1.6	6.2	0.2
Cycle Q Clear(g_c), s	1.4	3.7	1.7	1.6	6.2	0.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	822	294	341	933	427	201
V/C Ratio(X)	0.25	0.58	0.01	0.27	0.81	0.03
Avail Cap(c_a), veh/h	3266	1169	544	3707	1092	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.6	7.4	7.3	6.7	7.7	5.7
Incr Delay (d2), s/veh	0.2	1.8	0.0	0.2	3.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.0	0.3	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.8	9.2	7.3	6.8	11.4	5.7
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h	375			259	352	
Approach Delay, s/veh	7.9			6.8	11.3	
Approach LOS	A			A	B	
Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	12.2				12.2	13.0
Change Period (Y+Rc), s	4.6				4.6	4.6
Max Green Setting (Gmax), s	30.4				30.4	21.4
Max Q Clear Time (g_c+l1), s	5.7				3.7	8.2
Green Ext Time (p_c), s	1.9				1.7	1.0
Intersection Summary						
HCM 7th Control Delay, s/veh			8.8			
HCM 7th LOS			A			

HCM 7th Signalized Intersection Summary

9: Hansen Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	125	34	11	117	1	44	2	21	0	0	1
Future Volume (veh/h)	3	125	34	11	117	1	44	2	21	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1752	848	1633	1618	1900	1530	1900	1515	1900	1900	1900
Adj Flow Rate, veh/h	4	158	43	14	148	1	56	3	27	0	0	1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	10	71	18	19	0	25	0	26	0	0	0
Cap, veh/h	10	771	166	29	752	394	90	976	347	6	274	122
Arrive On Green	0.01	0.23	0.23	0.02	0.24	0.24	0.06	0.27	0.27	0.00	0.00	0.08
Sat Flow, veh/h	1810	3328	718	1555	3075	1610	1457	3610	1284	1810	3610	1610
Grp Volume(v), veh/h	4	158	43	14	148	1	56	3	27	0	0	1
Grp Sat Flow(s),veh/h/ln	1810	1664	718	1555	1537	1610	1457	1805	1284	1810	1805	1610
Q Serve(g_s), s	0.1	1.2	1.5	0.3	1.2	0.0	1.1	0.0	0.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	1.2	1.5	0.3	1.2	0.0	1.1	0.0	0.5	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	10	771	166	29	752	394	90	976	347	6	274	122
V/C Ratio(X)	0.40	0.20	0.26	0.49	0.20	0.00	0.62	0.00	0.08	0.00	0.00	0.01
Avail Cap(c_a), veh/h	1198	4405	951	1029	4080	2137	964	4778	1699	1198	4778	2131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	15.0	9.4	9.5	14.7	9.1	8.6	13.8	8.1	8.2	0.0	0.0	12.9
Incr Delay (d2), s/veh	24.5	0.1	0.8	12.5	0.1	0.0	6.7	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.2	0.2	0.3	0.0	0.4	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.5	9.5	10.3	27.1	9.2	8.6	20.6	8.1	8.3	0.0	0.0	12.9
LnGrp LOS	D	A	B	C	A	A	C	A	A			B
Approach Vol, veh/h	205		163			86			1			
Approach Delay, s/veh	10.2		10.7			16.3			12.9			
Approach LOS	B		B			B			B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.6	11.7	0.0	14.0	4.2	12.1	5.9	8.1				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.1	20.0	40.0				
Max Q Clear Time (g_c+I2), s	12.3	3.5	0.0	2.5	2.1	3.2	3.1	2.0				
Green Ext Time (p_c), s	0.0	1.2	0.0	0.1	0.0	0.9	0.1	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 11.6
HCM 7th LOS B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

10: Hansen Rd & Hopkins Rd

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	17	85	6	17	2	55	26	4	0	35	3
Future Volume (veh/h)	0	17	85	6	17	2	55	26	4	0	35	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	774	1574	1159	1722	1900	1589	1337	418	1900	1737	907
Adj Flow Rate, veh/h	0	20	99	7	20	2	64	30	5	0	41	3
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	76	22	50	12	0	21	38	100	0	11	67
Cap, veh/h	2	62	309	10	948	95	77	616	86	2	451	105
Arrive On Green	0.00	0.55	0.55	0.01	0.62	0.62	0.05	0.24	0.24	0.00	0.14	0.14
Sat Flow, veh/h	1810	113	560	1104	1540	154	1513	2540	354	1810	3300	769
Grp Volume(v), veh/h	0	0	119	7	0	22	64	30	5	0	41	3
Grp Sat Flow(s),veh/h/ln	1810	0	673	1104	0	1694	1513	1270	354	1810	1650	769
Q Serve(g_s), s	0.0	0.0	7.0	0.5	0.0	0.4	3.1	0.7	0.8	0.0	0.8	0.2
Cycle Q Clear(g_c), s	0.0	0.0	7.0	0.5	0.0	0.4	3.1	0.7	0.8	0.0	0.8	0.2
Prop In Lane	1.00		0.83	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	0	371	10	0	1043	77	616	86	2	451	105
V/C Ratio(X)	0.00	0.00	0.32	0.70	0.00	0.02	0.83	0.05	0.06	0.00	0.09	0.03
Avail Cap(c_a), veh/h	222	0	371	136	0	1043	310	1152	161	222	1226	286
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.9	36.2	0.0	5.5	34.4	21.3	21.3	0.0	27.6	27.4
Incr Delay (d2), s/veh	0.0	0.0	2.3	62.1	0.0	0.0	19.3	0.0	0.3	0.0	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.0	0.3	0.0	0.1	1.5	0.2	0.1	0.0	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	11.2	98.3	0.0	5.5	53.7	21.3	21.6	0.0	27.7	27.5
LnGrp LOS			B	F		A	D	C	C		C	C
Approach Vol, veh/h	119		29			99			44			
Approach Delay, s/veh	11.2		27.9			42.3			27.7			
Approach LOS	B		C			D			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	45.0	0.0	23.5	0.0	49.7	7.7	15.8				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	4.0	40.4	9.0	33.2	9.0	40.4	15.0	27.2				
Max Q Clear Time (g_c+I2), s	4.0	9.0	0.0	2.8	0.0	2.4	5.1	2.8				
Green Ext Time (p_c), s	0.0	0.7	0.0	0.1	0.0	0.1	0.1	0.2				

Intersection Summary

HCM 7th Control Delay, s/veh	25.9
HCM 7th LOS	C

HCM 7th Signalized Intersection Summary

11: Old Schulte Road & Hansen Rd

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	331	49	21	175	27	87	24	63	102	9	20
Future Volume (veh/h)	13	331	49	21	175	27	87	24	63	102	9	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1085	1796	1159	1530	1693	1900	1648	1781	1826	1811	1411	1441
Adj Flow Rate, veh/h	17	441	65	28	233	36	116	32	84	136	12	27
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	55	7	50	25	14	0	17	8	5	6	33	31
Cap, veh/h	33	1132	619	64	1087	1034	137	260	119	160	116	101
Arrive On Green	0.03	0.63	0.63	0.04	0.64	0.64	0.09	0.08	0.08	0.09	0.08	0.08
Sat Flow, veh/h	1033	1796	982	1457	1693	1610	1570	3385	1547	1725	1411	1221
Grp Volume(v), veh/h	17	441	65	28	233	36	116	32	84	136	12	27
Grp Sat Flow(s),veh/h/ln	1033	1796	982	1457	1693	1610	1570	1692	1547	1725	1411	1221
Q Serve(g_s), s	2.1	15.6	3.4	2.4	7.4	1.1	9.5	1.1	6.9	10.1	1.0	2.7
Cycle Q Clear(g_c), s	2.1	15.6	3.4	2.4	7.4	1.1	9.5	1.1	6.9	10.1	1.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	1132	619	64	1087	1034	137	260	119	160	116	101
V/C Ratio(X)	0.52	0.39	0.11	0.44	0.21	0.03	0.85	0.12	0.71	0.85	0.10	0.27
Avail Cap(c_a), veh/h	111	1132	619	157	1087	1034	169	890	407	186	371	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.0	11.8	9.5	60.6	9.6	8.5	58.5	55.9	58.6	58.1	55.2	56.0
Incr Delay (d2), s/veh	12.1	1.0	0.3	4.6	0.5	0.1	26.6	0.3	10.4	26.5	0.5	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.0	0.7	1.0	2.6	0.4	4.7	0.5	3.0	5.5	0.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.0	12.8	9.9	65.2	10.1	8.6	85.0	56.2	68.9	84.6	55.7	58.0
LnGrp LOS	E	B	A	E	B	A	F	E	E	F	E	E
Approach Vol, veh/h	523		297			232			175			
Approach Delay, s/veh	14.4		15.1			75.2			78.5			
Approach LOS	B		B			E			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	88.4	15.4	16.5	8.1	90.0	16.1	15.8				
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	14.0	* 48	14.0	34.2	14.0	47.5	14.0	34.2				
Max Q Clear Time (g_c+I), s	14.4	17.6	11.5	4.7	4.1	9.4	12.1	3.1				
Green Ext Time (p_c), s	0.0	4.3	0.1	0.2	0.0	2.0	0.1	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 35.2
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection

Intersection Delay, s/veh 8.2

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	13	7	49	20	5	19
Future Vol, veh/h	13	7	49	20	5	19
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles, %	73	71	0	6	20	53
Mvmt Flow	19	10	71	29	7	28
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	8.5	8.2	8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	19	13	7	49	20
LT Vol	5	0	0	0	49	0
Through Vol	0	0	13	0	0	20
RT Vol	0	19	0	7	0	0
Lane Flow Rate	7	28	19	10	71	29
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.011	0.039	0.031	0.014	0.1	0.038
Departure Headway (Hd)	5.681	5.042	5.851	5.116	5.074	4.675
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	634	714	608	694	704	762
Service Time	3.381	2.742	3.621	2.885	2.824	2.426
HCM Lane V/C Ratio	0.011	0.039	0.031	0.014	0.101	0.038
HCM Control Delay, s/veh	8.4	7.9	8.8	8	8.4	7.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.1	0.1	0	0.3	0.1

HCM 7th Signalized Intersection Summary 13: Old Schulte Road & Bud Lyons Wy

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	486	11	6	164	12	48	0	6	43	0	11
Future Volume (veh/h)	11	486	11	6	164	12	48	0	6	43	0	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	952	1870	418	1900	1826	1648	418	1900	1900	1767	1900	1767
Adj Flow Rate, veh/h	14	615	14	8	208	15	61	0	8	54	0	14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	64	2	100	0	5	17	100	0	0	9	0	9
Cap, veh/h	13	968	96	15	925	372	22	0	266	338	0	453
Arrive On Green	0.01	0.27	0.27	0.01	0.27	0.27	0.05	0.00	0.16	0.20	0.00	0.28
Sat Flow, veh/h	906	3554	354	1810	3469	1397	398	0	1610	1682	0	1610
Grp Volume(v), veh/h	14	615	14	8	208	15	61	0	8	54	0	14
Grp Sat Flow(s),veh/h/ln	906	1777	354	1810	1735	1397	398	0	1610	1682	0	1610
Q Serve(g_s), s	0.7	7.5	1.5	0.2	2.3	0.4	2.7	0.0	0.2	1.3	0.0	0.3
Cycle Q Clear(g_c), s	0.7	7.5	1.5	0.2	2.3	0.4	2.7	0.0	0.2	1.3	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	13	968	96	15	925	372	22	0	266	338	0	453
V/C Ratio(X)	1.09	0.64	0.15	0.53	0.22	0.04	2.81	0.00	0.03	0.16	0.00	0.03
Avail Cap(c_a), veh/h	192	2833	282	383	2765	1113	84	0	780	1137	0	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.4	15.9	13.7	24.5	14.2	13.5	23.4	0.0	17.4	16.3	0.0	12.9
Incr Delay (d2), s/veh	97.9	0.7	0.7	25.3	0.1	0.0	879.6	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.4	0.1	0.2	0.7	0.1	5.5	0.0	0.1	0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	122.3	16.6	14.3	49.7	14.3	13.5	903.1	0.0	17.4	16.4	0.0	12.9
LnGrp LOS	F	B	B	D	B	B	F		B	B		B
Approach Vol, veh/h	643					231		69		68		
Approach Delay, s/veh	18.8					15.5		800.4		15.7		
Approach LOS	B					B		F		B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	19.0	7.2	18.4	5.2	18.7	13.0	12.7				
Change Period (Y+Rc), s	4.5	5.5	4.5	4.5	4.5	5.5	3.0	4.5				
Max Green Setting (Gmax), s	10.5	39.5	10.5	32.0	10.5	39.5	33.5	24.0				
Max Q Clear Time (g_c+I2), s	12.2	9.5	4.7	2.3	2.7	4.3	3.3	2.2				
Green Ext Time (p_c), s	0.0	4.0	0.1	0.0	0.0	1.2	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			71.2									
HCM 7th LOS			E									

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	533	6	2	164	1	4	0	11	25	0	0
Future Vol, veh/h	0	533	6	2	164	1	4	0	11	25	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	380	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	2	50	0	8	0	0	0	9	0	0	0
Mvmt Flow	0	683	8	3	210	1	5	0	14	32	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	212	0	0	691	0	0	903	904	687	899	907	211
Stage 1	-	-	-	-	-	-	687	687	-	216	216	-
Stage 2	-	-	-	-	-	-	215	217	-	683	691	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.29	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.381	3.5	4	3.3
Pot Cap-1 Maneuver	1371	-	-	913	-	-	261	279	435	262	278	834
Stage 1	-	-	-	-	-	-	440	450	-	791	728	-
Stage 2	-	-	-	-	-	-	791	727	-	442	449	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1371	-	-	913	-	-	260	278	435	253	277	834
Mov Cap-2 Maneuver	-	-	-	-	-	-	260	278	-	253	277	-
Stage 1	-	-	-	-	-	-	440	450	-	789	726	-
Stage 2	-	-	-	-	-	-	789	725	-	428	449	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			0.11			15.3			21.31		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	369	1371	-	-	913	-	-	253				
HCM Lane V/C Ratio	0.052	-	-	-	0.003	-	-	0.127				
HCM Control Delay (s/veh)	15.3	0	-	-	9	-	-	21.3				
HCM Lane LOS	C	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.4				

HCM 7th Signalized Intersection Summary

16: Lammers Road & Eleventh St

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	927	145	226	390	82	112	197	538	65	157	31
Future Volume (veh/h)	121	927	145	226	390	82	112	197	538	65	157	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1885	1885	1870	1870	1841	1885	1870	1870	1856	1885	1811
Adj Flow Rate, veh/h	141	1078	0	263	453	0	130	229	0	76	183	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	1	1	2	2	4	1	2	2	3	1	6
Cap, veh/h	233	1909		368	2094		214	404		159	353	
Arrive On Green	0.07	0.37	0.00	0.11	0.41	0.00	0.06	0.11	0.00	0.05	0.10	0.00
Sat Flow, veh/h	3456	5147	1598	3456	5106	1560	3483	3554	1585	3428	3582	1535
Grp Volume(v), veh/h	141	1078	0	263	453	0	130	229	0	76	183	0
Grp Sat Flow(s),veh/h/ln	1728	1716	1598	1728	1702	1560	1742	1777	1585	1714	1791	1535
Q Serve(g_s), s	2.5	10.7	0.0	4.7	3.7	0.0	2.3	3.9	0.0	1.4	3.1	0.0
Cycle Q Clear(g_c), s	2.5	10.7	0.0	4.7	3.7	0.0	2.3	3.9	0.0	1.4	3.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	1909		368	2094		214	404		159	353	
V/C Ratio(X)	0.61	0.56		0.71	0.22		0.61	0.57		0.48	0.52	
Avail Cap(c_a), veh/h	518	3280		567	3326		299	2248		268	2238	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.0	16.0	0.0	27.7	12.2	0.0	29.3	26.9	0.0	29.8	27.4	0.0
Incr Delay (d2), s/veh	2.5	0.4	0.0	1.0	0.1	0.0	2.8	1.2	0.0	2.2	1.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.5	0.0	1.8	1.2	0.0	1.0	1.6	0.0	0.6	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.5	16.4	0.0	28.6	12.3	0.0	32.1	28.1	0.0	32.0	28.6	0.0
LnGrp LOS	C	B		C	B		C	C		C	C	
Approach Vol, veh/h	1219			716			359			259		
Approach Delay, s/veh	18.2			18.3			29.5			29.6		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	29.8	9.4	12.4	9.8	32.4	8.5	13.4				
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1				
Max Green Setting (Gmax), s	10.5	40.8	5.5	40.0	9.6	41.7	5.0	40.5				
Max Q Clear Time (g_c+l1), s	6.7	12.7	4.3	5.1	4.5	5.7	3.4	5.9				
Green Ext Time (p_c), s	0.2	11.1	0.0	1.2	0.2	4.3	0.0	1.4				

Intersection Summary

HCM 7th Control Delay, s/veh	21.0
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary 17: Lammers Road & Old Schulte Road

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	187	380	125	462	551	47
Future Volume (veh/h)	187	380	125	462	551	47
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1841	1885	1900	1885	1856
Adj Flow Rate, veh/h	212	432	142	525	626	53
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	4	1	0	1	3
Cap, veh/h	555	482	181	1076	706	60
Arrive On Green	0.31	0.31	0.10	0.57	0.41	0.41
Sat Flow, veh/h	1795	1560	1795	1900	1714	145
Grp Volume(v), veh/h	212	432	142	525	0	679
Grp Sat Flow(s), veh/h/ln	1795	1560	1795	1900	0	1859
Q Serve(g_s), s	8.1	23.1	6.8	14.5	0.0	29.6
Cycle Q Clear(g_c), s	8.1	23.1	6.8	14.5	0.0	29.6
Prop In Lane	1.00	1.00	1.00			0.08
Lane Grp Cap(c), veh/h	555	482	181	1076	0	766
V/C Ratio(X)	0.38	0.90	0.79	0.49	0.00	0.89
Avail Cap(c_a), veh/h	821	713	616	1086	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	28.9	38.4	11.4	0.0	23.8
Incr Delay (d2), s/veh	0.4	10.1	7.3	0.3	0.0	7.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	19.1	3.3	5.5	0.0	13.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	24.1	39.0	45.7	11.7	0.0	30.9
LnGrp LOS	C	D	D	B		C
Approach Vol, veh/h	644			667	679	
Approach Delay, s/veh	34.1			19.0	30.9	
Approach LOS	C			B	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	55.7			31.7	13.5	42.2
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	50.0			40.0	30.0	50.0
Max Q Clear Time (g_c+l1), s	16.5			25.1	8.8	31.6
Green Ext Time (p_c), s		3.6		1.9	0.3	4.4
Intersection Summary						
HCM 7th Control Delay, s/veh			27.9			
HCM 7th LOS			C			

HCM 7th TWSC
18: Lammers Road & Valpico Road

IPC 20 General Plan Analysis
Existing Plus Approved Conditions PM Peak Hour

Intersection												
Int Delay, s/veh	34.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	10	0	336	0	112	14	595	143	0
Future Vol, veh/h	0	0	0	10	0	336	0	112	14	595	143	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	13	0	4	0	1	9	12	4	0
Mvmt Flow	0	0	0	13	0	425	0	142	18	753	181	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1829	1847	181	1838	1838	151	181	0	0	159	0	0
Stage 1	1687	1687	-	151	151	-	-	-	-	-	-	-
Stage 2	142	159	-	1687	1687	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.5	6.24	4.1	-	-	4.22	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4	3.336	2.2	-	-	2.308	-	-
Pot Cap-1 Maneuver	60	76	867	54	76	891	1407	-	-	1361	-	-
Stage 1	120	151	-	826	776	-	-	-	-	-	-	-
Stage 2	866	770	-	111	151	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	12	29	867	21	29	891	1407	-	-	1361	-	-
Mov Cap-2 Maneuver	12	29	-	21	29	-	-	-	-	-	-	-
Stage 1	46	58	-	826	776	-	-	-	-	-	-	-
Stage 2	452	770	-	43	58	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s/v	0		100.7		0		8.76					
HCM LOS	A		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1407	-	-	-	405	1224	-	-				
HCM Lane V/C Ratio	-	-	-	-	1.082	0.553	-	-				
HCM Control Delay (s/veh)	0	-	-	0	100.7	10.9	0	-				
HCM Lane LOS	A	-	-	A	F	B	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	15.1	3.6	-	-				

3: International Pkwy & Daylight Rd Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	4.2	0.1	3.6	0.1	0.0	0.0	0.0	0.3	0.0	0.1	0.1
Total Del/Veh (s)	25.6	7.9	30.0	6.8	20.6	12.1	9.6	17.8	4.8	3.7	7.8
Vehicles Entered	37	9	16	16	27	523	18	72	1368	41	2127
Vehicles Exited	37	9	16	16	27	525	18	73	1373	41	2135
Hourly Exit Rate	37	9	16	16	27	525	18	73	1373	41	2135
Input Volume	36	8	20	13	32	575	15	68	1459	35	2261
% of Volume	103	109	81	121	84	91	118	107	94	117	94

4: International Pkwy & Promontory Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.2	0.1	4.2	0.1	0.0	0.1	1.0	0.0	0.9	0.0	0.0	0.0
Total Del/Veh (s)	29.5	29.7	9.2	31.1	12.0	9.2	37.7	16.4	5.1	26.0	25.1	5.7
Vehicles Entered	25	9	7	59	15	218	51	321	106	345	827	1
Vehicles Exited	26	9	7	61	16	220	54	328	106	347	833	1
Hourly Exit Rate	26	9	7	61	16	220	54	328	106	347	833	1
Input Volume	25	9	3	51	24	237	58	366	118	355	888	2
% of Volume	105	97	233	120	67	93	93	90	90	98	94	50

4: International Pkwy & Promontory Pkwy Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	21.5
Vehicles Entered	1984
Vehicles Exited	2008
Hourly Exit Rate	2008
Input Volume	2136
% of Volume	94

5: International Pkwy & Old Schulte Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.4	0.5	3.9	9.5	6.4	26.3	0.0	0.1	0.2	24.0	2.9	17.9
Total Del/Veh (s)	78.6	84.8	26.1	238.8	53.9	31.3	63.8	29.6	4.5	201.5	208.9	103.1
Vehicles Entered	14	10	176	444	210	161	31	253	260	247	640	17
Vehicles Exited	13	10	173	409	205	158	29	251	259	232	568	16
Hourly Exit Rate	13	10	173	409	205	158	29	251	259	232	568	16
Input Volume	13	10	177	680	298	194	30	278	263	256	692	18
% of Volume	98	100	98	60	69	82	96	90	99	91	82	88

5: International Pkwy & Old Schulte Road Performance by movement

Movement	All
Denied Del/Veh (s)	7.7
Total Del/Veh (s)	132.5
Vehicles Entered	2463
Vehicles Exited	2323
Hourly Exit Rate	2323
Input Volume	2908
% of Volume	80

8: Hopkins Rd & Promontory Pkwy Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	1.3	0.0	0.0	0.2
Total Del/Veh (s)	16.5	6.3	22.7	17.8	5.3	0.0	3.6	13.2
Vehicles Entered	330	194	1	199	84	1	8	817
Vehicles Exited	332	197	1	194	84	1	8	817
Hourly Exit Rate	332	197	1	194	84	1	8	817
Input Volume	352	187	3	207	91	1	9	850
% of Volume	94	105	31	94	92	133	89	96

9: Hansen Rd & Promontory Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	4.2	0.1	2.1	0.0	2.5	4.2	4.2	0.8
Total Del/Veh (s)	18.1	6.9	5.9	19.0	5.2	7.6	4.5	1.6	10.6	2.2	6.9
Vehicles Entered	5	252	32	5	37	139	1	24	5	3	503
Vehicles Exited	5	253	33	5	37	140	1	24	5	3	506
Hourly Exit Rate	5	253	33	5	37	140	1	24	5	3	506
Input Volume	2	259	35	7	32	154	2	28	2	3	525
% of Volume	222	98	94	69	115	91	44	86	222	109	96

10: Hansen Rd & Hopkins Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	1.4	0.0	1.2	0.0	0.0	0.9
Total Del/Veh (s)	26.1	2.0	2.8	49.7	6.5	0.7	33.5	13.8	3.5	1.9	17.8	1.5
Vehicles Entered	4	168	23	3	34	3	39	70	7	1	36	9
Vehicles Exited	4	169	23	3	34	3	40	71	7	1	37	9
Hourly Exit Rate	4	169	23	3	34	3	40	71	7	1	37	9
Input Volume	4	158	28	2	37	7	45	91	8	2	40	11
% of Volume	107	107	83	133	91	43	89	78	88	44	93	80

10: Hansen Rd & Hopkins Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	9.7
Vehicles Entered	397
Vehicles Exited	401
Hourly Exit Rate	401
Input Volume	434
% of Volume	92

11: Old Schulte Road & Hansen Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.1	4.2	0.0	0.0	0.0
Total Del/Veh (s)	76.2	5.0	2.5	73.0	8.7	2.0	58.7	51.5	4.7	59.1	25.3	12.1
Vehicles Entered	15	459	26	21	838	55	14	5	6	32	14	14
Vehicles Exited	15	458	27	21	847	55	15	5	6	32	14	14
Hourly Exit Rate	15	458	27	21	847	55	15	5	6	32	14	14
Input Volume	16	474	38	34	1052	67	19	8	6	36	18	16
% of Volume	94	97	71	61	80	82	78	62	100	88	80	88

11: Old Schulte Road & Hansen Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	10.7
Vehicles Entered	1499
Vehicles Exited	1509
Hourly Exit Rate	1509
Input Volume	1785
% of Volume	85

12: Bud Lyons Wy & Hopkins Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	3.8	0.1	1.3	0.0	0.0	0.6
Total Del/Veh (s)	5.8	2.7	4.5	7.0	4.0	0.4	2.2	3.4
Vehicles Entered	26	12	22	12	20	4	111	207
Vehicles Exited	26	12	23	12	20	4	110	207
Hourly Exit Rate	26	12	23	12	20	4	110	207
Input Volume	28	8	13	8	28	2	143	230
% of Volume	95	150	177	150	71	178	77	90

13: Old Schulte Road & Bud Lyons Wy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	4.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	41.2	6.1	1.7	56.1	6.5	1.1	48.7	3.4	55.6	0.1	3.4	9.3
Vehicles Entered	2	338	81	79	936	94	23	1	24	94	10	1682
Vehicles Exited	2	336	82	81	928	94	24	1	24	93	10	1675
Hourly Exit Rate	2	336	82	81	928	94	24	1	24	93	10	1675
Input Volume	3	354	77	81	1184	127	17	2	19	78	4	1947
% of Volume	67	95	106	100	78	74	139	50	128	119	250	86

15: Private Driveway/Pavillion Pkwy & Old Schulte Road Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.5	0.0	0.1	0.1	0.0	0.3
Total Del/Veh (s)	1.3	0.8	8.0	5.3	1.4	21.4	3.2	18.8	4.6
Vehicles Entered	311	1	5	1026	3	5	1	10	1362
Vehicles Exited	314	1	5	1020	3	5	1	11	1360
Hourly Exit Rate	314	1	5	1020	3	5	1	11	1360
Input Volume	324	3	6	1296	3	5	2	10	1650
% of Volume	97	33	83	79	100	100	50	107	82

16: Lammers Road & Eleventh St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1
Total Del/Veh (s)	57.4	20.1	2.6	57.7	14.1	6.2	75.2	48.0	3.1	68.3	44.9	3.2
Vehicles Entered	19	267	65	463	526	92	36	193	436	49	235	64
Vehicles Exited	19	266	65	451	526	92	34	191	436	43	236	61
Hourly Exit Rate	19	266	65	451	526	92	34	191	436	43	236	61
Input Volume	23	275	58	480	497	103	43	172	432	42	240	59
% of Volume	82	97	112	94	106	90	79	111	101	102	98	103

16: Lammers Road & Eleventh St Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	28.3
Vehicles Entered	2445
Vehicles Exited	2420
Hourly Exit Rate	2420
Input Volume	2425
% of Volume	100

17: Lammers Road & Old Schulte Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	1.0	755.2	895.9	0.7	0.6	472.0
Total Del/Veh (s)	30.3	7.4	450.0	283.3	30.0	21.8	175.3
Vehicles Entered	63	108	315	351	327	408	1572
Vehicles Exited	63	108	297	360	326	408	1562
Hourly Exit Rate	63	108	297	360	326	408	1562
Input Volume	55	100	562	664	323	389	2091
% of Volume	115	108	53	54	101	105	75

18: Lammers Road & Valpico Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.5	0.4	0.2	0.2	0.0	0.0	0.2
Total Del/Veh (s)	487.4	231.4	9.3	5.5	7.3	4.5	106.7
Vehicles Entered	13	535	257	49	265	174	1293
Vehicles Exited	12	441	263	47	267	171	1201
Hourly Exit Rate	12	441	263	47	267	171	1201
Input Volume	15	530	233	46	264	159	1247
% of Volume	79	83	113	102	101	108	96

Total Zone Performance

Denied Del/Veh (s)	164.3
Total Del/Veh (s)	467.4
Vehicles Entered	5605
Vehicles Exited	1459
Hourly Exit Rate	1459
Input Volume	20489
% of Volume	7

G. Existing (2024) Plus Approved Projects Plus Project Conditions Synchro Outputs

DRAFT

HCM 7th Signalized Intersection Summary

IPC 20 General Plan Analysis

3: International Pkwy & Daylight Rd

Existing Plus Approved Plus Project Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	0	8	20	0	13	52	627	25	68	1242	35
Future Volume (veh/h)	36	0	8	20	0	13	52	627	25	68	1242	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1648	1752	981	1752	1203	1100	1604	1648	1752
Adj Flow Rate, veh/h	39	0	9	22	0	14	57	682	27	74	1350	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	17	10	62	10	47	54	20	17	10
Cap, veh/h	219	79	71	65	281	133	274	927	378	138	1920	910
Arrive On Green	0.05	0.00	0.05	0.02	0.00	0.16	0.41	0.41	0.41	0.09	0.61	0.61
Sat Flow, veh/h	1311	1664	1485	3045	1752	831	365	2287	932	1527	3131	1485
Grp Volume(v), veh/h	39	0	9	22	0	14	57	682	27	74	1350	38
Grp Sat Flow(s),veh/h/ln	1311	1664	1485	1522	1752	831	365	1143	932	1527	1566	1485
Q Serve(g_s), s	1.3	0.0	0.3	0.3	0.0	0.7	5.8	11.6	0.8	2.1	13.5	0.5
Cycle Q Clear(g_c), s	1.3	0.0	0.3	0.3	0.0	0.7	9.7	11.6	0.8	2.1	13.5	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	79	71	65	281	133	274	927	378	138	1920	910
V/C Ratio(X)	0.18	0.00	0.13	0.34	0.00	0.10	0.21	0.74	0.07	0.54	0.70	0.04
Avail Cap(c_a), veh/h	614	580	517	265	900	427	308	1145	467	253	2455	1164
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	0.0	21.0	22.2	0.0	16.5	12.6	11.6	8.4	20.0	6.0	3.5
Incr Delay (d2), s/veh	0.4	0.0	0.8	1.1	0.0	0.3	0.5	2.3	0.1	1.2	0.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.1	0.1	0.0	0.1	0.4	2.3	0.1	0.7	1.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.9	0.0	21.8	23.3	0.0	16.8	13.1	13.9	8.5	21.2	6.9	3.6
LnGrp LOS	C		C	C		B	B	B	A	C	A	A
Approach Vol, veh/h	48			36			766			1462		
Approach Delay, s/veh	21.8			20.8			13.7			7.5		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	9.5	24.4	5.2	6.8		34.0		12.0				
Change Period (Y+Rc), s	5.4	5.8	4.2	* 4.6		5.8		4.6				
Max Green Setting (Gmax), s	7.6	23.0	4.0	* 16		36.0		23.6				
Max Q Clear Time (g_c+I1), s	4.1	13.6	2.3	3.3		15.5		2.7				
Green Ext Time (p_c), s	0.0	4.6	0.0	0.1		12.7		0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	10.1
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Summary

4: International Pkwy & Promontory Pkwy

IPC 20 General Plan Analysis

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	9	43	232	36	264	38	373	141	382	851	2
Future Volume (veh/h)	25	9	43	232	36	264	38	373	141	382	851	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1292	1411	1366	1530	1085	1500	1678	1648	1900
Adj Flow Rate, veh/h	27	10	47	255	40	290	42	410	155	420	935	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	41	33	36	25	55	27	15	17	0
Cap, veh/h	45	141	120	144	235	339	50	1037	639	472	1024	1000
Arrive On Green	0.02	0.07	0.07	0.12	0.17	0.17	0.03	0.50	0.50	0.15	0.62	0.62
Sat Flow, veh/h	1810	1900	1610	1231	1411	2038	1457	2061	1270	3100	1648	1609
Grp Volume(v), veh/h	27	10	47	255	40	290	42	410	155	420	935	2
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1231	1411	1019	1457	1031	1270	1550	1648	1609
Q Serve(g_s), s	1.8	0.6	3.3	14.0	2.9	16.6	3.4	14.8	8.3	15.9	59.6	0.1
Cycle Q Clear(g_c), s	1.8	0.6	3.3	14.0	2.9	16.6	3.4	14.8	8.3	15.9	59.6	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	141	120	144	235	339	50	1037	639	472	1024	1000
V/C Ratio(X)	0.60	0.07	0.39	1.78	0.17	0.86	0.84	0.40	0.24	0.89	0.91	0.00
Avail Cap(c_a), veh/h	90	507	429	144	470	679	61	1037	639	517	1024	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	57.9	51.7	52.9	53.0	42.9	48.6	57.6	18.5	16.9	49.9	19.9	8.6
Incr Delay (d2), s/veh	12.4	0.2	2.1	370.2	0.3	4.9	56.2	1.1	0.9	14.3	12.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	1.4	19.0	1.0	4.4	2.0	3.5	2.5	6.9	23.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.3	51.9	55.0	423.2	43.2	53.5	113.8	19.6	17.8	64.1	31.9	8.6
LnGrp LOS	E	D	E	F	D	D	F	B	B	E	C	A
Approach Vol, veh/h	84			585			607			1357		
Approach Delay, s/veh	59.6			214.0			25.7			41.8		
Approach LOS	E			F			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	80.4	18.0	13.5	22.3	66.2	7.0	24.6					
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	50.6	50.6	14.0	32.0	20.0	35.6	6.0	40.0				
Max Q Clear Time (g_c+I), s	61.6	61.6	16.0	5.3	17.9	16.8	3.8	18.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.3	2.9	0.0	1.4				

Intersection Summary

HCM 7th Control Delay, s/veh	76.9
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

5: International Pkwy & Old Schulte Road

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	10	177	515	132	89	30	273	274	265	864	18
Future Volume (veh/h)	13	10	177	515	132	89	30	273	274	265	864	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1060	1238	1767	1125	1617	1263	929	873	833	620	1688	1485
Adj Flow Rate, veh/h	14	10	184	536	138	93	31	284	285	276	900	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	15	40	9	8	13	43	29	66	72	62	8	28
Cap, veh/h	36	99	120	621	555	510	23	447	335	153	1209	475
Arrive On Green	0.04	0.08	0.08	0.30	0.34	0.34	0.03	0.27	0.27	0.13	0.38	0.38
Sat Flow, veh/h	1009	1238	1497	2079	1617	1070	884	1659	1242	1145	3207	1259
Grp Volume(v), veh/h	14	10	184	536	138	93	31	284	285	276	900	19
Grp Sat Flow(s),veh/h/ln	1009	1238	1497	1039	1617	1070	884	830	621	572	1603	1259
Q Serve(g_s), s	1.2	0.7	7.2	21.9	5.5	4.5	2.3	13.6	19.5	12.0	21.8	0.9
Cycle Q Clear(g_c), s	1.2	0.7	7.2	21.9	5.5	4.5	2.3	13.6	19.5	12.0	21.8	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	99	120	621	555	510	23	447	335	153	1209	475
V/C Ratio(X)	0.39	0.10	1.53	0.86	0.25	0.18	1.35	0.64	0.85	1.80	0.74	0.04
Avail Cap(c_a), veh/h	56	99	120	1023	835	696	49	683	512	153	1571	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	38.3	41.3	29.8	21.2	13.5	43.7	28.9	31.1	38.9	24.2	17.7
Incr Delay (d2), s/veh	6.6	0.4	277.3	5.7	0.2	0.2	239.3	1.5	8.4	386.8	1.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	11.8	5.5	2.0	1.0	2.0	2.6	3.1	9.8	7.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.0	38.8	318.7	35.5	21.4	13.7	283.1	30.4	39.5	425.7	25.6	17.7
LnGrp LOS	D	D	F	D	C	B	F	C	D	F	C	B
Approach Vol, veh/h	208			767			600			1195		
Approach Delay, s/veh	287.0			30.3			47.8			117.9		
Approach LOS	F			C			D			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	30.0	30.8	13.0	6.3	39.7	7.2	36.6				
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	12.0	37.0	44.2	7.2	5.0	44.0	5.0	46.4				
Max Q Clear Time (g_c+1.0), s	14.0	21.5	23.9	9.2	4.3	23.8	3.2	7.5				
Green Ext Time (p_c), s	0.0	2.7	2.9	0.0	0.0	5.9	0.0	1.0				

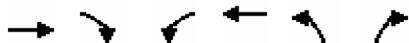
Intersection Summary

HCM 7th Control Delay, s/veh	91.2
HCM 7th LOS	F

HCM 7th Signalized Intersection Summary

8: Hopkins Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (veh/h)	337	187	12	442	93	11
Future Volume (veh/h)	337	187	12	442	93	11
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1722	1070	1900	1485	966	1737
Adj Flow Rate, veh/h	449	249	16	589	124	15
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	12	56	0	28	63	11
Cap, veh/h	1102	305	294	950	472	754
Arrive On Green	0.34	0.34	0.34	0.34	0.51	0.51
Sat Flow, veh/h	3358	907	759	2896	920	1472
Grp Volume(v), veh/h	449	249	16	589	124	15
Grp Sat Flow(s), veh/h/ln	1636	907	759	1411	920	1472
Q Serve(g_s), s	6.4	15.3	1.0	10.7	4.6	0.3
Cycle Q Clear(g_c), s	6.4	15.3	7.4	10.7	4.6	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1102	305	294	950	472	754
V/C Ratio(X)	0.41	0.82	0.05	0.62	0.26	0.02
Avail Cap(c_a), veh/h	1631	452	416	1406	472	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.85	0.85	1.00	1.00
Uniform Delay (d), s/veh	15.6	18.5	18.4	17.0	8.4	7.3
Incr Delay (d2), s/veh	0.2	5.6	0.1	0.6	1.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.3	0.2	3.1	0.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.7	24.1	18.5	17.5	9.7	7.4
LnGrp LOS	B	C	B	B	A	A
Approach Vol, veh/h	698			605	139	
Approach Delay, s/veh	18.7			17.6	9.5	
Approach LOS	B			B	A	
Timer - Assigned Phs	2			4		8
Phs Duration (G+Y+Rc), s	35.9			25.1		25.1
Change Period (Y+Rc), s	4.6			4.6		4.6
Max Green Setting (Gmax), s	21.4			30.4		30.4
Max Q Clear Time (g_c+I1), s	6.6			17.3		12.7
Green Ext Time (p_c), s	0.3			3.2		3.8
Intersection Summary						
HCM 7th Control Delay, s/veh			17.3			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary

IPC 20 General Plan Analysis

9: Hansen Rd & Promontory Pkwy

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	157	75	19	272	12	159	2	23	2	0	3
Future Volume (veh/h)	42	157	75	19	272	12	159	2	23	2	0	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1559	1767	1263	1248	1900	1500	1159	1559	1900	1900	1900
Adj Flow Rate, veh/h	64	238	114	29	412	18	241	3	35	3	0	5
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	0	23	9	43	44	0	27	50	23	0	0	0
Cap, veh/h	108	845	427	40	614	417	292	651	391	7	344	153
Arrive On Green	0.06	0.29	0.29	0.03	0.26	0.26	0.20	0.30	0.30	0.00	0.00	0.10
Sat Flow, veh/h	1810	2962	1497	1203	2371	1610	1428	2202	1321	1810	3610	1610
Grp Volume(v), veh/h	64	238	114	29	412	18	241	3	35	3	0	5
Grp Sat Flow(s),veh/h/ln	1810	1481	1497	1203	1186	1610	1428	1101	1321	1810	1805	1610
Q Serve(g_s), s	1.7	3.0	2.9	1.2	7.6	0.4	7.8	0.0	0.9	0.1	0.0	0.1
Cycle Q Clear(g_c), s	1.7	3.0	2.9	1.2	7.6	0.4	7.8	0.0	0.9	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	845	427	40	614	417	292	651	391	7	344	153
V/C Ratio(X)	0.59	0.28	0.27	0.72	0.67	0.04	0.83	0.00	0.09	0.41	0.00	0.03
Avail Cap(c_a), veh/h	746	2444	1235	496	1961	1332	589	1817	1090	746	2978	1328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.2	13.5	13.4	23.2	16.1	13.5	18.5	12.0	12.4	24.1	0.0	19.9
Incr Delay (d2), s/veh	5.1	0.2	0.3	21.6	1.3	0.0	5.9	0.0	0.1	32.1	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.9	0.8	0.5	1.8	0.1	2.5	0.0	0.2	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.4	13.6	13.7	44.8	17.4	13.5	24.3	12.0	12.5	56.2	0.0	20.0
LnGrp LOS	C	B	B	D	B	B	C	B	B	E		B
Approach Vol, veh/h	416				459		279				8	
Approach Delay, s/veh	15.8				19.0		22.7				33.6	
Approach LOS	B				B		C				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	18.5	4.2	20.1	6.9	17.3	13.9	10.4				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.1	20.0	40.0				
Max Q Clear Time (g_c+I), s	13.2	5.0	2.1	2.9	3.7	9.6	9.8	2.1				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.1	0.1	3.0	0.5	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	18.8
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

10: Hansen Rd & Hopkins Rd

IPC 20 General Plan Analysis

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	28	23	5	44	12	47	86	14	32	38	11
Future Volume (veh/h)	4	28	23	5	44	12	47	86	14	32	38	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1159	966	1337	418	1011	1900	1381	1663	1530	1900	1470	1085
Adj Flow Rate, veh/h	6	39	32	7	62	17	66	121	20	45	54	15
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	50	63	38	100	60	0	35	16	25	0	29	55
Cap, veh/h	8	206	169	4	321	88	78	1089	447	66	899	296
Arrive On Green	0.01	0.42	0.42	0.01	0.42	0.42	0.06	0.34	0.34	0.04	0.32	0.32
Sat Flow, veh/h	1104	491	403	398	764	209	1316	3159	1296	1810	2793	919
Grp Volume(v), veh/h	6	0	71	7	0	79	66	121	20	45	54	15
Grp Sat Flow(s),veh/h/ln	1104	0	894	398	0	973	1316	1580	1296	1810	1397	919
Q Serve(g_s), s	0.5	0.0	4.8	0.9	0.0	4.9	4.8	2.5	1.0	2.4	1.3	1.1
Cycle Q Clear(g_c), s	0.5	0.0	4.8	0.9	0.0	4.9	4.8	2.5	1.0	2.4	1.3	1.1
Prop In Lane	1.00		0.45	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	0	375	4	0	409	78	1089	447	66	899	296
V/C Ratio(X)	0.71	0.00	0.19	1.98	0.00	0.19	0.85	0.11	0.04	0.68	0.06	0.05
Avail Cap(c_a), veh/h	103	0	375	37	0	409	205	1089	447	169	899	296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	0.0	17.6	47.8	0.0	17.6	44.9	21.5	21.0	45.9	22.6	22.5
Incr Delay (d2), s/veh	71.4	0.0	1.1	605.0	0.0	1.0	21.6	0.2	0.2	11.8	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.1	0.7	0.0	1.1	2.0	0.9	0.3	1.2	0.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	119.1	0.0	18.8	652.8	0.0	18.7	66.5	21.7	21.2	57.7	22.6	22.6
LnGrp LOS	F		B	F		B	E	C	C	E	C	C
Approach Vol, veh/h	77		86			207			114			
Approach Delay, s/veh	26.6		70.3			36.0			36.5			
Approach LOS	C		E			D			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	45.0	7.5	39.0	4.7	45.1	9.7	36.8				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	4.0	40.4	9.0	33.2	9.0	40.4	15.0	27.2				
Max Q Clear Time (g_c+I2), s	4.0	6.8	4.4	4.5	2.5	6.9	6.8	3.3				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.7	0.0	0.4	0.1	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	40.7
HCM 7th LOS	D

HCM 7th Signalized Intersection Summary

11: Old Schulte Road & Hansen Rd

IPC 20 General Plan Analysis

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	365	38	34	714	49	19	8	6	31	9	19
Future Volume (veh/h)	22	365	38	34	714	49	19	8	6	31	9	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	670	1040	581	1900	1841	1707	789	1337	1900	1337	1411	1411
Adj Flow Rate, veh/h	23	376	39	35	736	51	20	8	6	32	9	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	83	58	89	0	4	13	75	38	0	38	33	33
Cap, veh/h	25	705	334	90	1267	996	27	175	111	60	114	97
Arrive On Green	0.04	0.68	0.68	0.05	0.69	0.69	0.04	0.07	0.07	0.05	0.08	0.08
Sat Flow, veh/h	638	1040	492	1810	1841	1447	751	2540	1610	1273	1411	1196
Grp Volume(v), veh/h	23	376	39	35	736	51	20	8	6	32	9	20
Grp Sat Flow(s),veh/h/ln	638	1040	492	1810	1841	1447	751	1270	1610	1273	1411	1196
Q Serve(g_s), s	4.7	23.7	3.6	2.4	27.0	1.5	3.4	0.4	0.5	3.2	0.8	2.0
Cycle Q Clear(g_c), s	4.7	23.7	3.6	2.4	27.0	1.5	3.4	0.4	0.5	3.2	0.8	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	25	705	334	90	1267	996	27	175	111	60	114	97
V/C Ratio(X)	0.92	0.53	0.12	0.39	0.58	0.05	0.75	0.05	0.05	0.53	0.08	0.21
Avail Cap(c_a), veh/h	69	705	334	195	1267	996	81	668	424	137	371	315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.3	10.6	7.3	59.9	10.5	6.5	62.1	56.5	56.5	60.5	55.3	55.8
Incr Delay (d2), s/veh	65.0	2.9	0.7	2.7	1.9	0.1	33.4	0.2	0.3	7.0	0.4	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.3	0.4	1.2	9.9	0.4	0.9	0.1	0.2	1.1	0.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	127.3	13.4	8.0	62.6	12.5	6.6	95.5	56.7	56.8	67.5	55.7	57.3
LnGrp LOS	F	B	A	E	B	A	F	E	E	E	E	E
Approach Vol, veh/h	438				822		34				61	
Approach Delay, s/veh	18.9				14.2		79.5				62.4	
Approach LOS	B				B		E				E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	94.6	10.2	14.8	9.1	96.0	8.6	16.3				
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	14.0	* 48	14.0	34.2	14.0	47.5	14.0	34.2				
Max Q Clear Time (g_c+I), s	14.4	25.7	5.2	2.4	6.7	29.0	5.4	4.0				
Green Ext Time (p_c), s	0.0	3.3	0.0	0.0	0.0	6.5	0.0	0.1				

Intersection Summary

HCM 7th Control Delay, s/veh	19.6
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th AWSC
12: Bud Lyons Wy & Hopkins Rd

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection

Intersection Delay, s/veh 8.7

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	41	38	15	38	29	145
Future Vol, veh/h	41	38	15	38	29	145
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	11	75	15	14	7	6
Mvmt Flow	59	54	21	54	41	207
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	8.8	8.8	8.6
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	145	41	38	15	38
LT Vol	29	0	0	0	15	0
Through Vol	0	0	41	0	0	38
RT Vol	0	145	0	38	0	0
Lane Flow Rate	41	207	59	54	21	54
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.065	0.254	0.087	0.087	0.036	0.082
Departure Headway (Hd)	5.634	4.414	5.353	5.744	5.967	5.446
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	638	816	669	624	600	658
Service Time	3.353	2.133	3.086	3.477	3.701	3.18
HCM Lane V/C Ratio	0.064	0.254	0.088	0.087	0.035	0.082
HCM Control Delay, s/veh	8.7	8.6	8.6	9	8.9	8.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.2	1	0.3	0.3	0.1	0.3

HCM 7th Signalized Intersection Summary 13: Old Schulte Road & Bud Lyons Wy

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	278	77	81	737	95	17	0	2	24	0	33
Future Volume (veh/h)	41	278	77	81	737	95	17	0	2	24	0	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	418	1470	418	418	1856	1811	418	1900	1900	1426	1900	789
Adj Flow Rate, veh/h	45	302	84	88	801	103	18	0	2	26	0	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	100	29	100	100	3	6	100	0	0	32	0	75
Cap, veh/h	25	1812	230	34	2373	1033	6	0	131	29	0	154
Arrive On Green	0.06	0.65	0.65	0.09	0.67	0.67	0.01	0.00	0.08	0.02	0.00	0.10
Sat Flow, veh/h	398	2793	354	398	3526	1535	398	0	1610	1358	0	1610
Grp Volume(v), veh/h	45	302	84	88	801	103	18	0	2	26	0	36
Grp Sat Flow(s),veh/h/ln	398	1397	354	398	1763	1535	398	0	1610	1358	0	1610
Q Serve(g_s), s	7.9	5.4	13.9	11.0	12.2	3.0	1.9	0.0	0.1	2.4	0.0	2.6
Cycle Q Clear(g_c), s	7.9	5.4	13.9	11.0	12.2	3.0	1.9	0.0	0.1	2.4	0.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	25	1812	230	34	2373	1033	6	0	131	29	0	154
V/C Ratio(X)	1.82	0.17	0.37	2.55	0.34	0.10	3.05	0.00	0.02	0.91	0.00	0.23
Avail Cap(c_a), veh/h	34	1812	230	34	2373	1033	81	0	303	214	0	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.6	8.8	10.3	58.0	8.8	7.3	62.6	0.0	53.7	62.0	0.0	53.1
Incr Delay (d2), s/veh	490.9	0.2	4.4	775.8	0.4	0.2	1047.6	0.0	0.0	70.1	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	1.5	1.3	8.5	4.1	1.0	1.9	0.0	0.1	1.4	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	550.5	9.0	14.7	833.8	9.2	7.5	1110.2	0.0	53.7	132.1	0.0	53.9
LnGrp LOS	F	A	B	F	A	A	F		D	F		D
Approach Vol, veh/h	431		992				20		62			
Approach Delay, s/veh	66.6		82.1				1004.6		86.7			
Approach LOS	E		F				F		F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	88.9	5.9	17.2	11.9	92.0	7.7	15.4				
Change Period (Y+Rc), s	4.0	6.5	4.0	5.1	4.0	6.5	5.0	* 5.1				
Max Green Setting (Gmax), s	1.0	38.5	26.0	31.4	11.0	38.5	20.0	* 24				
Max Q Clear Time (g_c+T1), s	13.0	15.9	3.9	4.6	9.9	14.2	4.4	2.1				
Green Ext Time (p_c), s	0.0	2.9	0.0	0.1	0.0	7.9	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 90.1
HCM 7th LOS F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th TWSC
14: Pavillion Pkwy & Hopkins Rd

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	4	3	15	27
Future Vol, veh/h	2	3	4	3	15	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	2	3	4	3	16	29
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	43	31	46	0	-	0
Stage 1	31	-	-	-	-	-
Stage 2	12	-	-	-	-	-
Critical Hdwy	6.5	6.3	4.2	-	-	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	2.29	-	-	-
Pot Cap-1 Maneuver	948	1021	1512	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	945	1021	1512	-	-	-
Mov Cap-2 Maneuver	945	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s/v	8.66	4.22		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1512	-	989	-	-	
HCM Lane V/C Ratio	0.003	-	0.005	-	-	
HCM Control Delay (s/veh)	7.4	-	8.7	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 7th Signalized Intersection Summary

IPC 20 General Plan Analysis

15: Private Driveway/Pavillion Pkwy & Old Schulte Road Existing Plus Approved Plus Project Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	84	3	6	939	7	5	0	2	12	0	6
Future Volume (veh/h)	0	84	3	6	939	7	5	0	2	12	0	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1470	1411	1648	1870	1900	714	1900	1900	1900	1976	1900
Adj Flow Rate, veh/h	0	90	3	6	1010	8	5	0	2	13	0	6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	29	33	17	2	0	80	0	0	0	0	0
Cap, veh/h	4	806	27	10	1251	10	9	0	4	24	0	11
Arrive On Green	0.00	0.57	0.57	0.01	0.68	0.68	0.01	0.00	0.01	0.02	0.00	0.02
Sat Flow, veh/h	1810	1415	47	1570	1853	15	1248	0	499	1239	0	572
Grp Volume(v), veh/h	0	0	93	6	0	1018	7	0	0	19	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1462	1570	0	1868	1748	0	0	1811	0	0
Q Serve(g_s), s	0.0	0.0	1.2	0.2	0.0	15.7	0.2	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.2	0.2	0.0	15.7	0.2	0.0	0.0	0.4	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.01	0.71		0.29	0.68		0.32
Lane Grp Cap(c), veh/h	4	0	832	10	0	1261	13	0	0	34	0	0
V/C Ratio(X)	0.00	0.00	0.11	0.59	0.00	0.81	0.54	0.00	0.00	0.55	0.00	0.00
Avail Cap(c_a), veh/h	180	0	2470	156	0	3156	695	0	0	720	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	4.0	19.9	0.0	4.7	19.9	0.0	0.0	19.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	44.9	0.0	1.3	30.0	0.0	0.0	13.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.2	0.0	0.4	0.2	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	4.0	64.9	0.0	5.9	49.9	0.0	0.0	32.6	0.0	0.0
LnGrp LOS	A			E			A			D		
Approach Vol, veh/h	93			1024			7			19		
Approach Delay, s/veh	4.0			6.3			49.9			32.6		
Approach LOS	A			A			D			C		
Timer - Assigned Phs	2			3			4			6		
Phs Duration (G+Y+Rc), s	4.3			4.3			26.9			4.8		
Change Period (Y+Rc), s	4.0			4.0			4.0			4.0		
Max Green Setting (Gmax), s	16.0			4.0			68.0			16.0		
Max Q Clear Time (g_c+I1), s	2.2			2.2			3.2			2.4		
Green Ext Time (p_c), s	0.0			0.0			0.5			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh				6.8								
HCM 7th LOS				A								

HCM 7th Signalized Intersection Summary

16: Lammers Road & Eleventh St

IPC 20 General Plan Analysis

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	277	58	511	480	103	43	172	435	42	240	59
Future Volume (veh/h)	23	277	58	511	480	103	43	172	435	42	240	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No				No			No		
Adj Sat Flow, veh/h/ln	1900	1856	1826	1870	1870	1870	1826	1870	1856	1870	1856	1826
Adj Flow Rate, veh/h	27	322	0	594	558	0	50	200	0	49	279	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	3	5	2	2	2	5	2	3	2	3	5
Cap, veh/h	71	2379		644	3248		94	407		95	403	
Arrive On Green	0.02	0.47	0.00	0.19	0.64	0.00	0.03	0.11	0.00	0.03	0.11	0.00
Sat Flow, veh/h	3510	5066	1547	3456	5106	1585	3374	3554	1572	3456	3526	1547
Grp Volume(v), veh/h	27	322	0	594	558	0	50	200	0	49	279	0
Grp Sat Flow(s),veh/h/ln	1755	1689	1547	1728	1702	1585	1687	1777	1572	1728	1763	1547
Q Serve(g_s), s	0.9	4.1	0.0	19.4	5.1	0.0	1.7	6.1	0.0	1.6	8.8	0.0
Cycle Q Clear(g_c), s	0.9	4.1	0.0	19.4	5.1	0.0	1.7	6.1	0.0	1.6	8.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	2379		644	3248		94	407		95	403	
V/C Ratio(X)	0.38	0.14		0.92	0.17		0.53	0.49		0.52	0.69	
Avail Cap(c_a), veh/h	122	2379		646	3248		249	989		282	1009	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.6	17.3	0.0	46.0	8.5	0.0	55.2	47.8	0.0	55.2	49.0	0.0
Incr Delay (d2), s/veh	3.4	0.1	0.0	18.8	0.1	0.0	4.7	1.3	0.0	1.6	3.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.6	0.0	9.7	1.7	0.0	0.8	2.7	0.0	0.7	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.0	17.4	0.0	64.7	8.7	0.0	59.8	49.1	0.0	56.8	52.0	0.0
LnGrp LOS	E	B		E	A		E	D		E	D	
Approach Vol, veh/h	349		1152				250			328		
Approach Delay, s/veh	20.6		37.6				51.2			52.7		
Approach LOS	C		D				D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.9	60.1	8.7	19.2	7.8	79.2	8.7	19.3				
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1				
Max Green Setting (Gmax), s	21.5	28.9	8.5	32.9	4.0	46.4	9.4	32.0				
Max Q Clear Time (g_c+Y), s	21.4	6.1	3.7	10.8	2.9	7.1	3.6	8.1				
Green Ext Time (p_c), s	0.0	1.9	0.0	2.4	0.0	3.8	0.0	1.5				

Intersection Summary

HCM 7th Control Delay, s/veh	38.8
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary

17: Lammers Road & Old Schulte Road

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	106	448	785	323	151
Future Volume (veh/h)	28	106	448	785	323	151
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1500	1870	1885	1856	1856
Adj Flow Rate, veh/h	32	120	509	892	367	172
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	15	27	2	1	3	3
Cap, veh/h	210	167	366	1264	454	213
Arrive On Green	0.13	0.13	0.21	0.67	0.38	0.38
Sat Flow, veh/h	1598	1271	1781	1885	1195	560
Grp Volume(v), veh/h	32	120	509	892	0	539
Grp Sat Flow(s), veh/h/ln	1598	1271	1781	1885	0	1755
Q Serve(g_s), s	1.0	5.0	11.3	16.3	0.0	15.1
Cycle Q Clear(g_c), s	1.0	5.0	11.3	16.3	0.0	15.1
Prop In Lane	1.00	1.00	1.00			0.32
Lane Grp Cap(c), veh/h	210	167	366	1264	0	666
V/C Ratio(X)	0.15	0.72	1.39	0.71	0.00	0.81
Avail Cap(c_a), veh/h	552	439	366	2060	0	1407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	22.9	21.9	5.7	0.0	15.3
Incr Delay (d2), s/veh	0.3	5.7	192.0	0.7	0.0	2.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	23.7	3.5	0.0	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.5	28.7	213.8	6.4	0.0	17.7
LnGrp LOS	C	C	F	A		B
Approach Vol, veh/h	152			1401	539	
Approach Delay, s/veh	27.2			81.8	17.7	
Approach LOS	C			F	B	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	43.1			11.9	16.0	27.1
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	60.1			19.0	11.3	44.1
Max Q Clear Time (g_c+l1), s	18.3			7.0	13.3	17.1
Green Ext Time (p_c), s	8.3			0.3	0.0	3.8
Intersection Summary						
HCM 7th Control Delay, s/veh			61.3			
HCM 7th LOS			E			

HCM 7th TWSC
18: Lammers Road & Valpico Road

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection												
Int Delay, s/veh	47.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	15	0	540	0	235	46	269	89	0
Future Vol, veh/h	0	0	0	15	0	540	0	235	46	269	89	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	13	0	4	0	1	9	12	4	0
Mvmt Flow	0	0	0	19	0	684	0	297	58	341	113	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1091	1149	113	1120	1120	327	113	0	0	356	0	0
Stage 1	794	794	-	327	327	-	-	-	-	-	-	-
Stage 2	297	356	-	794	794	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.5	6.24	4.1	-	-	4.22	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4	3.336	2.2	-	-	2.308	-	-
Pot Cap-1 Maneuver	194	200	946	175	208	710	1489	-	-	1150	-	-
Stage 1	385	403	-	663	652	-	-	-	-	-	-	-
Stage 2	716	633	-	366	403	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	5	137	946	120	142	710	1489	-	-	1150	-	-
Mov Cap-2 Maneuver	5	137	-	120	142	-	-	-	-	-	-	-
Stage 1	263	276	-	663	652	-	-	-	-	-	-	-
Stage 2	27	633	-	250	276	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	98.46	0	7.1
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1489	-	-	- 626	1078	-	-
HCM Lane V/C Ratio	-	-	-	- 1.121	0.296	-	-
HCM Control Delay (s/veh)	0	-	-	0 98.5	9.4	0	-
HCM Lane LOS	A	-	-	A F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	- 21.7	1.2	-	-

HCM 7th TWSC
19: Bud Lyons Wy & Driveway 1

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	1	139	34	22	110
Future Vol, veh/h	25	1	139	34	22	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	27	1	151	37	24	120
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	337	170	0	0	188	0
Stage 1	170	-	-	-	-	-
Stage 2	167	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	643	854	-	-	1339	-
Stage 1	841	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	631	854	-	-	1339	-
Mov Cap-2 Maneuver	631	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v10.91		0	1.29			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	637	1339	-	
HCM Lane V/C Ratio	-	-	0.044	0.018	-	
HCM Control Delay (s/veh)	-	-	10.9	7.7	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

HCM 7th TWSC
20: Bud Lyons Wy & Driveway 2

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	2	127	13	10	123
Future Vol, veh/h	9	2	127	13	10	123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	10	2	138	14	11	134
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	301	145	0	0	152	0
Stage 1	145	-	-	-	-	-
Stage 2	155	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	675	881	-	-	1381	-
Stage 1	863	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	669	881	-	-	1381	-
Mov Cap-2 Maneuver	669	-	-	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	9.09	0		0.57		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	881	1381	-	
HCM Lane V/C Ratio	-	-	0.002	0.008	-	
HCM Control Delay (s/veh)	-	-	9.1	7.6	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	

HCM 7th TWSC
21: Driveway 3 & Hopkins Rd

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	18	8	25	8	3
Future Vol, veh/h	60	18	8	25	8	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	65	20	9	27	9	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	85	0	120	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	-	-	4.2	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	2.29	-	3.59	3.39
Pot Cap-1 Maneuver	-	-	1463	-	857	965
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1463	-	852	965
Mov Cap-2 Maneuver	-	-	-	-	852	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	952	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		1.81		9.15	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	880	-	-	1463	-	
HCM Lane V/C Ratio	0.014	-	-	0.006	-	
HCM Control Delay (s/veh)	9.1	-	-	7.5	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

HCM 7th Signalized Intersection Summary

IPC 20 General Plan Analysis

3: International Pkwy & Daylight Rd

Existing Plus Approved Plus Project Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	0	8	20	0	13	52	627	25	68	1242	35
Future Volume (veh/h)	36	0	8	20	0	13	52	627	25	68	1242	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1752	1752	1752	1648	1752	981	1752	1203	1100	1604	1648	1752
Adj Flow Rate, veh/h	39	0	9	22	0	14	57	682	27	74	1350	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	17	10	62	10	47	54	20	17	10
Cap, veh/h	219	79	71	65	281	133	274	927	378	138	1920	910
Arrive On Green	0.05	0.00	0.05	0.02	0.00	0.16	0.41	0.41	0.41	0.09	0.61	0.61
Sat Flow, veh/h	1311	1664	1485	3045	1752	831	365	2287	932	1527	3131	1485
Grp Volume(v), veh/h	39	0	9	22	0	14	57	682	27	74	1350	38
Grp Sat Flow(s),veh/h/ln	1311	1664	1485	1522	1752	831	365	1143	932	1527	1566	1485
Q Serve(g_s), s	1.3	0.0	0.3	0.3	0.0	0.7	5.8	11.6	0.8	2.1	13.5	0.5
Cycle Q Clear(g_c), s	1.3	0.0	0.3	0.3	0.0	0.7	9.7	11.6	0.8	2.1	13.5	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	79	71	65	281	133	274	927	378	138	1920	910
V/C Ratio(X)	0.18	0.00	0.13	0.34	0.00	0.10	0.21	0.74	0.07	0.54	0.70	0.04
Avail Cap(c_a), veh/h	614	580	517	265	900	427	308	1145	467	253	2455	1164
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	0.0	21.0	22.2	0.0	16.5	12.6	11.6	8.4	20.0	6.0	3.5
Incr Delay (d2), s/veh	0.4	0.0	0.8	1.1	0.0	0.3	0.5	2.3	0.1	1.2	0.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.1	0.1	0.0	0.1	0.4	2.3	0.1	0.7	1.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.9	0.0	21.8	23.3	0.0	16.8	13.1	13.9	8.5	21.2	6.9	3.6
LnGrp LOS	C		C	C		B	B	B	A	C	A	A
Approach Vol, veh/h	48			36			766			1462		
Approach Delay, s/veh	21.8			20.8			13.7			7.5		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	9.5	24.4	5.2	6.8		34.0		12.0				
Change Period (Y+Rc), s	5.4	5.8	4.2	* 4.6		5.8		4.6				
Max Green Setting (Gmax), s	7.6	23.0	4.0	* 16		36.0		23.6				
Max Q Clear Time (g_c+I1), s	4.1	13.6	2.3	3.3		15.5		2.7				
Green Ext Time (p_c), s	0.0	4.6	0.0	0.1		12.7		0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	10.1
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Summary

4: International Pkwy & Promontory Pkwy

IPC 20 General Plan Analysis

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	9	43	232	36	264	38	373	141	382	851	2
Future Volume (veh/h)	25	9	43	232	36	264	38	373	141	382	851	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1292	1411	1366	1530	1085	1500	1678	1648	1900
Adj Flow Rate, veh/h	27	10	47	255	40	290	42	410	155	420	935	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	41	33	36	25	55	27	15	17	0
Cap, veh/h	45	141	120	144	235	339	50	1037	639	472	1024	1000
Arrive On Green	0.02	0.07	0.07	0.12	0.17	0.17	0.03	0.50	0.50	0.15	0.62	0.62
Sat Flow, veh/h	1810	1900	1610	1231	1411	2038	1457	2061	1270	3100	1648	1609
Grp Volume(v), veh/h	27	10	47	255	40	290	42	410	155	420	935	2
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1231	1411	1019	1457	1031	1270	1550	1648	1609
Q Serve(g_s), s	1.8	0.6	3.3	14.0	2.9	16.6	3.4	14.8	8.3	15.9	59.6	0.1
Cycle Q Clear(g_c), s	1.8	0.6	3.3	14.0	2.9	16.6	3.4	14.8	8.3	15.9	59.6	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	141	120	144	235	339	50	1037	639	472	1024	1000
V/C Ratio(X)	0.60	0.07	0.39	1.78	0.17	0.86	0.84	0.40	0.24	0.89	0.91	0.00
Avail Cap(c_a), veh/h	90	507	429	144	470	679	61	1037	639	517	1024	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	57.9	51.7	52.9	53.0	42.9	48.6	57.6	18.5	16.9	49.9	19.9	8.6
Incr Delay (d2), s/veh	12.4	0.2	2.1	370.2	0.3	4.9	56.2	1.1	0.9	14.3	12.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	1.4	19.0	1.0	4.4	2.0	3.5	2.5	6.9	23.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.3	51.9	55.0	423.2	43.2	53.5	113.8	19.6	17.8	64.1	31.9	8.6
LnGrp LOS	E	D	E	F	D	D	F	B	B	E	C	A
Approach Vol, veh/h	84			585			607			1357		
Approach Delay, s/veh	59.6			214.0			25.7			41.8		
Approach LOS	E			F			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	80.4	18.0	13.5	22.3	66.2	7.0	24.6					
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	50.6	50.6	14.0	32.0	20.0	35.6	6.0	40.0				
Max Q Clear Time (g_c+I), s	61.6	61.6	16.0	5.3	17.9	16.8	3.8	18.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.3	2.9	0.0	1.4				

Intersection Summary

HCM 7th Control Delay, s/veh 76.9
 HCM 7th LOS E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

5: International Pkwy & Old Schulte Road

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	10	177	515	132	89	30	273	274	265	864	18
Future Volume (veh/h)	13	10	177	515	132	89	30	273	274	265	864	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1060	1238	1767	1125	1617	1263	929	873	833	620	1688	1485
Adj Flow Rate, veh/h	14	10	184	536	138	93	31	284	285	276	900	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	15	40	9	8	13	43	29	66	72	62	8	28
Cap, veh/h	36	99	120	621	555	510	23	447	335	153	1209	475
Arrive On Green	0.04	0.08	0.08	0.30	0.34	0.34	0.03	0.27	0.27	0.13	0.38	0.38
Sat Flow, veh/h	1009	1238	1497	2079	1617	1070	884	1659	1242	1145	3207	1259
Grp Volume(v), veh/h	14	10	184	536	138	93	31	284	285	276	900	19
Grp Sat Flow(s),veh/h/ln	1009	1238	1497	1039	1617	1070	884	830	621	572	1603	1259
Q Serve(g_s), s	1.2	0.7	7.2	21.9	5.5	4.5	2.3	13.6	19.5	12.0	21.8	0.9
Cycle Q Clear(g_c), s	1.2	0.7	7.2	21.9	5.5	4.5	2.3	13.6	19.5	12.0	21.8	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	99	120	621	555	510	23	447	335	153	1209	475
V/C Ratio(X)	0.39	0.10	1.53	0.86	0.25	0.18	1.35	0.64	0.85	1.80	0.74	0.04
Avail Cap(c_a), veh/h	56	99	120	1023	835	696	49	683	512	153	1571	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	38.3	41.3	29.8	21.2	13.5	43.7	28.9	31.1	38.9	24.2	17.7
Incr Delay (d2), s/veh	6.6	0.4	277.3	5.7	0.2	0.2	239.3	1.5	8.4	386.8	1.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	11.8	5.5	2.0	1.0	2.0	2.6	3.1	9.8	7.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.0	38.8	318.7	35.5	21.4	13.7	283.1	30.4	39.5	425.7	25.6	17.7
LnGrp LOS	D	D	F	D	C	B	F	C	D	F	C	B
Approach Vol, veh/h	208			767			600			1195		
Approach Delay, s/veh	287.0			30.3			47.8			117.9		
Approach LOS	F			C			D			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	30.0	30.8	13.0	6.3	39.7	7.2	36.6				
Change Period (Y+Rc), s	4.0	5.8	4.0	5.8	4.0	5.8	4.0	5.8				
Max Green Setting (Gmax), s	12.0	37.0	44.2	7.2	5.0	44.0	5.0	46.4				
Max Q Clear Time (g_c+14.0), s	14.0	21.5	23.9	9.2	4.3	23.8	3.2	7.5				
Green Ext Time (p_c), s	0.0	2.7	2.9	0.0	0.0	5.9	0.0	1.0				

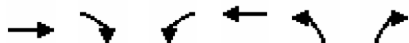
Intersection Summary

HCM 7th Control Delay, s/veh	91.2
HCM 7th LOS	F

HCM 7th Signalized Intersection Summary

8: Hopkins Rd & Promontory Pkwy

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (veh/h)	337	187	12	442	93	11
Future Volume (veh/h)	337	187	12	442	93	11
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1722	1070	1900	1485	966	1737
Adj Flow Rate, veh/h	449	249	16	589	124	15
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	12	56	0	28	63	11
Cap, veh/h	1102	305	294	950	472	754
Arrive On Green	0.34	0.34	0.34	0.34	0.51	0.51
Sat Flow, veh/h	3358	907	759	2896	920	1472
Grp Volume(v), veh/h	449	249	16	589	124	15
Grp Sat Flow(s), veh/h/ln	1636	907	759	1411	920	1472
Q Serve(g_s), s	6.4	15.3	1.0	10.7	4.6	0.3
Cycle Q Clear(g_c), s	6.4	15.3	7.4	10.7	4.6	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1102	305	294	950	472	754
V/C Ratio(X)	0.41	0.82	0.05	0.62	0.26	0.02
Avail Cap(c_a), veh/h	1631	452	416	1406	472	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.85	0.85	1.00	1.00
Uniform Delay (d), s/veh	15.6	18.5	18.4	17.0	8.4	7.3
Incr Delay (d2), s/veh	0.2	5.6	0.1	0.6	1.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.3	0.2	3.1	0.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.7	24.1	18.5	17.5	9.7	7.4
LnGrp LOS	B	C	B	B	A	A
Approach Vol, veh/h	698			605	139	
Approach Delay, s/veh	18.7			17.6	9.5	
Approach LOS	B			B	A	
Timer - Assigned Phs	2			4		8
Phs Duration (G+Y+Rc), s	35.9			25.1		25.1
Change Period (Y+Rc), s	4.6			4.6		4.6
Max Green Setting (Gmax), s	21.4			30.4		30.4
Max Q Clear Time (g_c+I1), s	6.6			17.3		12.7
Green Ext Time (p_c), s	0.3			3.2		3.8
Intersection Summary						
HCM 7th Control Delay, s/veh			17.3			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary

IPC 20 General Plan Analysis

9: Hansen Rd & Promontory Pkwy

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	157	75	19	272	12	159	2	23	2	0	3
Future Volume (veh/h)	42	157	75	19	272	12	159	2	23	2	0	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1559	1767	1263	1248	1900	1500	1159	1559	1900	1900	1900
Adj Flow Rate, veh/h	64	238	114	29	412	18	241	3	35	3	0	5
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	0	23	9	43	44	0	27	50	23	0	0	0
Cap, veh/h	108	845	427	40	614	417	292	651	391	7	344	153
Arrive On Green	0.06	0.29	0.29	0.03	0.26	0.26	0.20	0.30	0.30	0.00	0.00	0.10
Sat Flow, veh/h	1810	2962	1497	1203	2371	1610	1428	2202	1321	1810	3610	1610
Grp Volume(v), veh/h	64	238	114	29	412	18	241	3	35	3	0	5
Grp Sat Flow(s),veh/h/ln	1810	1481	1497	1203	1186	1610	1428	1101	1321	1810	1805	1610
Q Serve(g_s), s	1.7	3.0	2.9	1.2	7.6	0.4	7.8	0.0	0.9	0.1	0.0	0.1
Cycle Q Clear(g_c), s	1.7	3.0	2.9	1.2	7.6	0.4	7.8	0.0	0.9	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	845	427	40	614	417	292	651	391	7	344	153
V/C Ratio(X)	0.59	0.28	0.27	0.72	0.67	0.04	0.83	0.00	0.09	0.41	0.00	0.03
Avail Cap(c_a), veh/h	746	2444	1235	496	1961	1332	589	1817	1090	746	2978	1328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.2	13.5	13.4	23.2	16.1	13.5	18.5	12.0	12.4	24.1	0.0	19.9
Incr Delay (d2), s/veh	5.1	0.2	0.3	21.6	1.3	0.0	5.9	0.0	0.1	32.1	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.9	0.8	0.5	1.8	0.1	2.5	0.0	0.2	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.4	13.6	13.7	44.8	17.4	13.5	24.3	12.0	12.5	56.2	0.0	20.0
LnGrp LOS	C	B	B	D	B	B	C	B	B	E		B
Approach Vol, veh/h	416		459			279			8			
Approach Delay, s/veh	15.8		19.0			22.7			33.6			
Approach LOS	B		B			C			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	18.5	4.2	20.1	6.9	17.3	13.9	10.4				
Change Period (Y+Rc), s	4.0	4.7	4.0	5.8	4.0	4.7	4.0	5.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.1	20.0	40.0				
Max Q Clear Time (g_c+I), s	13.2	5.0	2.1	2.9	3.7	9.6	9.8	2.1				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.1	0.1	3.0	0.5	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	18.8
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary

10: Hansen Rd & Hopkins Rd

IPC 20 General Plan Analysis

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	28	23	5	44	12	47	86	14	32	38	11
Future Volume (veh/h)	4	28	23	5	44	12	47	86	14	32	38	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1159	966	1337	418	1011	1900	1381	1663	1530	1900	1470	1085
Adj Flow Rate, veh/h	6	39	32	7	62	17	66	121	20	45	54	15
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	50	63	38	100	60	0	35	16	25	0	29	55
Cap, veh/h	8	206	169	4	321	88	78	1089	447	66	899	296
Arrive On Green	0.01	0.42	0.42	0.01	0.42	0.42	0.06	0.34	0.34	0.04	0.32	0.32
Sat Flow, veh/h	1104	491	403	398	764	209	1316	3159	1296	1810	2793	919
Grp Volume(v), veh/h	6	0	71	7	0	79	66	121	20	45	54	15
Grp Sat Flow(s),veh/h/ln	1104	0	894	398	0	973	1316	1580	1296	1810	1397	919
Q Serve(g_s), s	0.5	0.0	4.8	0.9	0.0	4.9	4.8	2.5	1.0	2.4	1.3	1.1
Cycle Q Clear(g_c), s	0.5	0.0	4.8	0.9	0.0	4.9	4.8	2.5	1.0	2.4	1.3	1.1
Prop In Lane	1.00		0.45	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	0	375	4	0	409	78	1089	447	66	899	296
V/C Ratio(X)	0.71	0.00	0.19	1.98	0.00	0.19	0.85	0.11	0.04	0.68	0.06	0.05
Avail Cap(c_a), veh/h	103	0	375	37	0	409	205	1089	447	169	899	296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	0.0	17.6	47.8	0.0	17.6	44.9	21.5	21.0	45.9	22.6	22.5
Incr Delay (d2), s/veh	71.4	0.0	1.1	605.0	0.0	1.0	21.6	0.2	0.2	11.8	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.1	0.7	0.0	1.1	2.0	0.9	0.3	1.2	0.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	119.1	0.0	18.8	652.8	0.0	18.7	66.5	21.7	21.2	57.7	22.6	22.6
LnGrp LOS	F		B	F		B	E	C	C	E	C	C
Approach Vol, veh/h	77		86			207			114			
Approach Delay, s/veh	26.6		70.3			36.0			36.5			
Approach LOS	C		E			D			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	45.0	7.5	39.0	4.7	45.1	9.7	36.8				
Change Period (Y+Rc), s	4.0	4.6	4.0	5.8	4.0	4.6	4.0	5.8				
Max Green Setting (Gmax), s	4.0	40.4	9.0	33.2	9.0	40.4	15.0	27.2				
Max Q Clear Time (g_c+I2), s	4.0	6.8	4.4	4.5	2.5	6.9	6.8	3.3				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.7	0.0	0.4	0.1	0.3				

Intersection Summary

HCM 7th Control Delay, s/veh	40.7
HCM 7th LOS	D

HCM 7th Signalized Intersection Summary

11: Old Schulte Road & Hansen Rd

IPC 20 General Plan Analysis

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	365	38	34	714	49	19	8	6	31	9	19
Future Volume (veh/h)	22	365	38	34	714	49	19	8	6	31	9	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	670	1040	581	1900	1841	1707	789	1337	1900	1337	1411	1411
Adj Flow Rate, veh/h	23	376	39	35	736	51	20	8	6	32	9	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	83	58	89	0	4	13	75	38	0	38	33	33
Cap, veh/h	25	705	334	90	1267	996	27	175	111	60	114	97
Arrive On Green	0.04	0.68	0.68	0.05	0.69	0.69	0.04	0.07	0.07	0.05	0.08	0.08
Sat Flow, veh/h	638	1040	492	1810	1841	1447	751	2540	1610	1273	1411	1196
Grp Volume(v), veh/h	23	376	39	35	736	51	20	8	6	32	9	20
Grp Sat Flow(s),veh/h/ln	638	1040	492	1810	1841	1447	751	1270	1610	1273	1411	1196
Q Serve(g_s), s	4.7	23.7	3.6	2.4	27.0	1.5	3.4	0.4	0.5	3.2	0.8	2.0
Cycle Q Clear(g_c), s	4.7	23.7	3.6	2.4	27.0	1.5	3.4	0.4	0.5	3.2	0.8	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	25	705	334	90	1267	996	27	175	111	60	114	97
V/C Ratio(X)	0.92	0.53	0.12	0.39	0.58	0.05	0.75	0.05	0.05	0.53	0.08	0.21
Avail Cap(c_a), veh/h	69	705	334	195	1267	996	81	668	424	137	371	315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.3	10.6	7.3	59.9	10.5	6.5	62.1	56.5	56.5	60.5	55.3	55.8
Incr Delay (d2), s/veh	65.0	2.9	0.7	2.7	1.9	0.1	33.4	0.2	0.3	7.0	0.4	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.3	0.4	1.2	9.9	0.4	0.9	0.1	0.2	1.1	0.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	127.3	13.4	8.0	62.6	12.5	6.6	95.5	56.7	56.8	67.5	55.7	57.3
LnGrp LOS	F	B	A	E	B	A	F	E	E	E	E	E
Approach Vol, veh/h	438		822				34		61			
Approach Delay, s/veh	18.9		14.2				79.5		62.4			
Approach LOS	B		B				E		E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	94.6	10.2	14.8	9.1	96.0	8.6	16.3				
Change Period (Y+Rc), s	4.0	* 6.5	4.0	5.8	4.0	6.5	4.0	5.8				
Max Green Setting (Gmax), s	14.0	* 48	14.0	34.2	14.0	47.5	14.0	34.2				
Max Q Clear Time (g_c+I), s	14.4	25.7	5.2	2.4	6.7	29.0	5.4	4.0				
Green Ext Time (p_c), s	0.0	3.3	0.0	0.0	0.0	6.5	0.0	0.1				

Intersection Summary

HCM 7th Control Delay, s/veh	19.6
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th AWSC
12: Bud Lyons Wy & Hopkins Rd

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection

Intersection Delay, s/veh 8.7

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	41	38	15	38	29	145
Future Vol, veh/h	41	38	15	38	29	145
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	11	75	15	14	7	6
Mvmt Flow	59	54	21	54	41	207
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay, s/veh	8.8	8.8	8.6
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	145	41	38	15	38
LT Vol	29	0	0	0	15	0
Through Vol	0	0	41	0	0	38
RT Vol	0	145	0	38	0	0
Lane Flow Rate	41	207	59	54	21	54
Geometry Grp	5	5	5	5	5	5
Degree of Util (X)	0.065	0.254	0.087	0.087	0.036	0.082
Departure Headway (Hd)	5.634	4.414	5.353	5.744	5.967	5.446
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	638	816	669	624	600	658
Service Time	3.353	2.133	3.086	3.477	3.701	3.18
HCM Lane V/C Ratio	0.064	0.254	0.088	0.087	0.035	0.082
HCM Control Delay, s/veh	8.7	8.6	8.6	9	8.9	8.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.2	1	0.3	0.3	0.1	0.3

HCM 7th Signalized Intersection Summary

13: Old Schulte Road & Bud Lyons Wy

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	278	77	81	737	95	17	0	2	24	0	33
Future Volume (veh/h)	41	278	77	81	737	95	17	0	2	24	0	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	418	1470	418	418	1856	1811	418	1900	1900	1426	1900	789
Adj Flow Rate, veh/h	45	302	84	88	801	103	18	0	2	26	0	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	100	29	100	100	3	6	100	0	0	32	0	75
Cap, veh/h	25	1812	230	34	2373	1033	6	0	131	29	0	154
Arrive On Green	0.06	0.65	0.65	0.09	0.67	0.67	0.01	0.00	0.08	0.02	0.00	0.10
Sat Flow, veh/h	398	2793	354	398	3526	1535	398	0	1610	1358	0	1610
Grp Volume(v), veh/h	45	302	84	88	801	103	18	0	2	26	0	36
Grp Sat Flow(s),veh/h/ln	398	1397	354	398	1763	1535	398	0	1610	1358	0	1610
Q Serve(g_s), s	7.9	5.4	13.9	11.0	12.2	3.0	1.9	0.0	0.1	2.4	0.0	2.6
Cycle Q Clear(g_c), s	7.9	5.4	13.9	11.0	12.2	3.0	1.9	0.0	0.1	2.4	0.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	25	1812	230	34	2373	1033	6	0	131	29	0	154
V/C Ratio(X)	1.82	0.17	0.37	2.55	0.34	0.10	3.05	0.00	0.02	0.91	0.00	0.23
Avail Cap(c_a), veh/h	34	1812	230	34	2373	1033	81	0	303	214	0	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.6	8.8	10.3	58.0	8.8	7.3	62.6	0.0	53.7	62.0	0.0	53.1
Incr Delay (d2), s/veh	490.9	0.2	4.4	775.8	0.4	0.2	1047.6	0.0	0.0	70.1	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	1.5	1.3	8.5	4.1	1.0	1.9	0.0	0.1	1.4	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	550.5	9.0	14.7	833.8	9.2	7.5	1110.2	0.0	53.7	132.1	0.0	53.9
LnGrp LOS	F	A	B	F	A	A	F		D	F		D
Approach Vol, veh/h	431		992				20		62			
Approach Delay, s/veh	66.6		82.1				1004.6		86.7			
Approach LOS	E		F				F		F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	88.9	5.9	17.2	11.9	92.0	7.7	15.4				
Change Period (Y+Rc), s	4.0	6.5	4.0	5.1	4.0	6.5	5.0	* 5.1				
Max Green Setting (Gmax), s	1.0	38.5	26.0	31.4	11.0	38.5	20.0	* 24				
Max Q Clear Time (g_c+T1), s	13.0	15.9	3.9	4.6	9.9	14.2	4.4	2.1				
Green Ext Time (p_c), s	0.0	2.9	0.0	0.1	0.0	7.9	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 90.1
HCM 7th LOS F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th TWSC
14: Pavillion Pkwy & Hopkins Rd

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	4	3	15	27
Future Vol, veh/h	2	3	4	3	15	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	2	3	4	3	16	29
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	43	31	46	0	-	0
Stage 1	31	-	-	-	-	-
Stage 2	12	-	-	-	-	-
Critical Hdwy	6.5	6.3	4.2	-	-	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	2.29	-	-	-
Pot Cap-1 Maneuver	948	1021	1512	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	945	1021	1512	-	-	-
Mov Cap-2 Maneuver	945	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s/v	8.66	4.22		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1512	-	989	-	-	
HCM Lane V/C Ratio	0.003	-	0.005	-	-	
HCM Control Delay (s/veh)	7.4	-	8.7	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 7th Signalized Intersection Summary

IPC 20 General Plan Analysis

15: Private Driveway/Pavillion Pkwy & Old Schulte Road Existing Plus Approved Plus Project Conditions AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	84	3	6	939	7	5	0	2	12	0	6
Future Volume (veh/h)	0	84	3	6	939	7	5	0	2	12	0	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1470	1411	1648	1870	1900	714	1900	1900	1900	1976	1900
Adj Flow Rate, veh/h	0	90	3	6	1010	8	5	0	2	13	0	6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	29	33	17	2	0	80	0	0	0	0	0
Cap, veh/h	4	806	27	10	1251	10	9	0	4	24	0	11
Arrive On Green	0.00	0.57	0.57	0.01	0.68	0.68	0.01	0.00	0.01	0.02	0.00	0.02
Sat Flow, veh/h	1810	1415	47	1570	1853	15	1248	0	499	1239	0	572
Grp Volume(v), veh/h	0	0	93	6	0	1018	7	0	0	19	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1462	1570	0	1868	1748	0	0	1811	0	0
Q Serve(g_s), s	0.0	0.0	1.2	0.2	0.0	15.7	0.2	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.2	0.2	0.0	15.7	0.2	0.0	0.0	0.4	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.01	0.71		0.29	0.68		0.32
Lane Grp Cap(c), veh/h	4	0	832	10	0	1261	13	0	0	34	0	0
V/C Ratio(X)	0.00	0.00	0.11	0.59	0.00	0.81	0.54	0.00	0.00	0.55	0.00	0.00
Avail Cap(c_a), veh/h	180	0	2470	156	0	3156	695	0	0	720	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	4.0	19.9	0.0	4.7	19.9	0.0	0.0	19.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	44.9	0.0	1.3	30.0	0.0	0.0	13.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.2	0.0	0.4	0.2	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	4.0	64.9	0.0	5.9	49.9	0.0	0.0	32.6	0.0	0.0
LnGrp LOS	A			E			A			D		
Approach Vol, veh/h	93			1024			7			19		
Approach Delay, s/veh	4.0			6.3			49.9			32.6		
Approach LOS	A			A			D			C		
Timer - Assigned Phs	2			3			4			6		
Phs Duration (G+Y+Rc), s	4.3			4.3			26.9			4.8		
Change Period (Y+Rc), s	4.0			4.0			4.0			4.0		
Max Green Setting (Gmax), s	16.0			4.0			68.0			16.0		
Max Q Clear Time (g_c+I1), s	2.2			2.2			3.2			2.4		
Green Ext Time (p_c), s	0.0			0.0			0.5			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh				6.8								
HCM 7th LOS				A								

HCM 7th Signalized Intersection Summary

16: Lammers Road & Eleventh St

IPC 20 General Plan Analysis

Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	277	58	511	480	103	43	172	435	42	240	59
Future Volume (veh/h)	23	277	58	511	480	103	43	172	435	42	240	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1856	1826	1870	1870	1870	1826	1870	1856	1870	1856	1826
Adj Flow Rate, veh/h	27	322	0	594	558	0	50	200	0	49	279	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	3	5	2	2	2	5	2	3	2	3	5
Cap, veh/h	71	2379		644	3248		94	407		95	403	
Arrive On Green	0.02	0.47	0.00	0.19	0.64	0.00	0.03	0.11	0.00	0.03	0.11	0.00
Sat Flow, veh/h	3510	5066	1547	3456	5106	1585	3374	3554	1572	3456	3526	1547
Grp Volume(v), veh/h	27	322	0	594	558	0	50	200	0	49	279	0
Grp Sat Flow(s),veh/h/ln	1755	1689	1547	1728	1702	1585	1687	1777	1572	1728	1763	1547
Q Serve(g_s), s	0.9	4.1	0.0	19.4	5.1	0.0	1.7	6.1	0.0	1.6	8.8	0.0
Cycle Q Clear(g_c), s	0.9	4.1	0.0	19.4	5.1	0.0	1.7	6.1	0.0	1.6	8.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	2379		644	3248		94	407		95	403	
V/C Ratio(X)	0.38	0.14		0.92	0.17		0.53	0.49		0.52	0.69	
Avail Cap(c_a), veh/h	122	2379		646	3248		249	989		282	1009	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.6	17.3	0.0	46.0	8.5	0.0	55.2	47.8	0.0	55.2	49.0	0.0
Incr Delay (d2), s/veh	3.4	0.1	0.0	18.8	0.1	0.0	4.7	1.3	0.0	1.6	3.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.6	0.0	9.7	1.7	0.0	0.8	2.7	0.0	0.7	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.0	17.4	0.0	64.7	8.7	0.0	59.8	49.1	0.0	56.8	52.0	0.0
LnGrp LOS	E	B		E	A		E	D		E	D	
Approach Vol, veh/h	349		1152				250		328			
Approach Delay, s/veh	20.6		37.6				51.2		52.7			
Approach LOS	C		D				D		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.9	60.1	8.7	19.2	7.8	79.2	8.7	19.3				
Change Period (Y+Rc), s	5.5	6.1	5.5	6.1	5.5	6.1	5.5	6.1				
Max Green Setting (Gmax), s	21.5	28.9	8.5	32.9	4.0	46.4	9.4	32.0				
Max Q Clear Time (g_c+Q1), s	21.4	6.1	3.7	10.8	2.9	7.1	3.6	8.1				
Green Ext Time (p_c), s	0.0	1.9	0.0	2.4	0.0	3.8	0.0	1.5				

Intersection Summary

HCM 7th Control Delay, s/veh	38.8
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary

17: Lammers Road & Old Schulte Road

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	106	448	785	323	151
Future Volume (veh/h)	28	106	448	785	323	151
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1500	1870	1885	1856	1856
Adj Flow Rate, veh/h	32	120	509	892	367	172
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	15	27	2	1	3	3
Cap, veh/h	210	167	366	1264	454	213
Arrive On Green	0.13	0.13	0.21	0.67	0.38	0.38
Sat Flow, veh/h	1598	1271	1781	1885	1195	560
Grp Volume(v), veh/h	32	120	509	892	0	539
Grp Sat Flow(s), veh/h/ln	1598	1271	1781	1885	0	1755
Q Serve(g_s), s	1.0	5.0	11.3	16.3	0.0	15.1
Cycle Q Clear(g_c), s	1.0	5.0	11.3	16.3	0.0	15.1
Prop In Lane	1.00	1.00	1.00			0.32
Lane Grp Cap(c), veh/h	210	167	366	1264	0	666
V/C Ratio(X)	0.15	0.72	1.39	0.71	0.00	0.81
Avail Cap(c_a), veh/h	552	439	366	2060	0	1407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	22.9	21.9	5.7	0.0	15.3
Incr Delay (d2), s/veh	0.3	5.7	192.0	0.7	0.0	2.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	23.7	3.5	0.0	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.5	28.7	213.8	6.4	0.0	17.7
LnGrp LOS	C	C	F	A		B
Approach Vol, veh/h	152			1401	539	
Approach Delay, s/veh	27.2			81.8	17.7	
Approach LOS	C			F	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		43.1		11.9	16.0	27.1
Change Period (Y+Rc), s		6.2		4.7	4.7	6.2
Max Green Setting (Gmax), s		60.1		19.0	11.3	44.1
Max Q Clear Time (g_c+l1), s		18.3		7.0	13.3	17.1
Green Ext Time (p_c), s		8.3		0.3	0.0	3.8
Intersection Summary						
HCM 7th Control Delay, s/veh			61.3			
HCM 7th LOS			E			

HCM 7th TWSC
18: Lammers Road & Valpico Road

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection												
Int Delay, s/veh	47.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	15	0	540	0	235	46	269	89	0
Future Vol, veh/h	0	0	0	15	0	540	0	235	46	269	89	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	13	0	4	0	1	9	12	4	0
Mvmt Flow	0	0	0	19	0	684	0	297	58	341	113	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1091	1149	113	1120	1120	327	113	0	0	356	0	0
Stage 1	794	794	-	327	327	-	-	-	-	-	-	-
Stage 2	297	356	-	794	794	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.5	6.24	4.1	-	-	4.22	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4	3.336	2.2	-	-	2.308	-	-
Pot Cap-1 Maneuver	194	200	946	175	208	710	1489	-	-	1150	-	-
Stage 1	385	403	-	663	652	-	-	-	-	-	-	-
Stage 2	716	633	-	366	403	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	5	137	946	120	142	710	1489	-	-	1150	-	-
Mov Cap-2 Maneuver	5	137	-	120	142	-	-	-	-	-	-	-
Stage 1	263	276	-	663	652	-	-	-	-	-	-	-
Stage 2	27	633	-	250	276	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	98.46	0	7.1
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1489	-	-	- 626	1078	-	-
HCM Lane V/C Ratio	-	-	-	- 1.121	0.296	-	-
HCM Control Delay (s/veh)	0	-	-	0 98.5	9.4	0	-
HCM Lane LOS	A	-	-	A F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	- 21.7	1.2	-	-

HCM 7th TWSC
19: Bud Lyons Wy & Driveway 1

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	1	139	34	22	110
Future Vol, veh/h	25	1	139	34	22	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	27	1	151	37	24	120
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	337	170	0	0	188	0
Stage 1	170	-	-	-	-	-
Stage 2	167	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	643	854	-	-	1339	-
Stage 1	841	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	631	854	-	-	1339	-
Mov Cap-2 Maneuver	631	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v10.91		0		1.29		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	637	1339	-	
HCM Lane V/C Ratio	-	-	0.044	0.018	-	
HCM Control Delay (s/veh)	-	-	10.9	7.7	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

HCM 7th TWSC
20: Bud Lyons Wy & Driveway 2

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↘		↗	↘
Traffic Vol, veh/h	9	2	127	13	10	123
Future Vol, veh/h	9	2	127	13	10	123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	10	2	138	14	11	134
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	301	145	0	0	152	0
Stage 1	145	-	-	-	-	-
Stage 2	155	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	675	881	-	-	1381	-
Stage 1	863	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	669	881	-	-	1381	-
Mov Cap-2 Maneuver	669	-	-	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	9.09	0		0.57		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	881	1381	-	
HCM Lane V/C Ratio	-	-	0.002	0.008	-	
HCM Control Delay (s/veh)	-	-	9.1	7.6	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	

HCM 7th TWSC
21: Driveway 3 & Hopkins Rd

IPC 20 General Plan Analysis
Existing Plus Approved Plus Project Conditions AM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	18	8	25	8	3
Future Vol, veh/h	60	18	8	25	8	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	65	20	9	27	9	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	85	0	120	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	-	-	4.2	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	2.29	-	3.59	3.39
Pot Cap-1 Maneuver	-	-	1463	-	857	965
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1463	-	852	965
Mov Cap-2 Maneuver	-	-	-	-	852	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	952	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		1.81		9.15	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	880	-	-	1463	-	
HCM Lane V/C Ratio	0.014	-	-	0.006	-	
HCM Control Delay (s/veh)	9.1	-	-	7.5	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

H. Existing (2024) Plus Approved Projects Plus Project Conditions Improvements Synchro Outputs

DRAFT

HCM 7th Signalized Intersection Summary

4: International Pkwy & Promontory Pkwy

IPC 20 General Plan Analysis
Improved Ex Plus App Plus Proj AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	9	43	232	36	264	38	373	141	382	851	2
Future Volume (veh/h)	25	9	43	232	36	264	38	373	141	382	851	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1292	1411	1366	1530	1085	1500	1678	1648	1900
Adj Flow Rate, veh/h	27	10	47	255	40	290	42	410	155	420	935	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	41	33	36	25	55	27	15	17	0
Cap, veh/h	45	111	94	230	311	765	50	921	567	481	935	913
Arrive On Green	0.02	0.06	0.06	0.19	0.22	0.22	0.03	0.45	0.45	0.16	0.57	0.57
Sat Flow, veh/h	1810	1900	1610	1231	1411	2038	1457	2061	1270	3100	1648	1609
Grp Volume(v), veh/h	27	10	47	255	40	290	42	410	155	420	935	2
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1231	1411	1019	1457	1031	1270	1550	1648	1609
Q Serve(g_s), s	1.8	0.6	3.4	22.4	2.7	12.4	3.4	16.5	9.2	15.9	68.1	0.1
Cycle Q Clear(g_c), s	1.8	0.6	3.4	22.4	2.7	12.4	3.4	16.5	9.2	15.9	68.1	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	111	94	230	311	765	50	921	567	481	935	913
V/C Ratio(X)	0.60	0.09	0.50	1.11	0.13	0.38	0.84	0.45	0.27	0.87	1.00	0.00
Avail Cap(c_a), veh/h	187	428	362	230	435	945	61	921	567	594	935	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	57.9	53.5	54.8	48.8	37.5	27.3	57.6	22.9	20.9	49.5	25.9	11.2
Incr Delay (d2), s/veh	12.4	0.3	4.1	85.2	0.1	0.2	56.2	1.6	1.2	10.1	27.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.3	1.5	12.2	1.0	3.0	2.0	4.0	2.9	6.6	30.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.3	53.8	58.9	134.0	37.7	27.5	113.8	24.5	22.1	59.6	53.0	11.2
LnGrp LOS	E	D	E	F	D	C	F	C	C	E	D	B
Approach Vol, veh/h	84				585			607			1357	
Approach Delay, s/veh	61.9				74.7			30.1			55.0	
Approach LOS	E				E			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	73.9	26.4	11.6	22.6	59.4	7.0	31.0				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	47.2	22.4	27.0	23.0	29.2	12.4	37.0				
Max Q Clear Time (g_c+l1), s	5.4	70.1	24.4	5.4	17.9	18.5	3.8	14.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.7	2.3	0.0	1.4				

Intersection Summary

HCM 7th Control Delay, s/veh 53.8
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary 17: Lammers Road & Old Schulte Road

IPC 20 General Plan Analysis
Improved Ex Plus App Plus Proj AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	106	448	785	323	151
Future Volume (veh/h)	28	106	448	785	323	151
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1500	1870	1885	1856	1856
Adj Flow Rate, veh/h	32	120	509	892	367	172
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	15	27	2	1	3	3
Cap, veh/h	176	543	565	1378	413	193
Arrive On Green	0.11	0.11	0.32	0.73	0.35	0.35
Sat Flow, veh/h	1598	1271	1781	1885	1195	560
Grp Volume(v), veh/h	32	120	509	892	0	539
Grp Sat Flow(s), veh/h/ln	1598	1271	1781	1885	0	1755
Q Serve(g_s), s	1.2	4.1	18.8	16.6	0.0	19.9
Cycle Q Clear(g_c), s	1.2	4.1	18.8	16.6	0.0	19.9
Prop In Lane	1.00	1.00	1.00			0.32
Lane Grp Cap(c), veh/h	176	543	565	1378	0	606
V/C Ratio(X)	0.18	0.22	0.90	0.65	0.00	0.89
Avail Cap(c_a), veh/h	442	755	709	1651	0	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.7	12.4	22.4	4.7	0.0	21.2
Incr Delay (d2), s/veh	0.5	0.2	12.7	0.7	0.0	11.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	9.0	3.7	0.0	9.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	28.2	12.6	35.1	5.4	0.0	32.9
LnGrp LOS	C	B	D	A		C
Approach Vol, veh/h	152			1401	539	
Approach Delay, s/veh	15.9			16.2	32.9	
Approach LOS	B			B	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	56.4			12.3	26.4	29.9
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	60.1			19.0	27.3	28.1
Max Q Clear Time (g_c+l1), s	18.6			6.1	20.8	21.9
Green Ext Time (p_c), s	8.3			0.3	1.0	1.8
Intersection Summary						
HCM 7th Control Delay, s/veh			20.5			
HCM 7th LOS			C			

HCM 7th Signalized Intersection Summary

18: Lammers Road & Valpico Road

IPC 20 General Plan Analysis
Improved Ex Plus App Plus Proj AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	15	0	540	1	235	46	269	89	0
Future Volume (veh/h)	0	0	0	15	0	540	1	235	46	269	89	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1707	1900	1841	1900	1885	1767	1722	1841	1900
Adj Flow Rate, veh/h	0	0	0	19	0	684	1	297	58	341	113	0
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	0	0	13	0	4	0	1	9	12	4	0
Cap, veh/h	0	3	0	531	0	847	3	362	71	410	893	0
Arrive On Green	0.00	0.00	0.00	0.29	0.00	0.29	0.00	0.24	0.24	0.25	0.49	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1560	1810	1532	299	1640	1841	0
Grp Volume(v), veh/h	0	0	0	19	0	684	1	0	355	341	113	0
Grp Sat Flow(s), veh/h/ln	0	1900	0	1810	0	1560	1810	0	1831	1640	1841	0
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	16.0	0.0	0.0	10.0	10.7	1.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	16.0	0.0	0.0	10.0	10.7	1.8	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.16	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	531	0	847	3	0	433	410	893	0
V/C Ratio(X)	0.00	0.00	0.00	0.04	0.00	0.81	0.30	0.00	0.82	0.83	0.13	0.00
Avail Cap(c_a), veh/h	0	558	0	531	0	847	133	0	672	662	1283	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	13.7	0.0	10.1	27.2	0.0	19.7	19.4	7.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	5.8	44.3	0.0	4.6	4.9	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	6.0	0.1	0.0	4.3	4.1	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	13.8	0.0	15.9	71.5	0.0	24.3	24.3	7.8	0.0
LnGrp LOS				B				E				C
Approach Vol, veh/h	0			703			356			454		
Approach Delay, s/veh	0.0			15.9			24.5			20.2		
Approach LOS				B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	16.9		0.0	4.1	30.4		20.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	22.0	20.0		16.0	4.0	38.0		16.0				
Max Q Clear Time (g_c+1/2), s	12.0	12.0		0.0	2.0	3.8		18.0				
Green Ext Time (p_c), s	1.0	0.9		0.0	0.0	0.4		0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	19.2
HCM 7th LOS	B

HCM 7th Signalized Intersection Summary

4: International Pkwy & Promontory Pkwy

IPC 20 General Plan Analysis
Improved Ex Plus App Plus Proj PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	19	9	163	17	396	24	654	165	259	413	4
Future Volume (veh/h)	57	19	9	163	17	396	24	654	165	259	413	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1900	1870	1589	1900	1544	1826	1885	1292	1366	1544	1900
Adj Flow Rate, veh/h	70	23	11	199	21	483	29	798	201	316	504	5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	5	0	2	21	0	24	5	1	41	36	24	0
Cap, veh/h	98	222	185	221	392	800	72	1586	484	356	837	872
Arrive On Green	0.06	0.12	0.12	0.15	0.21	0.21	0.04	0.44	0.44	0.14	0.54	0.54
Sat Flow, veh/h	1739	1900	1585	1513	1900	2303	1739	3582	1094	2525	1544	1609
Grp Volume(v), veh/h	70	23	11	199	21	483	29	798	201	316	504	5
Grp Sat Flow(s),veh/h/ln	1739	1900	1585	1513	1900	1152	1739	1791	1094	1262	1544	1609
Q Serve(g_s), s	4.7	1.3	0.7	15.5	1.1	20.8	2.0	19.2	15.1	14.7	26.6	0.2
Cycle Q Clear(g_c), s	4.7	1.3	0.7	15.5	1.1	20.8	2.0	19.2	15.1	14.7	26.6	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	222	185	221	392	800	72	1586	484	356	837	872
V/C Ratio(X)	0.71	0.10	0.06	0.90	0.05	0.60	0.40	0.50	0.41	0.89	0.60	0.01
Avail Cap(c_a), veh/h	145	507	423	227	633	1092	72	1586	484	379	837	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	55.6	47.4	47.1	50.4	38.2	32.3	56.0	24.0	22.8	50.6	18.7	12.6
Incr Delay (d2), s/veh	9.1	0.2	0.1	30.5	0.0	0.6	3.5	1.1	2.6	20.2	3.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.6	0.3	7.7	0.5	5.8	0.9	8.0	4.2	5.5	9.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.8	47.6	47.3	80.9	38.3	33.0	59.6	25.1	25.4	70.8	21.7	12.6
LnGrp LOS	E	D	D	F	D	C	E	C	C	E	C	B
Approach Vol, veh/h	104			703			1028			825		
Approach Delay, s/veh	59.1			46.7			26.1			40.5		
Approach LOS	E			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	70.8	21.5	18.6	20.9	58.9	10.8	29.4				
Change Period (Y+Rc), s	4.0	5.8	4.0	4.6	4.0	5.8	4.0	4.6				
Max Green Setting (Gmax), s	5.0	46.6	18.0	32.0	18.0	33.6	10.0	40.0				
Max Q Clear Time (g_c+I1), s	4.0	28.6	17.5	3.3	16.7	21.2	6.7	22.8				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.1	0.2	4.6	0.0	2.0				

Intersection Summary

HCM 7th Control Delay, s/veh 37.3
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary 17: Lammers Road & Old Schulte Road

IPC 20 General Plan Analysis
Improved Ex Plus App Plus Proj PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	397	111	484	551	26
Future Volume (veh/h)	70	397	111	484	551	26
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1841	1885	1900	1885	1856
Adj Flow Rate, veh/h	80	451	126	550	626	30
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	4	1	0	1	3
Cap, veh/h	509	590	170	1052	693	33
Arrive On Green	0.28	0.28	0.09	0.55	0.39	0.39
Sat Flow, veh/h	1795	1560	1795	1900	1784	86
Grp Volume(v), veh/h	80	451	126	550	0	656
Grp Sat Flow(s), veh/h/ln	1795	1560	1795	1900	0	1870
Q Serve(g_s), s	2.2	16.9	4.6	12.2	0.0	22.1
Cycle Q Clear(g_c), s	2.2	16.9	4.6	12.2	0.0	22.1
Prop In Lane	1.00	1.00	1.00			0.05
Lane Grp Cap(c), veh/h	509	590	170	1052	0	727
V/C Ratio(X)	0.16	0.77	0.74	0.52	0.00	0.90
Avail Cap(c_a), veh/h	510	591	304	1282	0	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.0	18.2	29.5	9.4	0.0	19.2
Incr Delay (d2), s/veh	0.1	5.9	6.2	0.4	0.0	12.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	2.1	4.1	0.0	10.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	18.1	24.1	35.7	9.8	0.0	31.7
LnGrp LOS	B	C	D	A		C
Approach Vol, veh/h	531			676	656	
Approach Delay, s/veh	23.2			14.6	31.7	
Approach LOS	C			B	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	43.2			23.6	11.0	32.2
Change Period (Y+Rc), s	6.2			4.7	4.7	6.2
Max Green Setting (Gmax), s	45.1			19.0	11.3	29.1
Max Q Clear Time (g_c+l1), s	14.2			18.9	6.6	24.1
Green Ext Time (p_c), s	3.8			0.0	0.1	1.9
Intersection Summary						
HCM 7th Control Delay, s/veh			23.1			
HCM 7th LOS			C			

HCM 7th Signalized Intersection Summary

18: Lammers Road & Valpico Road

IPC 20 General Plan Analysis
Improved Ex Plus App Plus Proj PM Peak Hour

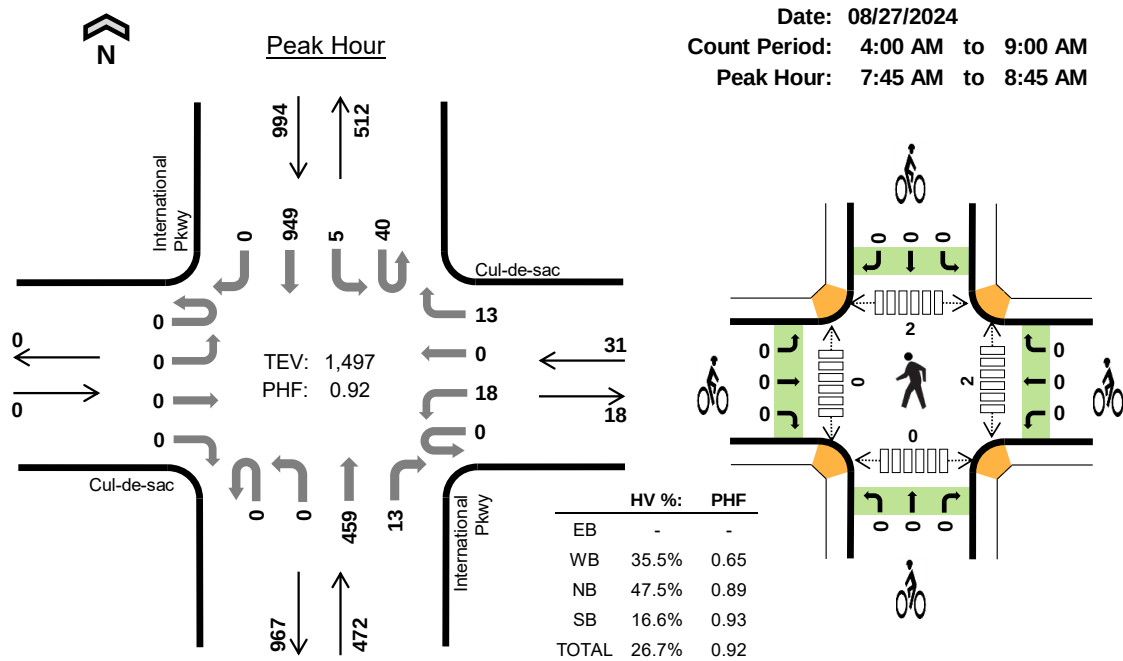


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	10	0	343	1	113	14	610	145	0
Future Volume (veh/h)	0	0	0	10	0	343	1	113	14	610	145	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1707	1900	1841	1900	1885	1767	1722	1841	1900
Adj Flow Rate, veh/h	0	0	0	13	0	434	1	143	18	772	184	0
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	0	0	13	0	4	0	1	9	12	4	0
Cap, veh/h	0	3	0	306	0	1078	3	198	25	856	1180	0
Arrive On Green	0.00	0.00	0.00	0.17	0.00	0.17	0.00	0.12	0.12	0.52	0.64	0.00
Sat Flow, veh/h	0	1900	0	1810	0	1560	1810	1641	207	1640	1841	0
Grp Volume(v), veh/h	0	0	0	13	0	434	1	0	161	772	184	0
Grp Sat Flow(s), veh/h/ln	0	1900	0	1810	0	1560	1810	0	1848	1640	1841	0
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	7.6	0.0	0.0	5.3	27.0	2.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	7.6	0.0	0.0	5.3	27.0	2.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	306	0	1078	3	0	223	856	1180	0
V/C Ratio(X)	0.00	0.00	0.00	0.04	0.00	0.40	0.35	0.00	0.72	0.90	0.16	0.00
Avail Cap(c_a), veh/h	0	478	0	455	0	1206	114	0	465	1445	1969	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	22.1	0.0	4.2	31.7	0.0	26.9	13.7	4.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.2	61.2	0.0	4.4	4.7	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.2	0.0	1.5	0.1	0.0	2.5	8.9	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	22.2	0.0	4.5	92.9	0.0	31.3	18.5	4.6	0.0
LnGrp LOS				C				A	F			
Approach Vol, veh/h	0			447			162			956		
Approach Delay, s/veh	0.0			5.0			31.7			15.8		
Approach LOS				A			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.2	11.7		0.0	4.1	44.8		14.7				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	56.6	16.0		16.0	4.0	68.0		16.0				
Max Q Clear Time (g_c+29.0), s	29.0	7.3		0.0	2.0	4.5		9.6				
Green Ext Time (p_c), s	4.1	0.3		0.0	0.0	0.7		1.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				14.4								
HCM 7th LOS				B								

I. Study Intersection, Roadway, and Driveway Traffic Counts and Data Collection

DRAFT

International Pkwy Cul-de-sac



Five-Hour Count Summaries

Interval Start	Cul-de-sac Eastbound				Cul-de-sac Westbound				International Pkwy Northbound				International Pkwy Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM	0	0	0	0	0	3	0	0	0	0	95	3	10	2	236	0	349	0
8:00 AM	0	0	0	0	0	6	0	6	0	0	110	4	8	1	240	0	375	0
8:15 AM	0	0	0	0	0	6	0	5	0	0	125	3	12	1	253	0	405	0
8:30 AM	0	0	0	0	0	3	0	2	0	0	129	3	10	1	220	0	368	1,497
Peak Hour	All	0	0	0	0	18	0	13	0	0	459	13	40	5	949	0	1,497	0
	HV	0	0	0	0	3	0	8	0	0	217	7	2	1	162	0	400	0
	HV%	-	-	-	-	17%	-	62%	-	-	47%	54%	5%	20%	17%	-	27%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:45 AM	0	1	39	45	85	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	4	52	42	98	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	5	67	43	115	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	1	66	35	102	0	0	0	0	0	2	0	1	0	3
Peak Hour	0	11	224	165	400	0	0	0	0	0	2	0	2	0	4

Five-Hour Count Summaries																			
Interval Start		Cul-de-sac				Cul-de-sac				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	4:00 AM	0	0	0	0	0	1	0	0	0	0	57	0	3	1	115	0	177	0
	4:15 AM	0	0	0	0	0	2	0	0	0	0	76	0	3	0	127	0	208	0
	4:30 AM	0	0	0	0	0	6	0	0	0	0	100	2	4	0	163	0	275	0
	4:45 AM	0	0	0	0	0	3	0	1	0	0	65	0	3	1	215	0	288	948
	5:00 AM	0	0	0	0	0	6	0	1	0	0	91	4	3	0	275	0	380	1,151
	5:15 AM	0	0	0	0	0	2	0	2	0	0	46	0	5	0	244	0	299	1,242
	5:30 AM	0	0	0	0	0	5	0	0	0	0	115	1	6	3	265	0	395	1,362
	5:45 AM	0	0	0	0	0	6	0	1	0	0	61	1	10	2	278	0	359	1,433
	6:00 AM	0	0	0	0	0	5	0	2	0	0	71	1	7	2	240	0	328	1,381
	6:15 AM	0	0	0	0	0	6	0	6	0	0	99	0	8	3	246	0	368	1,450
	6:30 AM	0	0	0	0	0	9	0	1	0	0	67	4	6	1	255	0	343	1,398
	6:45 AM	0	0	0	0	0	2	0	2	0	0	76	3	6	2	307	0	398	1,437
	7:00 AM	0	0	0	0	0	4	0	3	0	0	95	1	7	0	216	0	326	1,435
	7:15 AM	0	0	0	0	0	4	0	3	0	0	74	3	3	3	238	0	328	1,395
	7:30 AM	0	0	0	0	0	6	0	0	0	0	79	0	3	1	224	0	313	1,365
	7:45 AM	0	0	0	0	0	3	0	0	0	0	95	3	10	2	236	0	349	1,316
	8:00 AM	0	0	0	0	0	6	0	6	0	0	110	4	8	1	240	0	375	1,365
	8:15 AM	0	0	0	0	0	6	0	5	0	0	125	3	12	1	253	0	405	1,442
	8:30 AM	0	0	0	0	0	3	0	2	0	0	129	3	10	1	220	0	368	1,497
	8:45 AM	0	0	0	0	0	4	0	3	1	0	102	2	6	2	198	0	318	1,466
Count Total		0	0	0	0	0	89	0	38	1	0	1,733	35	123	26	4,555	0	6,600	0
Peak Hour	All	0	0	0	0	0	18	0	13	0	0	459	13	40	5	949	0	1,497	0
	HV	0	0	0	0	0	3	0	8	0	0	217	7	2	1	162	0	400	0
	HV%	-	-	-	-	-	17%	-	62%	-	-	47%	54%	5%	20%	17%	-	27%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	4:00 AM	0	0	19	32	51	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 AM	0	0	21	29	50	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 AM	0	2	28	24	54	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 AM	0	3	25	32	60	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 AM	0	3	27	27	57	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 AM	0	1	16	23	40	0	0	1	0	1	0	0	0	0	0	0	0	
	5:30 AM	0	0	29	30	59	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 AM	0	0	39	26	65	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 AM	0	4	29	24	57	0	0	0	0	0	0	1	0	0	0	0	1	
	6:15 AM	0	6	47	24	77	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	4	37	29	70	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	4	42	41	87	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	3	46	38	87	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	1	47	33	81	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	2	47	36	85	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	1	39	45	85	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	4	52	42	98	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	5	67	43	115	0	0	0	0	0	0	0	0	0	1	0	1	
	8:30 AM	0	1	66	35	102	0	0	0	0	0	0	0	2	0	1	0	3	
	8:45 AM	0	4	63	57	124	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total		0	48	786	670	1,504	0	0	1	0	1		3	0	2	0	5		
Peak Hour		0	11	224	165	400	0	0	0	0	0		2	0	2	0	4		

Five-Hour Count Summaries - Heavy Vehicles

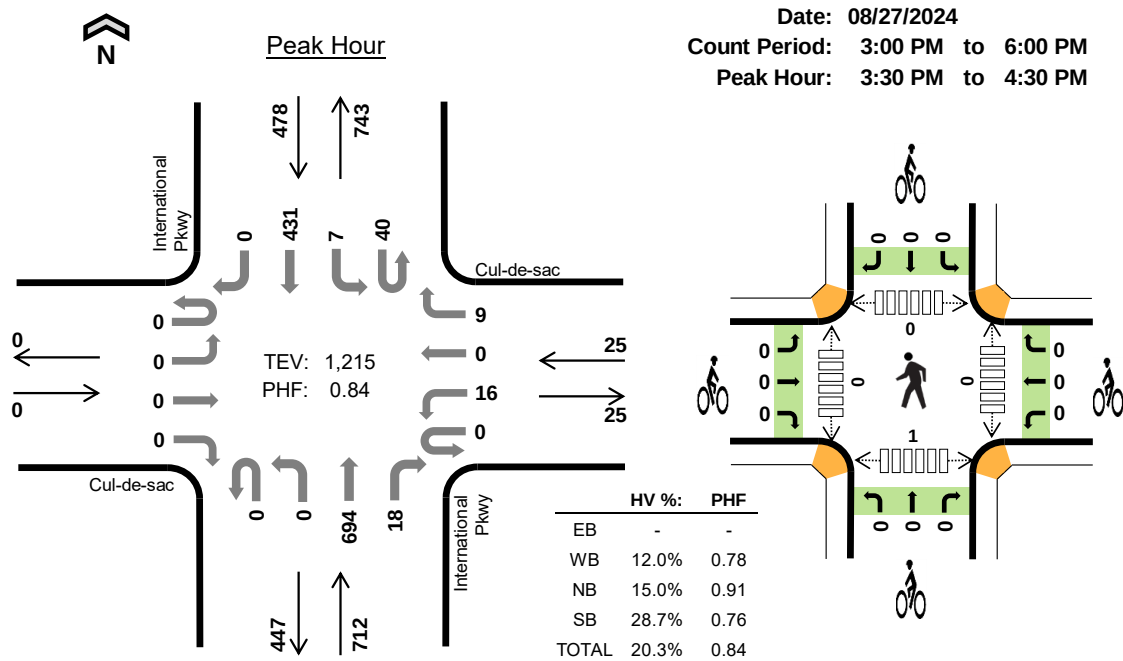
Interval Start	Cul-de-sac				Cul-de-sac				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	19	0	0	1	31	0	51	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	21	0	0	0	29	0	50	0
4:30 AM	0	0	0	0	0	2	0	0	0	0	0	26	2	0	0	24	54	0
4:45 AM	0	0	0	0	0	2	0	1	0	0	25	0	0	0	32	0	60	215
5:00 AM	0	0	0	0	0	2	0	1	0	0	24	3	0	0	27	0	57	221
5:15 AM	0	0	0	0	0	0	0	1	0	0	16	0	0	0	23	0	40	211
5:30 AM	0	0	0	0	0	0	0	0	0	0	29	0	1	0	29	0	59	216
5:45 AM	0	0	0	0	0	0	0	0	0	0	38	1	0	2	24	0	65	221
6:00 AM	0	0	0	0	0	2	0	2	0	0	28	1	0	2	22	0	57	221
6:15 AM	0	0	0	0	0	1	0	5	0	0	47	0	1	0	23	0	77	258
6:30 AM	0	0	0	0	0	3	0	1	0	0	34	3	1	0	28	0	70	269
6:45 AM	0	0	0	0	0	2	0	2	0	0	40	2	0	0	41	0	87	291
7:00 AM	0	0	0	0	0	1	0	2	0	0	46	0	0	0	38	0	87	321
7:15 AM	0	0	0	0	0	0	0	1	0	0	44	3	0	0	33	0	81	325
7:30 AM	0	0	0	0	0	2	0	0	0	0	47	0	0	1	35	0	85	340
7:45 AM	0	0	0	0	0	1	0	0	0	0	38	1	1	1	43	0	85	338
8:00 AM	0	0	0	0	0	1	0	3	0	0	49	3	1	0	41	0	98	349
8:15 AM	0	0	0	0	0	1	0	4	0	0	66	1	0	0	43	0	115	383
8:30 AM	0	0	0	0	0	0	0	1	0	0	64	2	0	0	35	0	102	400
8:45 AM	0	0	0	0	0	1	0	3	0	0	62	1	1	2	54	0	124	439
Count Total	0	0	0	0	0	21	0	27	0	0	763	23	6	9	655	0	1,504	0
Peak Hour	0	0	0	0	0	3	0	8	0	0	217	7	2	1	162	0	400	0

Five-Hour Count Summaries - Bikes

Interval Start	Cul-de-sac			Cul-de-sac			International Pkwy			International Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

International Pkwy Cul-de-sac



Three-Hour Count Summaries

Interval Start		Cul-de-sac				Cul-de-sac				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM		0	0	0	0	0	3	0	5	0	0	190	6	15	0	143	0	362	0
3:45 PM		0	0	0	0	0	6	0	2	0	0	167	2	5	2	110	0	294	0
4:00 PM		0	0	0	0	0	3	0	1	0	0	174	7	15	2	84	0	286	0
4:15 PM		0	0	0	0	0	4	0	1	0	0	163	3	5	3	94	0	273	1,215
Peak Hour	All	0	0	0	0	0	16	0	9	0	0	694	18	40	7	431	0	1,215	0
	HV	0	0	0	0	0	0	0	3	0	0	101	6	0	1	136	0	247	0
	HV%	-	-	-	-	-	0%	-	33%	-	-	15%	33%	0%	14%	32%	-	20%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	0	1	28	44	73	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	2	36	31	69	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	23	29	52	0	0	0	0	0	0	0	0	1	1
4:15 PM	0	0	20	33	53	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	3	107	137	247	0	0	0	0	0	0	0	0	1	1

Three-Hour Count Summaries																			
Interval Start		Cul-de-sac				Cul-de-sac				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	3:00 PM	0	0	0	0	0	4	0	6	0	0	145	1	11	4	114	0	285	0
	3:15 PM	0	0	0	0	0	6	0	2	0	0	154	1	9	3	81	0	256	0
	3:30 PM	0	0	0	0	0	3	0	5	0	0	190	6	15	0	143	0	362	0
	3:45 PM	0	0	0	0	0	6	0	2	0	0	167	2	5	2	110	0	294	1,197
	4:00 PM	0	0	0	0	0	3	0	1	0	0	174	7	15	2	84	0	286	1,198
	4:15 PM	0	0	0	0	0	4	0	1	0	0	163	3	5	3	94	0	273	1,215
	4:30 PM	0	0	0	0	0	2	0	3	0	0	188	1	9	2	73	0	278	1,131
	4:45 PM	0	0	0	0	0	2	0	4	0	0	159	3	10	0	77	0	255	1,092
	5:00 PM	0	0	0	0	0	2	0	4	0	0	158	2	4	1	77	0	248	1,054
	5:15 PM	0	0	0	0	0	1	0	3	0	0	114	3	8	3	76	0	208	989
	5:30 PM	0	0	0	0	0	4	0	0	0	0	182	1	5	2	95	0	289	1,000
	5:45 PM	0	0	0	0	0	7	0	1	1	0	167	2	17	0	99	0	294	1,039
Count Total		0	0	0	0	0	44	0	32	1	0	1,961	32	113	22	1,123	0	3,328	0
Peak Hour	All	0	0	0	0	0	16	0	9	0	0	694	18	40	7	431	0	1,215	0
	HV	0	0	0	0	0	0	0	3	0	0	101	6	0	1	136	0	247	0
	HV%	-	-	-	-	-	0%	-	33%	-	-	15%	33%	0%	14%	32%	-	20%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	3:00 PM	0	3	31	39	73	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	1	23	27	51	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	1	28	44	73	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	2	36	31	69	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	23	29	52	0	0	0	0	0	0	0	0	0	0	1	1	
	4:15 PM	0	0	20	33	53	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	1	25	22	48	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	1	31	31	63	0	0	0	0	0	0	0	0	1	2	0	3	
	5:00 PM	0	2	17	25	44	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	1	18	19	38	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	2	25	31	58	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	21	22	43	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total		0	14	298	353	665	0	0	0	0	0	0	0	0	1	2	1	4	
Peak Hour		0	3	107	137	247	0	0	0	0	0	0	0	0	0	0	1	1	

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	Cul-de-sac				Cul-de-sac				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	3	0	0	31	0	1	3	35	0	73	0
3:15 PM	0	0	0	0	0	1	0	0	0	0	23	0	0	1	26	0	51	0
3:30 PM	0	0	0	0	0	0	0	1	0	0	25	3	0	0	44	0	73	0
3:45 PM	0	0	0	0	0	0	0	2	0	0	36	0	0	0	31	0	69	266
4:00 PM	0	0	0	0	0	0	0	0	0	0	21	2	0	0	29	0	52	245
4:15 PM	0	0	0	0	0	0	0	0	0	0	19	1	0	1	32	0	53	247
4:30 PM	0	0	0	0	0	1	0	0	0	0	25	0	0	1	21	0	48	222
4:45 PM	0	0	0	0	0	0	0	1	0	0	30	1	0	0	31	0	63	216
5:00 PM	0	0	0	0	0	1	0	1	0	0	16	1	0	0	25	0	44	208
5:15 PM	0	0	0	0	0	0	0	1	0	0	17	1	1	1	17	0	38	193
5:30 PM	0	0	0	0	0	2	0	0	0	0	25	0	0	1	30	0	58	203
5:45 PM	0	0	0	0	0	0	0	0	0	0	21	0	0	0	22	0	43	183
Count Total	0	0	0	0	0	5	0	9	0	0	289	9	2	8	343	0	665	0
Peak Hour	0	0	0	0	0	0	0	3	0	0	101	6	0	1	136	0	247	0

Three-Hour Count Summaries - Bikes

Interval Start	Cul-de-sac			Cul-de-sac			International Pkwy			International Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

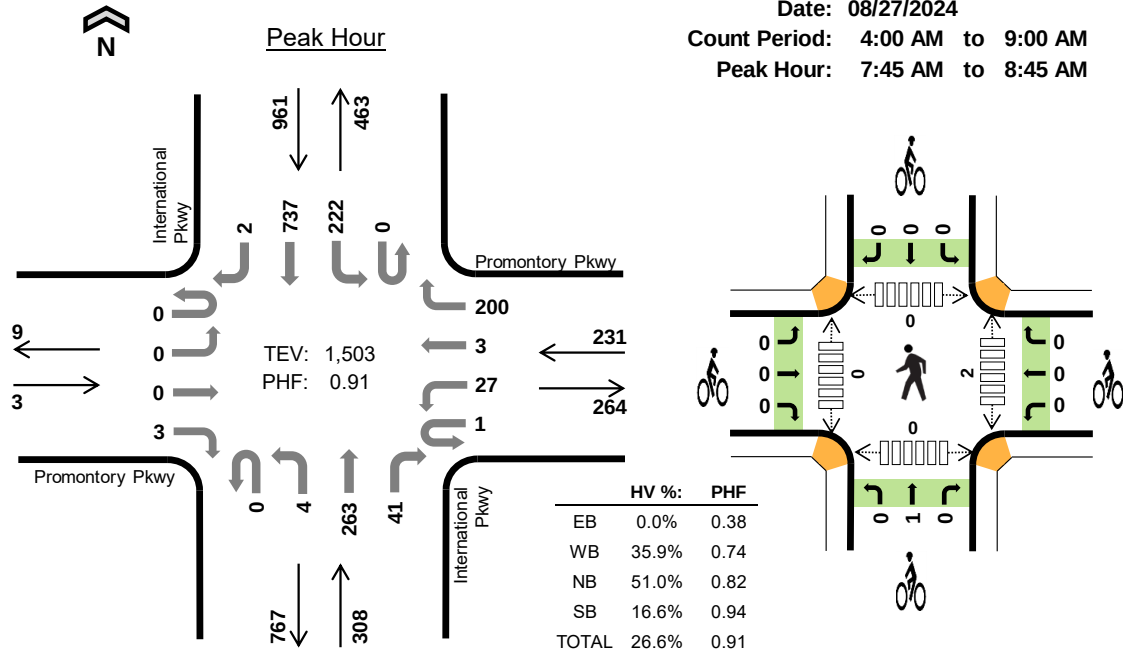
International Pkwy Promontory Pkwy



Date: 08/27/2024

Count Period: 4:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



Five-Hour Count Summaries

Interval Start		Promontory Pkwy				Promontory Pkwy				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	0	0	2	1	9	1	67	0	0	48	8	0	43	179	1	359	0
8:00 AM		0	0	0	0	0	6	0	26	0	0	66	6	0	48	204	0	356	0
8:15 AM		0	0	0	1	0	7	1	57	0	4	75	15	0	84	171	0	415	0
8:30 AM		0	0	0	0	0	5	1	50	0	0	74	12	0	47	183	1	373	1,503
Peak Hour	All	0	0	0	3	1	27	3	200	0	4	263	41	0	222	737	2	1,503	0
	HV	0	0	0	0	0	11	1	71	0	1	145	11	0	34	126	0	400	0
	HV%	-	-	-	0%	0%	41%	33%	36%	-	25%	55%	27%	-	15%	17%	0%	27%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:45 AM	0	18	30	38	86	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	12	40	45	97	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	28	45	43	116	0	0	1	0	1	2	0	0	0	2
8:30 AM	0	25	42	34	101	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	83	157	160	400	0	0	1	0	1	2	0	0	0	2

Five-Hour Count Summaries																			
Interval Start		Promontory Pkwy				Promontory Pkwy				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM		0	0	0	0	0	5	0	30	0	1	24	13	0	55	56	0	184	0
4:15 AM		0	0	0	0	0	3	0	60	0	2	17	12	0	48	60	0	202	0
4:30 AM		0	0	0	0	0	4	3	49	0	1	46	5	0	44	96	0	248	0
4:45 AM		0	0	0	0	0	3	3	23	0	5	39	7	0	44	135	0	259	893
5:00 AM		0	0	0	0	0	7	0	27	0	1	64	2	0	47	214	0	362	1,071
5:15 AM		0	0	0	1	0	6	1	19	0	1	26	3	0	24	230	0	311	1,180
5:30 AM		0	0	0	4	0	7	0	22	0	1	54	2	0	36	214	0	340	1,272
5:45 AM		0	0	0	1	1	4	2	21	0	2	41	3	0	48	233	0	356	1,369
6:00 AM		0	0	0	0	0	5	0	32	0	1	43	3	0	26	219	0	329	1,336
6:15 AM		0	0	0	1	0	13	0	31	0	1	56	1	0	19	221	0	343	1,368
6:30 AM		0	0	1	2	0	8	0	28	0	1	49	7	0	28	234	0	358	1,386
6:45 AM		0	0	0	2	0	17	1	28	0	1	46	3	0	30	261	0	389	1,419
7:00 AM		0	0	0	1	0	14	0	39	0	0	48	7	0	29	222	0	360	1,450
7:15 AM		0	0	1	0	0	12	0	35	0	1	44	9	1	28	203	0	334	1,441
7:30 AM		0	0	0	1	0	9	2	28	0	1	47	7	0	35	197	0	327	1,410
7:45 AM		0	0	0	2	1	9	1	67	0	0	48	8	0	43	179	1	359	1,380
8:00 AM		0	0	0	0	0	6	0	26	0	0	66	6	0	48	204	0	356	1,376
8:15 AM		0	0	0	1	0	7	1	57	0	4	75	15	0	84	171	0	415	1,457
8:30 AM		0	0	0	0	0	5	1	50	0	0	74	12	0	47	183	1	373	1,503
8:45 AM		0	0	0	3	0	2	0	40	0	3	63	7	0	50	155	1	324	1,468
Count Total		0	0	2	19	2	146	15	712	0	27	970	132	1	813	3,687	3	6,529	0
Peak Hour	All	0	0	0	3	1	27	3	200	0	4	263	41	0	222	737	2	1,503	0
	HV	0	0	0	0	0	11	1	71	0	1	145	11	0	34	126	0	400	0
	HV%	-	-	-	0%	0%	41%	33%	36%	-	25%	55%	27%	-	15%	17%	0%	27%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
4:00 AM		0	7	13	28	48	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 AM		0	18	11	27	56	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 AM		0	11	16	26	53	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 AM		0	6	22	33	61	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 AM		0	11	22	35	68	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 AM		0	5	15	22	42	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 AM		0	10	22	29	61	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 AM		1	17	27	23	68	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM		0	12	23	24	59	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM		0	21	26	25	72	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM		2	17	34	28	81	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM		0	22	30	39	91	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM		0	13	38	44	95	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM		1	30	33	35	99	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM		0	20	32	38	90	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM		0	18	30	38	86	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM		0	12	40	45	97	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM		0	28	45	43	116	0	0	1	0	1	2	0	0	0	0	0	2	
8:30 AM		0	25	42	34	101	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM		2	18	45	57	122	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total		6	321	566	673	1,566	0	0	1	0	1	2	0	0	0	0	0	2	
Peak Hour		0	83	157	160	400	0	0	1	0	1	2	0	0	0	0	0	2	

Five-Hour Count Summaries - Heavy Vehicles

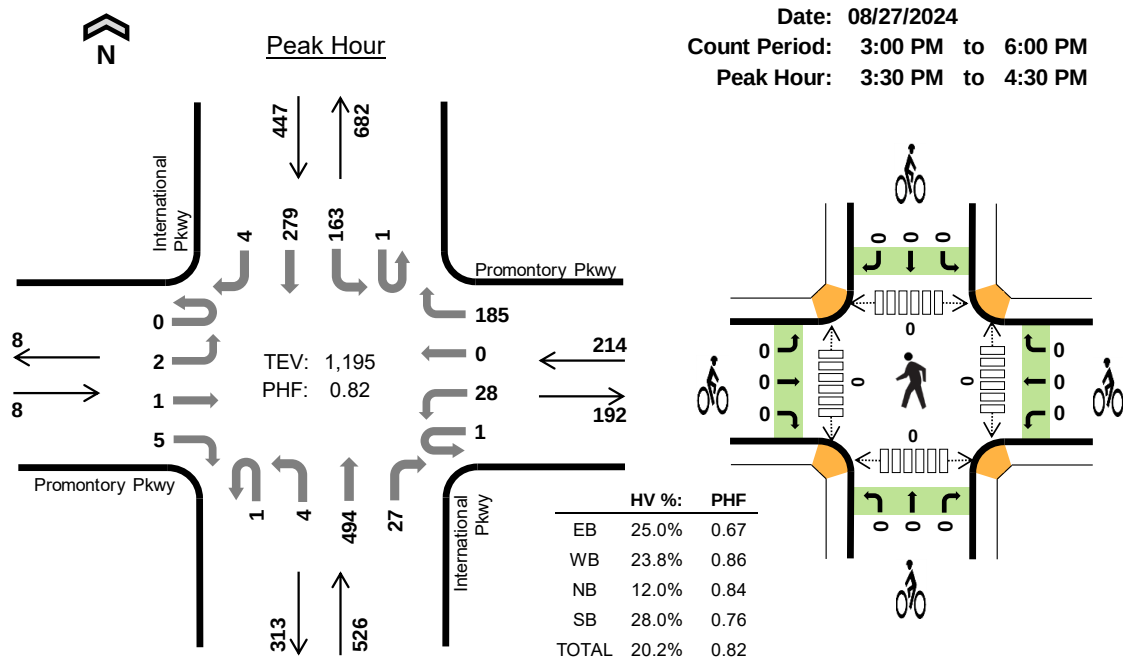
Interval Start	Promontory Pkwy				Promontory Pkwy				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM	0	0	0	0	0	1	0	6	0	0	11	2	0	14	14	0	48	0
4:15 AM	0	0	0	0	0	1	0	17	0	0	9	2	0	12	15	0	56	0
4:30 AM	0	0	0	0	0	1	0	10	0	0	14	2	0	9	17	0	53	0
4:45 AM	0	0	0	0	0	1	0	5	0	0	20	2	0	12	21	0	61	218
5:00 AM	0	0	0	0	0	4	0	7	0	0	21	1	0	9	26	0	68	238
5:15 AM	0	0	0	0	0	2	0	3	0	0	15	0	0	5	17	0	42	224
5:30 AM	0	0	0	0	0	3	0	7	0	0	22	0	0	13	16	0	61	232
5:45 AM	0	0	0	1	0	4	0	13	0	0	27	0	0	10	13	0	68	239
6:00 AM	0	0	0	0	0	3	0	9	0	1	20	2	0	5	19	0	59	230
6:15 AM	0	0	0	0	0	7	0	14	0	0	25	1	0	9	16	0	72	260
6:30 AM	0	0	0	2	0	1	0	16	0	0	28	6	0	11	17	0	81	280
6:45 AM	0	0	0	0	0	8	0	14	0	0	28	2	0	8	31	0	91	303
7:00 AM	0	0	0	0	0	2	0	11	0	0	33	5	0	11	33	0	95	339
7:15 AM	0	0	1	0	0	8	0	22	0	1	28	4	0	7	28	0	99	366
7:30 AM	0	0	0	0	0	8	0	12	0	0	29	3	0	11	27	0	90	375
7:45 AM	0	0	0	0	0	4	0	14	0	0	27	3	0	10	28	0	86	370
8:00 AM	0	0	0	0	0	4	0	8	0	0	38	2	0	6	39	0	97	372
8:15 AM	0	0	0	0	0	3	1	24	0	1	42	2	0	8	35	0	116	389
8:30 AM	0	0	0	0	0	0	0	25	0	0	38	4	0	10	24	0	101	400
8:45 AM	0	0	0	2	0	0	0	18	0	1	43	1	0	15	42	0	122	436
Count Total	0	0	1	5	0	65	1	255	0	4	518	44	0	195	478	0	1,566	0
Peak Hour	0	0	0	0	0	11	1	71	0	1	145	11	0	34	126	0	400	0

Five-Hour Count Summaries - Bikes

Interval Start	Promontory Pkwy			Promontory Pkwy			International Pkwy			International Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	1	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

International Pkwy Promontory Pkwy



Three-Hour Count Summaries

Interval Start		Promontory Pkwy				Promontory Pkwy				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM		0	0	0	2	0	9	0	48	0	3	146	8	0	59	87	2	364	0
3:45 PM		0	1	0	0	1	3	0	40	1	0	117	8	0	58	55	0	284	0
4:00 PM		0	0	1	1	0	11	0	51	0	1	122	6	0	20	69	0	282	0
4:15 PM		0	1	0	2	0	5	0	46	0	0	109	5	1	26	68	2	265	1,195
Peak Hour	All	0	2	1	5	1	28	0	185	1	4	494	27	1	163	279	4	1,195	0
	HV	0	1	0	1	0	6	0	45	0	2	50	11	0	59	66	0	241	0
	HV%	-	50%	0%	20%	0%	21%	-	24%	0%	50%	10%	41%	0%	36%	24%	0%	20%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	0	14	15	42	71	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	16	24	27	67	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	10	13	28	52	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	11	11	28	51	0	0	0	0	0	0	0	0	0	0
Peak Hour	2	51	63	125	241	0	0	0	0	0	0	0	0	0	0

Three-Hour Count Summaries																			
Interval Start		Promontory Pkwy				Promontory Pkwy				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	3:00 PM	0	0	0	2	0	6	0	43	0	0	103	3	0	29	98	0	284	0
	3:15 PM	0	1	0	0	0	3	0	40	0	1	107	6	1	29	57	0	245	0
	3:30 PM	0	0	0	2	0	9	0	48	0	3	146	8	0	59	87	2	364	0
	3:45 PM	0	1	0	0	1	3	0	40	1	0	117	8	0	58	55	0	284	1,177
	4:00 PM	0	0	1	1	0	11	0	51	0	1	122	6	0	20	69	0	282	1,175
	4:15 PM	0	1	0	2	0	5	0	46	0	0	109	5	1	26	68	2	265	1,195
	4:30 PM	0	0	1	0	0	7	1	48	0	0	145	1	0	24	54	0	281	1,112
	4:45 PM	0	1	1	0	0	4	0	35	0	2	121	1	1	26	53	0	245	1,073
	5:00 PM	0	0	0	3	0	5	0	35	0	1	121	2	0	23	57	0	247	1,038
	5:15 PM	0	0	0	1	0	9	0	34	0	1	87	2	0	29	52	0	215	988
	5:30 PM	0	0	0	3	0	4	1	46	0	2	123	8	0	33	60	0	280	987
	5:45 PM	0	1	0	0	0	2	1	33	1	1	137	5	0	36	70	0	287	1,029
Count Total		0	5	3	14	1	68	3	499	2	12	1,438	55	3	392	780	4	3,279	0
Peak Hour	All	0	2	1	5	1	28	0	185	1	4	494	27	1	163	279	4	1,195	0
	HV	0	1	0	1	0	6	0	45	0	2	50	11	0	59	66	0	241	0
	HV%	-	50%	0%	20%	0%	21%	-	24%	0%	50%	10%	41%	0%	36%	24%	0%	20%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	3:00 PM	0	10	18	38	66	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	10	14	26	50	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	14	15	42	71	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	16	24	27	67	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	10	13	28	52	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	1	11	11	28	51	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	10	20	25	55	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	1	10	20	31	62	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	1	11	10	23	45	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	6	10	20	36	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	1	8	20	29	58	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	6	17	24	47	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		5	122	192	341	660	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour		2	51	63	125	241	0	0	0	0	0	0	0	0	0	0	0	0	0

Three-Hour Count Summaries - Heavy Vehicles

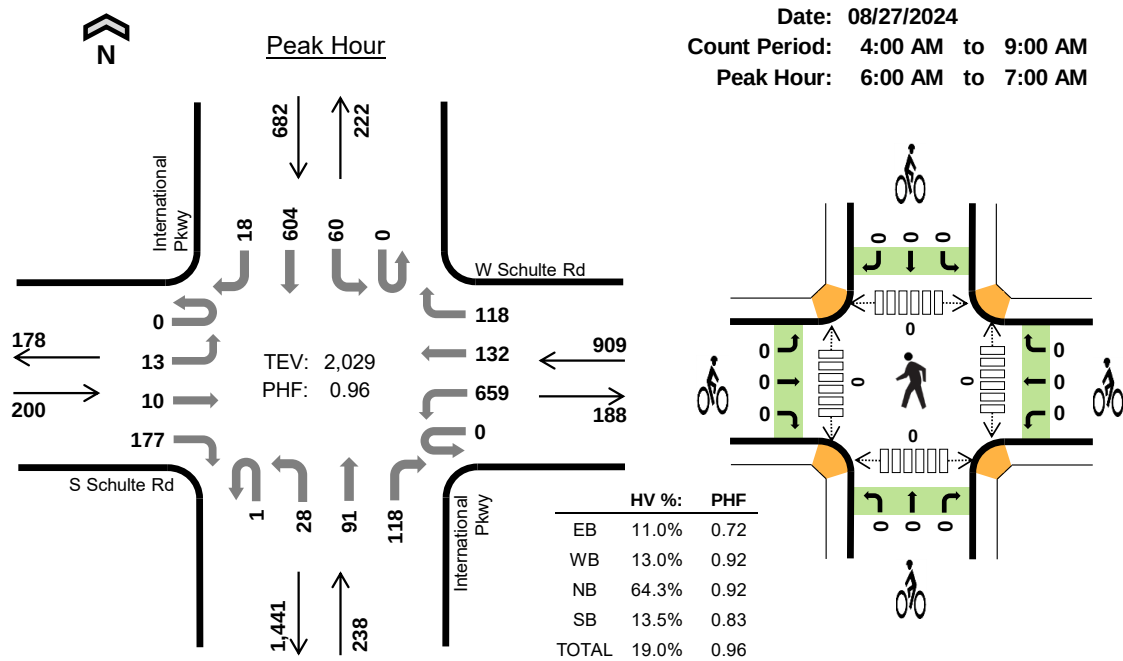
Interval Start	Promontory Pkwy				Promontory Pkwy				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	0	0	0	1	0	9	0	0	18	0	0	11	27	0	66	0
3:15 PM	0	0	0	0	0	1	0	9	0	0	14	0	0	12	14	0	50	0
3:30 PM	0	0	0	0	0	3	0	11	0	2	11	2	0	19	23	0	71	0
3:45 PM	0	0	0	0	0	1	0	15	0	0	20	4	0	13	14	0	67	254
4:00 PM	0	0	0	1	0	1	0	9	0	0	10	3	0	11	17	0	52	240
4:15 PM	0	1	0	0	0	1	0	10	0	0	9	2	0	16	12	0	51	241
4:30 PM	0	0	0	0	0	4	1	5	0	0	19	1	0	15	10	0	55	225
4:45 PM	0	0	1	0	0	0	0	10	0	0	19	1	0	14	17	0	62	220
5:00 PM	0	0	0	1	0	2	0	9	0	0	9	1	0	10	13	0	45	213
5:15 PM	0	0	0	0	0	1	0	5	0	0	9	1	0	9	11	0	36	198
5:30 PM	0	0	0	1	0	1	0	7	0	0	17	3	0	11	18	0	58	201
5:45 PM	0	0	0	0	0	1	0	5	0	0	15	2	0	16	8	0	47	186
Count Total	0	1	1	3	0	17	1	104	0	2	170	20	0	157	184	0	660	0
Peak Hour	0	1	0	1	0	6	0	45	0	2	50	11	0	59	66	0	241	0

Three-Hour Count Summaries - Bikes

Interval Start	Promontory Pkwy			Promontory Pkwy			International Pkwy			International Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

International Pkwy S Schulte Rd



Five-Hour Count Summaries

Interval Start		S Schulte Rd				W Schulte Rd				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
6:00 AM		0	4	1	23	0	167	18	21	1	9	22	33	0	15	187	3	504	0
6:15 AM		0	5	2	39	0	174	26	35	0	2	21	29	0	19	164	4	520	0
6:30 AM		0	2	4	63	0	188	36	24	0	7	30	22	0	12	132	9	529	0
6:45 AM		0	2	3	52	0	130	52	38	0	10	18	34	0	14	121	2	476	2,029
Peak Hour	All	0	13	10	177	0	659	132	118	1	28	91	118	0	60	604	18	2,029	0
	HV	0	2	4	16	0	50	17	51	0	8	60	85	0	37	50	5	385	0
	HV%	-	15%	40%	9%	-	8%	13%	43%	0%	29%	66%	72%	-	62%	8%	28%	19%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
6:00 AM	6	32	36	22	96	0	0	0	0	0	0	0	0	0	0
6:15 AM	4	25	39	26	94	0	0	0	0	0	0	0	0	0	0
6:30 AM	5	31	43	20	99	0	0	0	0	0	0	0	0	0	0
6:45 AM	7	30	35	24	96	0	0	0	0	0	0	0	0	0	0
Peak Hour	22	118	153	92	385	0	0	0	0	0	0	0	0	0	0

Five-Hour Count Summaries																			
Interval Start		S Schulte Rd				W Schulte Rd				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM		0	3	5	4	0	51	6	11	0	3	14	35	0	26	17	6	181	0
4:15 AM		0	3	8	4	0	54	7	11	0	5	22	38	0	22	27	1	202	0
4:30 AM		0	4	10	0	0	85	17	17	3	11	15	52	0	30	56	2	302	0
4:45 AM		0	2	9	7	0	122	15	27	1	7	15	80	0	28	89	5	407	1,092
5:00 AM		0	4	2	13	0	154	6	23	0	5	12	33	0	34	162	5	453	1,364
5:15 AM		0	3	6	41	0	139	37	11	0	3	9	35	0	29	168	3	484	1,646
5:30 AM		1	2	9	55	0	111	37	42	0	6	14	32	0	23	188	7	527	1,871
5:45 AM		0	3	8	48	0	135	24	25	0	10	10	38	0	25	137	3	466	1,930
6:00 AM		0	4	1	23	0	167	18	21	1	9	22	33	0	15	187	3	504	1,981
6:15 AM		0	5	2	39	0	174	26	35	0	2	21	29	0	19	164	4	520	2,017
6:30 AM		0	2	4	63	0	188	36	24	0	7	30	22	0	12	132	9	529	2,019
6:45 AM		0	2	3	52	0	130	52	38	0	10	18	34	0	14	121	2	476	2,029
7:00 AM		0	2	5	106	0	104	40	32	0	12	30	31	0	14	110	3	489	2,014
7:15 AM		0	2	6	47	0	124	28	17	0	14	27	34	0	15	151	1	466	1,960
7:30 AM		0	5	13	43	0	99	29	17	0	11	28	43	0	34	143	3	468	1,899
7:45 AM		0	7	3	32	0	131	23	28	0	11	33	44	0	26	129	3	470	1,893
8:00 AM		0	1	10	57	0	111	41	23	0	18	63	37	0	25	156	5	547	1,951
8:15 AM		0	9	7	31	0	161	35	31	0	13	55	40	0	30	99	4	515	2,000
8:30 AM		0	9	4	14	0	92	12	36	0	10	37	28	0	27	123	3	395	1,927
8:45 AM		0	10	3	14	0	104	12	32	1	17	38	31	0	28	96	2	388	1,845
Count Total		1	82	118	693	0	2,436	501	501	6	184	513	749	0	476	2,455	74	8,789	0
Peak Hour	All	0	13	10	177	0	659	132	118	1	28	91	118	0	60	604	18	2,029	0
	HV	0	2	4	16	0	50	17	51	0	8	60	85	0	37	50	5	385	0
	HV%	-	15%	40%	9%	-	8%	13%	43%	0%	29%	66%	72%	-	62%	8%	28%	19%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
4:00 AM		2	27	17	14	60	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 AM		2	28	22	18	70	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 AM		6	27	37	21	91	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 AM		4	39	29	19	91	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 AM		2	31	17	27	77	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 AM		6	27	22	24	79	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 AM		9	33	27	18	87	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 AM		13	41	35	20	109	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM		6	32	36	22	96	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM		4	25	39	26	94	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM		5	31	43	20	99	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM		7	30	35	24	96	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM		12	42	45	31	130	0	0	0	0	0	0	0	3	0	3	0	6	
7:15 AM		7	31	41	36	115	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM		13	37	48	36	134	0	0	0	0	0	0	0	0	1	0	0	1	
7:45 AM		8	34	41	28	111	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM		12	41	53	46	152	0	0	0	0	0	0	0	0	0	1	0	1	
8:15 AM		12	58	55	42	167	0	0	0	0	0	0	0	0	0	1	0	1	
8:30 AM		10	48	29	42	129	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM		10	45	32	43	130	0	0	0	0	0	0	0	0	0	1	0	1	
Count Total		150	707	703	557	2,117	0	0	0	0	0	0	0	3	1	6	0	10	
Peak Hour		22	118	153	92	385	0	0	0	0	0	0	0	0	0	0	0	0	

Five-Hour Count Summaries - Heavy Vehicles

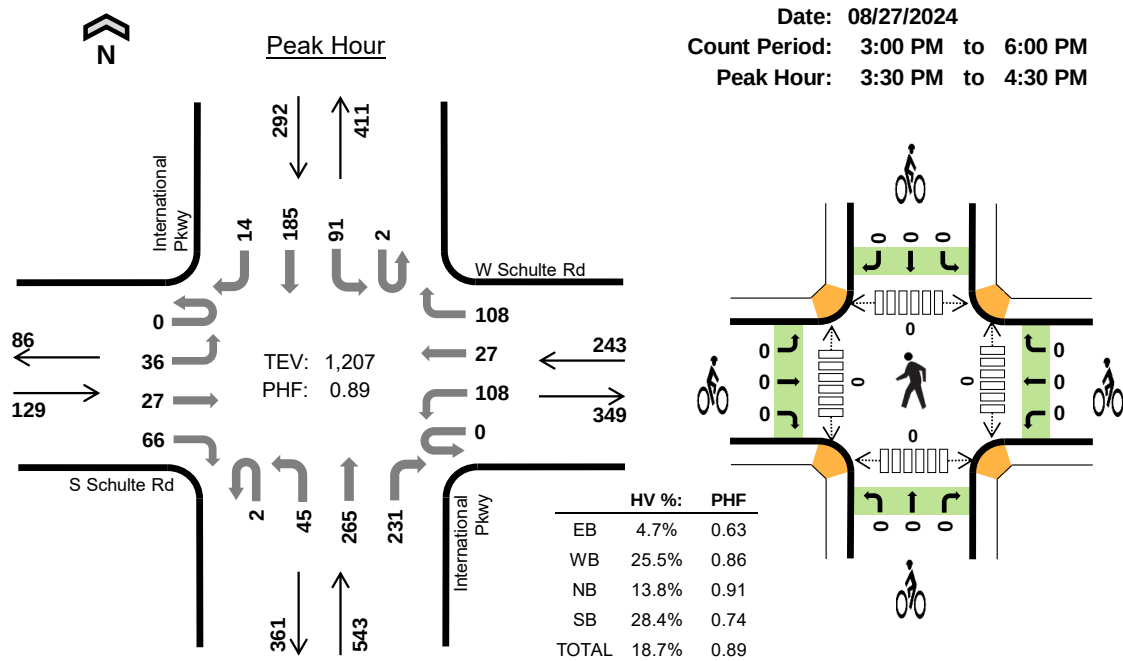
Interval Start	S Schulte Rd				W Schulte Rd				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM	0	1	0	1	0	20	1	6	0	0	3	14	0	7	3	4	60	0
4:15 AM	0	0	2	0	0	18	3	7	0	1	5	16	0	8	10	0	70	0
4:30 AM	0	2	4	0	0	18	6	3	0	6	9	22	0	13	7	1	91	0
4:45 AM	0	0	2	2	0	18	7	14	0	1	3	25	0	7	12	0	91	312
5:00 AM	0	1	1	0	0	13	2	16	0	1	4	12	0	14	12	1	77	329
5:15 AM	0	0	2	4	0	15	3	9	0	2	4	16	0	14	8	2	79	338
5:30 AM	0	0	5	4	0	13	5	15	0	2	8	17	0	8	5	5	87	334
5:45 AM	0	1	5	7	0	19	4	18	0	3	4	28	0	6	13	1	109	352
6:00 AM	0	1	0	5	0	13	5	14	0	1	13	22	0	10	10	2	96	371
6:15 AM	0	0	1	3	0	14	4	7	0	1	16	22	0	10	16	0	94	386
6:30 AM	0	0	2	3	0	16	3	12	0	2	22	19	0	9	10	1	99	398
6:45 AM	0	1	1	5	0	7	5	18	0	4	9	22	0	8	14	2	96	385
7:00 AM	0	1	1	10	0	18	4	20	0	3	19	23	0	9	21	1	130	419
7:15 AM	0	2	5	0	0	16	3	12	0	4	15	22	0	14	21	1	115	440
7:30 AM	0	1	11	1	0	15	7	15	0	4	14	30	0	18	17	1	134	475
7:45 AM	0	3	2	3	0	15	4	15	0	2	18	21	0	14	12	2	111	490
8:00 AM	0	1	6	5	0	17	6	18	0	6	24	23	0	19	23	4	152	512
8:15 AM	0	3	5	4	0	22	12	24	0	1	30	24	0	22	18	2	167	564
8:30 AM	0	5	3	2	0	20	3	25	0	2	11	16	0	8	32	2	129	559
8:45 AM	0	5	1	4	0	17	5	23	0	3	16	13	0	11	32	0	130	578
Count Total	0	28	59	63	0	324	92	291	0	49	247	407	0	229	296	32	2,117	0
Peak Hour	0	2	4	16	0	50	17	51	0	8	60	85	0	37	50	5	385	0

Five-Hour Count Summaries - Bikes

Interval Start	S Schulte Rd			W Schulte Rd			International Pkwy			International Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

International Pkwy S Schulte Rd



Three-Hour Count Summaries

Interval Start		S Schulte Rd				W Schulte Rd				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM		0	13	15	23	0	38	4	29	0	16	50	52	0	28	64	6	338	0
3:45 PM		0	5	2	18	0	15	5	24	0	11	76	62	1	21	38	2	280	0
4:00 PM		0	8	7	10	0	24	10	27	2	9	75	57	1	22	45	2	299	0
4:15 PM		0	10	3	15	0	31	8	28	0	9	64	60	0	20	38	4	290	1,207
Peak Hour	All	0	36	27	66	0	108	27	108	2	45	265	231	2	91	185	14	1,207	0
	HV	0	2	2	2	0	29	1	32	0	12	23	40	0	34	41	8	226	0
	HV%	-	6%	7%	3%	-	27%	4%	30%	0%	27%	9%	17%	0%	37%	22%	57%	19%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	1	14	14	23	52	0	0	0	0	0	0	0	0	0	0
3:45 PM	1	17	23	23	64	0	0	0	0	0	0	0	0	0	0
4:00 PM	2	16	17	22	57	0	0	0	0	0	0	0	0	0	0
4:15 PM	2	15	21	15	53	0	0	0	0	0	0	0	0	0	0
Peak Hour	6	62	75	83	226	0	0	0	0	0	0	0	0	0	0

Three-Hour Count Summaries																			
Interval Start		S Schulte Rd				W Schulte Rd				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	3:00 PM	0	9	7	9	1	37	9	55	0	10	35	51	2	25	46	0	296	0
	3:15 PM	0	4	13	21	0	27	5	31	0	11	42	42	0	26	48	4	274	0
	3:30 PM	0	13	15	23	0	38	4	29	0	16	50	52	0	28	64	6	338	0
	3:45 PM	0	5	2	18	0	15	5	24	0	11	76	62	1	21	38	2	280	1,188
	4:00 PM	0	8	7	10	0	24	10	27	2	9	75	57	1	22	45	2	299	1,191
	4:15 PM	0	10	3	15	0	31	8	28	0	9	64	60	0	20	38	4	290	1,207
	4:30 PM	0	8	11	13	1	39	10	45	0	5	63	70	0	15	50	2	332	1,201
	4:45 PM	0	9	4	19	0	35	7	20	0	4	80	63	0	16	26	3	286	1,207
	5:00 PM	0	7	10	13	0	26	3	11	0	10	74	75	0	23	35	3	290	1,198
	5:15 PM	0	3	9	16	0	20	6	11	1	10	63	73	0	11	35	0	258	1,166
	5:30 PM	0	5	7	15	0	34	10	31	0	9	74	70	0	21	27	3	306	1,140
	5:45 PM	0	4	9	2	0	20	10	29	0	11	91	80	2	36	18	2	314	1,168
Count Total		0	85	97	174	2	346	87	341	3	115	787	755	6	264	470	31	3,563	0
Peak Hour	All	0	36	27	66	0	108	27	108	2	45	265	231	2	91	185	14	1,207	0
	HV	0	2	2	2	0	29	1	32	0	12	23	40	0	34	41	8	226	0
	HV%	-	6%	7%	3%	-	27%	4%	30%	0%	27%	9%	17%	0%	37%	22%	57%	19%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	3:00 PM	3	19	14	23	59	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	4	14	15	17	50	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	1	14	14	23	52	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	1	17	23	23	64	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	16	17	22	57	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	2	15	21	15	53	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	3	27	21	19	70	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	22	11	13	46	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	2	15	15	17	49	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	21	12	10	43	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	1	22	12	15	50	0	0	0	0	0	0	0	0	0	2	0	0	2
	5:45 PM	0	15	11	13	39	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		19	217	186	210	632	0	0	0	0	0	0	0	0	0	2	0	2	2
Peak Hour		6	62	75	83	226	0	0	0	0	0	0	0	0	0	0	0	0	0

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	S Schulte Rd				W Schulte Rd				International Pkwy				International Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	1	0	2	1	4	1	13	0	4	4	6	0	9	14	0	59	0
3:15 PM	0	0	3	1	0	4	2	8	0	1	7	7	0	6	8	3	50	0
3:30 PM	0	0	0	1	0	7	0	7	0	7	5	2	0	5	15	3	52	0
3:45 PM	0	0	1	0	0	3	0	14	0	1	9	13	0	12	10	1	64	225
4:00 PM	0	0	1	1	0	11	0	5	0	3	4	10	0	11	10	1	57	223
4:15 PM	0	2	0	0	0	8	1	6	0	1	5	15	0	6	6	3	53	226
4:30 PM	0	1	0	2	1	14	0	12	0	1	6	14	0	6	13	0	70	244
4:45 PM	0	0	0	0	0	13	0	9	0	0	3	8	0	8	4	1	46	226
5:00 PM	0	2	0	0	0	11	0	4	0	0	6	9	0	7	8	2	49	218
5:15 PM	0	0	0	0	0	11	1	9	0	1	3	8	0	2	8	0	43	208
5:30 PM	0	0	0	1	0	12	1	9	0	1	6	5	0	9	5	1	50	188
5:45 PM	0	0	0	0	0	6	0	9	0	2	3	6	0	10	3	0	39	181
Count Total	0	6	5	8	2	104	6	105	0	22	61	103	0	91	104	15	632	0
Peak Hour	0	2	2	2	0	29	1	32	0	12	23	40	0	34	41	8	226	0

Three-Hour Count Summaries - Bikes

Interval Start	S Schulte Rd			W Schulte Rd			International Pkwy			International Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Hopkins Rd Promontory Pkwy

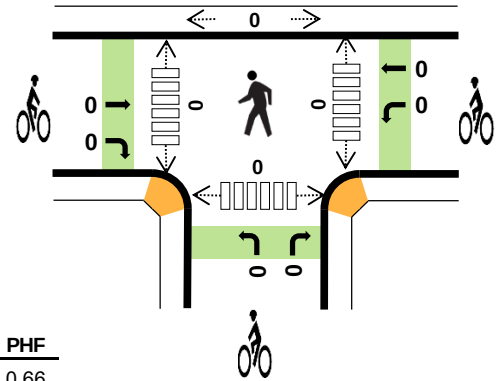
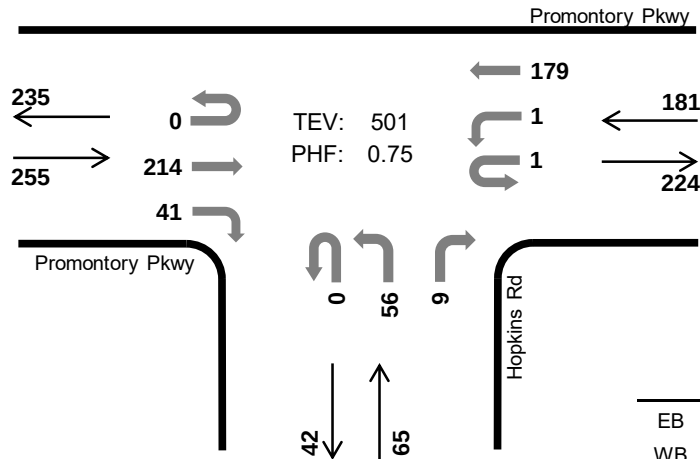


Peak Hour

Date: 08/27/2024

Count Period: 4:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	18.8%	0.66
WB	28.2%	0.74
NB	55.4%	0.86
SB	-	-
TOTAL	26.9%	0.75

Five-Hour Count Summaries

Interval Start		Promontory Pkwy				Promontory Pkwy				Hopkins Rd				n/a				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	0	32	14	0	1	60	0	0	17	0	2	0	0	0	0	126	0
8:00 AM		0	0	45	6	1	0	19	0	0	13	0	2	0	0	0	0	86	0
8:15 AM		0	0	87	10	0	0	53	0	0	14	0	3	0	0	0	0	167	0
8:30 AM		0	0	50	11	0	0	47	0	0	12	0	2	0	0	0	0	122	501
Peak Hour	All	0	0	214	41	1	1	179	0	0	56	0	9	0	0	0	0	501	0
	HV	0	0	25	23	0	0	51	0	0	35	0	1	0	0	0	0	135	0
	HV%	-	-	12%	56%	0%	0%	28%	-	-	63%	-	11%	-	-	-	-	27%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:45 AM	14	7	12	0	33	0	0	0	0	0	0	0	0	0	0
8:00 AM	9	7	7	0	23	0	0	0	0	0	0	0	0	0	0
8:15 AM	11	19	9	0	39	0	0	0	0	0	0	0	0	0	0
8:30 AM	14	18	8	0	40	0	0	0	0	0	0	0	0	0	0
Peak Hour	48	51	36	0	135	0	0	0	0	0	0	0	0	0	0

Five-Hour Count Summaries

Interval Start		Promontory Pkwy				Promontory Pkwy				Hopkins Rd				n/a				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM		0	0	51	13	0	0	27	0	0	5	0	0	0	0	0	0	96	0
4:15 AM		0	0	51	10	0	0	59	0	0	5	0	1	0	0	0	0	126	0
4:30 AM		0	0	38	7	0	0	33	0	0	18	0	1	0	0	0	0	97	0
4:45 AM		0	0	41	10	1	0	18	0	0	13	0	2	0	0	0	0	85	404
5:00 AM		0	0	32	10	0	0	24	0	0	8	0	1	0	0	0	0	75	383
5:15 AM		0	0	16	13	0	0	22	0	0	6	0	2	0	0	0	0	59	316
5:30 AM		0	0	17	16	0	1	28	0	0	2	0	1	0	0	0	0	65	284
5:45 AM		0	0	29	23	0	5	18	0	0	9	0	0	0	0	0	0	84	283
6:00 AM		0	0	16	11	0	9	34	0	0	6	0	3	0	0	0	0	79	287
6:15 AM		0	0	14	7	0	1	25	0	0	20	0	0	0	0	0	0	67	295
6:30 AM		0	0	23	12	0	0	23	0	0	14	0	1	0	0	0	0	73	303
6:45 AM		0	0	21	10	0	0	21	0	0	23	0	5	0	0	0	0	80	299
7:00 AM		0	0	26	9	0	1	30	0	0	22	0	0	0	0	0	0	88	308
7:15 AM		0	0	26	8	1	1	30	0	0	15	0	1	0	0	0	0	82	323
7:30 AM		0	0	32	12	0	2	21	0	0	18	0	3	0	0	0	0	88	338
7:45 AM		0	0	32	14	0	1	60	0	0	17	0	2	0	0	0	0	126	384
8:00 AM		0	0	45	6	1	0	19	0	0	13	0	2	0	0	0	0	86	382
8:15 AM		0	0	87	10	0	0	53	0	0	14	0	3	0	0	0	0	167	467
8:30 AM		0	0	50	11	0	0	47	0	0	12	0	2	0	0	0	0	122	501
8:45 AM		0	0	37	17	0	0	35	0	0	6	0	1	0	0	0	0	96	471
Count Total		0	0	684	229	3	21	627	0	0	246	0	31	0	0	0	0	1,841	0
Peak Hour	All	0	0	214	41	1	1	179	0	0	56	0	9	0	0	0	0	501	0
	HV	0	0	25	23	0	0	51	0	0	35	0	1	0	0	0	0	135	0
	HV%	-	-	12%	56%	0%	0%	28%	-	-	63%	-	11%	-	-	-	-	27%	0

Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 AM	16	5	2	0	23	0	0	0	0	0	0	0	0	0	0
4:15 AM	14	13	4	0	31	0	0	0	0	0	0	0	0	0	0
4:30 AM	12	5	6	0	23	0	0	0	0	0	0	0	0	0	0
4:45 AM	14	4	3	0	21	0	0	0	0	0	0	0	0	0	0
5:00 AM	10	6	3	0	19	0	0	0	0	0	0	0	0	0	0
5:15 AM	5	7	0	0	12	0	0	0	0	0	0	0	0	0	0
5:30 AM	11	10	2	0	23	0	0	0	0	0	0	0	0	0	0
5:45 AM	11	15	5	0	31	0	0	0	0	0	0	0	0	0	0
6:00 AM	7	15	3	0	25	0	0	0	0	0	0	0	0	0	0
6:15 AM	10	10	12	0	32	0	0	0	0	0	0	0	0	0	0
6:30 AM	16	11	7	0	34	0	0	0	0	0	0	0	0	0	0
6:45 AM	9	11	14	0	34	0	0	0	0	0	0	0	0	0	0
7:00 AM	15	10	3	0	28	0	0	0	0	0	0	0	0	0	0
7:15 AM	11	18	13	0	42	0	0	0	0	0	0	0	0	0	0
7:30 AM	14	8	14	0	36	0	1	0	0	1	0	0	0	0	0
7:45 AM	14	7	12	0	33	0	0	0	0	0	0	0	0	0	0
8:00 AM	9	7	7	0	23	0	0	0	0	0	0	0	0	0	0
8:15 AM	11	19	9	0	39	0	0	0	0	0	0	0	0	0	0
8:30 AM	14	18	8	0	40	0	0	0	0	0	0	0	0	0	0
8:45 AM	16	15	3	0	34	0	0	0	0	0	0	0	0	0	0
Count Total	239	214	130	0	583	0	1	0	0	1	0	0	0	0	0
Peak Hr	48	51	36	0	135	0	0	0	0	0	0	0	0	0	0

Five-Hour Count Summaries - Heavy Vehicles

Interval Start	Promontory Pkwy				Promontory Pkwy				Hopkins Rd				n/a				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 AM	0	0	12	4	0	0	5	0	0	2	0	0	0	0	0	0	0	23	0
4:15 AM	0	0	9	5	0	0	13	0	0	4	0	0	0	0	0	0	0	31	0
4:30 AM	0	0	12	0	0	0	5	0	0	6	0	0	0	0	0	0	0	23	0
4:45 AM	0	0	10	4	0	0	4	0	0	3	0	0	0	0	0	0	0	21	98
5:00 AM	0	0	7	3	0	0	6	0	0	3	0	0	0	0	0	0	0	19	94
5:15 AM	0	0	3	2	0	0	7	0	0	0	0	0	0	0	0	0	0	12	75
5:30 AM	0	0	5	6	0	1	9	0	0	2	0	0	0	0	0	0	0	23	75
5:45 AM	0	0	4	7	0	4	11	0	0	5	0	0	0	0	0	0	0	31	85
6:00 AM	0	0	3	4	0	6	9	0	0	3	0	0	0	0	0	0	0	25	91
6:15 AM	0	0	6	4	0	1	9	0	0	12	0	0	0	0	0	0	0	32	111
6:30 AM	0	0	11	5	0	0	11	0	0	6	0	1	0	0	0	0	0	34	122
6:45 AM	0	0	4	5	0	0	11	0	0	10	0	4	0	0	0	0	0	34	125
7:00 AM	0	0	10	5	0	0	10	0	0	3	0	0	0	0	0	0	0	28	128
7:15 AM	0	0	6	5	1	1	16	0	0	13	0	0	0	0	0	0	0	42	138
7:30 AM	0	0	8	6	0	2	6	0	0	13	0	1	0	0	0	0	0	36	140
7:45 AM	0	0	7	7	0	0	7	0	0	12	0	0	0	0	0	0	0	33	139
8:00 AM	0	0	6	3	0	0	7	0	0	7	0	0	0	0	0	0	0	23	134
8:15 AM	0	0	5	6	0	0	19	0	0	9	0	0	0	0	0	0	0	39	131
8:30 AM	0	0	7	7	0	0	18	0	0	7	0	1	0	0	0	0	0	40	135
8:45 AM	0	0	5	11	0	0	15	0	0	3	0	0	0	0	0	0	0	34	136
Count Total	0	0	140	99	1	15	198	0	0	123	0	7	0	0	0	0	0	583	0
Peak Hour	0	0	25	23	0	0	51	0	0	35	0	1	0	0	0	0	0	135	0

Five-Hour Count Summaries - Bikes

Interval Start	Promontory Pkwy			Promontory Pkwy			Hopkins Rd			n/a			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Hopkins Rd Promontory Pkwy

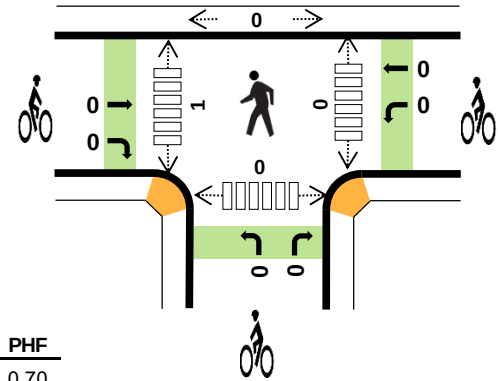
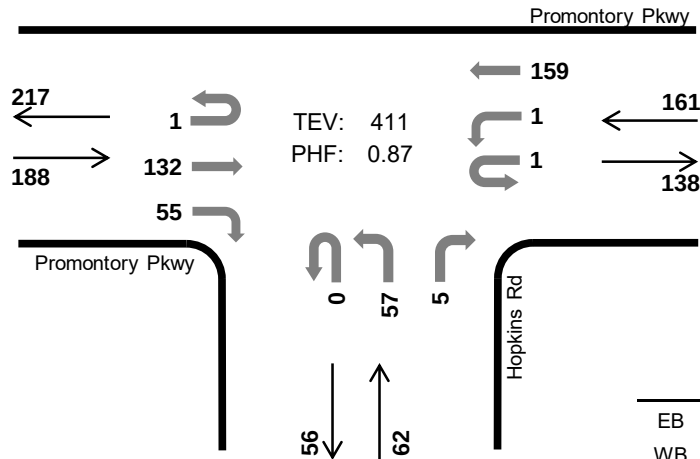


Peak Hour

Date: 08/27/2024

Count Period: 3:00 PM to 6:00 PM

Peak Hour: 3:30 PM to 4:30 PM



	HV %:	PHF
EB	37.8%	0.70
WB	19.3%	0.77
NB	40.3%	0.62
SB	-	-
TOTAL	30.9%	0.87

Three-Hour Count Summaries

Interval Start		Promontory Pkwy				Promontory Pkwy				Hopkins Rd				n/a				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM		0	0	42	22	0	0	44	0	0	10	0	0	0	0	0	0	118	0
3:45 PM		0	0	55	12	0	0	30	0	0	17	0	0	0	0	0	0	114	0
4:00 PM		1	0	14	12	1	1	50	0	0	9	0	1	0	0	0	0	89	0
4:15 PM		0	0	21	9	0	0	35	0	0	21	0	4	0	0	0	0	90	411
Peak Hour	All	1	0	132	55	1	1	159	0	0	57	0	5	0	0	0	0	411	0
	HV	1	0	42	28	0	1	30	0	0	21	0	4	0	0	0	0	127	0
	HV%	100%	-	32%	51%	0%	100%	19%	-	-	37%	-	80%	-	-	-	-	31%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	21	6	5	0	32	0	0	0	0	0	0	0	0	0	0
3:45 PM	18	11	7	0	36	0	0	0	0	0	0	0	0	0	0
4:00 PM	14	7	3	0	24	0	0	0	0	0	0	1	0	0	1
4:15 PM	18	7	10	0	35	0	0	0	0	0	0	0	0	0	0
Peak Hour	71	31	25	0	127	0	0	0	0	0	0	1	0	0	1

Three-Hour Count Summaries

Interval Start		Promontory Pkwy				Promontory Pkwy				Hopkins Rd				n/a				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	0	26	7	0	1	34	0	0	15	0	0	0	0	0	0	83	0
3:15 PM		0	0	24	7	0	0	39	0	0	7	0	0	0	0	0	0	77	0
3:30 PM		0	0	42	22	0	0	44	0	0	10	0	0	0	0	0	0	118	0
3:45 PM		0	0	55	12	0	0	30	0	0	17	0	0	0	0	0	0	114	392
4:00 PM		1	0	14	12	1	1	50	0	0	9	0	1	0	0	0	0	89	398
4:15 PM		0	0	21	9	0	0	35	0	0	21	0	4	0	0	0	0	90	411
4:30 PM		0	0	18	8	0	0	39	0	0	19	0	1	0	0	0	0	85	378
4:45 PM		0	0	20	7	0	2	31	0	0	8	0	0	0	0	0	0	68	332
5:00 PM		0	0	17	7	0	0	32	0	0	5	0	0	0	0	0	0	61	304
5:15 PM		0	0	21	7	0	0	32	0	0	8	0	0	0	0	0	0	68	282
5:30 PM		0	0	25	12	0	0	41	0	0	11	0	1	0	0	0	0	90	287
5:45 PM		0	0	35	11	0	0	30	0	0	4	0	0	0	0	0	0	80	299
Count Total		1	0	318	121	1	4	437	0	0	134	0	7	0	0	0	0	1,023	0
Peak Hour	All	1	0	132	55	1	1	159	0	0	57	0	5	0	0	0	0	411	0
	HV	1	0	42	28	0	1	30	0	0	21	0	4	0	0	0	0	127	0
	HV%	100%	-	32%	51%	0%	100%	19%	-	-	37%	-	80%	-	-	-	-	31%	0

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	11	7	4	0	22	0	0	0	0	0	0	0	0	0	0
3:15 PM	10	8	3	0	21	0	0	0	0	0	0	0	0	0	0
3:30 PM	21	6	5	0	32	0	0	0	0	0	0	0	0	0	0
3:45 PM	18	11	7	0	36	0	0	0	0	0	0	0	0	0	0
4:00 PM	14	7	3	0	24	0	0	0	0	0	0	1	0	0	1
4:15 PM	18	7	10	0	35	0	0	0	0	0	0	0	0	0	0
4:30 PM	16	7	3	0	26	0	0	0	0	0	0	0	0	0	0
4:45 PM	16	9	2	0	27	0	0	0	0	0	0	0	0	0	0
5:00 PM	10	8	1	0	19	0	0	0	0	0	0	0	0	0	0
5:15 PM	9	3	3	0	15	0	0	0	0	0	0	0	0	0	0
5:30 PM	14	5	4	0	23	0	0	0	0	0	0	0	0	0	0
5:45 PM	18	4	1	0	23	0	0	0	0	0	0	0	0	0	0
Count Total	175	82	46	0	303	0	0	0	0	0	0	1	0	0	1
Peak Hr	71	31	25	0	127	0	0	0	0	0	0	1	0	0	1

Three-Hour Count Summaries - Heavy Vehicles

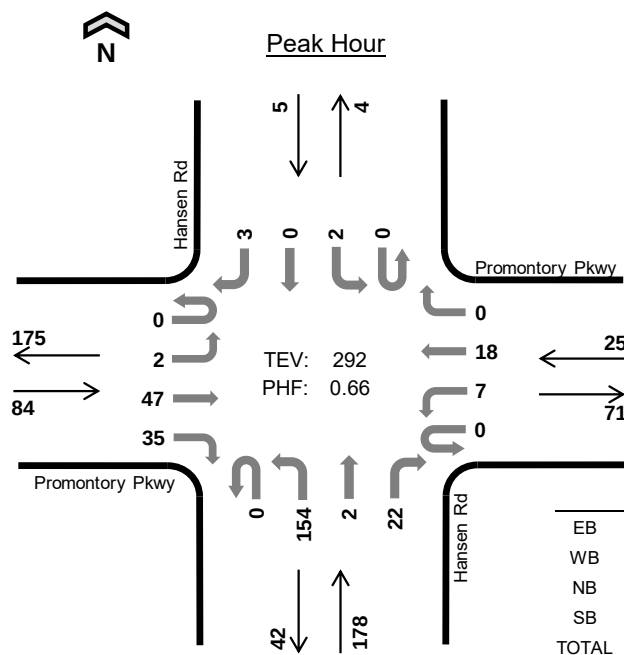
Interval Start	Promontory Pkwy				Promontory Pkwy				Hopkins Rd				n/a				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
3:00 PM	0	0	8	3	0	0	7	0	0	4	0	0	0	0	0	0	0	22	0
3:15 PM	0	0	7	3	0	0	8	0	0	3	0	0	0	0	0	0	0	21	0
3:30 PM	0	0	12	9	0	0	6	0	0	5	0	0	0	0	0	0	0	32	0
3:45 PM	0	0	12	6	0	0	11	0	0	7	0	0	0	0	0	0	0	36	111
4:00 PM	1	0	6	7	0	1	6	0	0	3	0	0	0	0	0	0	0	24	113
4:15 PM	0	0	12	6	0	0	7	0	0	6	0	4	0	0	0	0	0	35	127
4:30 PM	0	0	11	5	0	0	7	0	0	2	0	1	0	0	0	0	0	26	121
4:45 PM	0	0	12	4	0	0	9	0	0	2	0	0	0	0	0	0	0	27	112
5:00 PM	0	0	6	4	0	0	8	0	0	1	0	0	0	0	0	0	0	19	107
5:15 PM	0	0	7	2	0	0	3	0	0	3	0	0	0	0	0	0	0	15	87
5:30 PM	0	0	12	2	0	0	5	0	0	3	0	1	0	0	0	0	0	23	84
5:45 PM	0	0	15	3	0	0	4	0	0	1	0	0	0	0	0	0	0	23	80
Count Total	1	0	120	54	0	1	81	0	0	40	0	6	0	0	0	0	0	303	0
Peak Hour	1	0	42	28	0	1	30	0	0	21	0	4	0	0	0	0	0	127	0

Three-Hour Count Summaries - Bikes

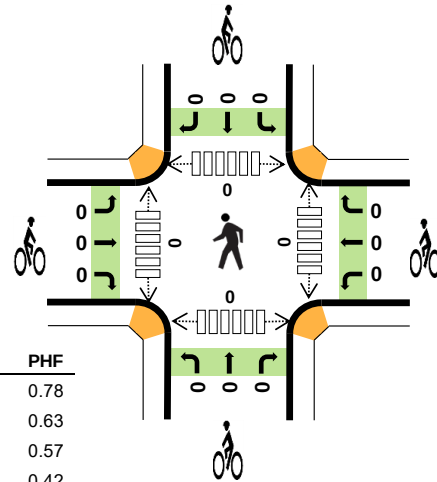
Interval Start	Promontory Pkwy			Promontory Pkwy			Hopkins Rd			n/a			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Hansen Rd Promontory Pkwy



Date: 08/27/2024
Count Period: 4:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



Five-Hour Count Summaries

Interval Start		Promontory Pkwy				Promontory Pkwy				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM		0	0	9	10	0	0	1	0	0	16	0	6	0	0	0	1	43	0
8:15 AM		0	2	10	8	0	4	6	0	0	72	0	6	0	2	0	1	111	0
8:30 AM		0	0	10	8	0	1	6	0	0	38	1	2	0	0	0	0	66	0
8:45 AM		0	0	18	9	0	2	5	0	0	28	1	8	0	0	0	1	72	292
Peak Hour	All	0	2	47	35	0	7	18	0	0	154	2	22	0	2	0	3	292	0
	HV	0	0	11	3	0	3	8	0	0	42	1	5	0	0	0	0	73	0
	HV%	-	0%	23%	9%	-	43%	44%	-	-	27%	50%	23%	-	0%	-	0%	25%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
8:00 AM	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0
8:15 AM	5	5	18	0	28	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	3	17	0	21	0	0	0	0	0	0	0	0	0	0
8:45 AM	5	3	10	0	18	0	0	0	0	0	0	0	0	0	0
Peak Hour	14	11	48	0	73	0	0	0	0	0	0	0	0	0	0

Five-Hour Count Summaries																			
Interval Start		Promontory Pkwy				Promontory Pkwy				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM		0	0	36	1	0	2	17	0	0	9	1	3	0	0	0	0	69	0
4:15 AM		0	0	39	3	0	2	24	1	0	21	1	3	0	0	0	0	94	0
4:30 AM		0	0	20	4	0	4	9	0	0	11	2	1	0	0	0	1	52	0
4:45 AM		0	2	13	6	0	0	11	0	2	8	0	6	0	0	2	1	51	266
5:00 AM		0	1	8	16	0	0	6	0	0	9	1	5	0	0	0	0	46	243
5:15 AM		0	0	5	8	0	1	4	0	1	8	0	3	0	0	0	1	31	180
5:30 AM		0	0	12	3	0	2	10	0	0	9	0	6	0	0	0	0	42	170
5:45 AM		0	0	10	5	0	1	10	0	0	5	0	14	0	0	0	0	45	164
6:00 AM		0	0	5	2	0	1	10	0	0	13	0	7	0	0	1	0	39	157
6:15 AM		0	0	9	1	0	1	11	0	0	10	1	2	0	0	0	0	35	161
6:30 AM		0	0	15	3	0	1	13	0	1	8	0	9	0	0	0	0	50	169
6:45 AM		0	0	12	7	0	1	8	0	0	7	0	17	0	1	0	0	53	177
7:00 AM		0	0	8	7	0	2	10	0	0	6	0	7	0	0	0	0	40	178
7:15 AM		0	0	9	5	0	0	11	0	0	10	1	4	0	0	0	2	42	185
7:30 AM		0	0	7	8	0	0	7	0	0	11	0	2	0	0	0	0	35	170
7:45 AM		0	0	11	16	0	0	9	0	0	13	0	9	0	0	0	0	58	175
8:00 AM		0	0	9	10	0	0	1	0	0	16	0	6	0	0	0	1	43	178
8:15 AM		0	2	10	8	0	4	6	0	0	72	0	6	0	2	0	1	111	247
8:30 AM		0	0	10	8	0	1	6	0	0	38	1	2	0	0	0	0	66	278
8:45 AM		0	0	18	9	0	2	5	0	0	28	1	8	0	0	0	1	72	292
Count Total		0	5	266	130	0	25	188	1	4	312	9	120	0	3	3	8	1,074	0
Peak Hour	All	0	2	47	35	0	7	18	0	0	154	2	22	0	2	0	3	292	0
	HV	0	0	11	3	0	3	8	0	0	42	1	5	0	0	0	0	73	0
	HV%	-	0%	23%	9%	-	43%	44%	-	-	27%	50%	23%	-	0%	-	0%	25%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
4:00 AM		8	3	2	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM		9	7	5	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM		12	1	2	1	16	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM		7	3	3	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM		4	2	2	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM		2	3	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM		5	5	3	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM		2	8	1	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM		1	6	5	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM		5	6	5	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM		10	8	5	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM		2	7	3	1	13	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM		4	7	3	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM		6	8	4	1	19	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM		7	6	1	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM		8	3	4	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM		3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM		5	5	18	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM		1	3	17	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM		5	3	10	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		106	94	97	3	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour		14	11	48	0	73	0	0	0	0	0	0	0	0	0	0	0	0	0

Five-Hour Count Summaries - Heavy Vehicles

Interval Start	Promontory Pkwy				Promontory Pkwy				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM	0	0	8	0	0	0	3	0	0	2	0	0	0	0	0	0	13	0
4:15 AM	0	0	8	1	0	0	7	0	0	4	1	0	0	0	0	0	21	0
4:30 AM	0	0	10	2	0	1	0	0	0	1	1	0	0	0	0	1	16	0
4:45 AM	0	0	7	0	0	0	3	0	0	2	0	1	0	0	0	0	13	63
5:00 AM	0	0	2	2	0	0	2	0	0	2	0	0	0	0	0	0	8	58
5:15 AM	0	0	0	2	0	0	3	0	0	1	0	0	0	0	0	0	6	43
5:30 AM	0	0	4	1	0	1	4	0	0	2	0	1	0	0	0	0	13	40
5:45 AM	0	0	1	1	0	1	7	0	0	1	0	0	0	0	0	0	11	38
6:00 AM	0	0	1	0	0	0	6	0	0	1	0	4	0	0	0	0	12	42
6:15 AM	0	0	5	0	0	0	6	0	0	4	0	1	0	0	0	0	16	52
6:30 AM	0	0	9	1	0	1	7	0	0	3	0	2	0	0	0	0	23	62
6:45 AM	0	0	1	1	0	0	7	0	0	2	0	1	0	1	0	0	13	64
7:00 AM	0	0	2	2	0	2	5	0	0	2	0	1	0	0	0	0	14	66
7:15 AM	0	0	4	2	0	0	8	0	0	2	1	1	0	0	0	1	19	69
7:30 AM	0	0	4	3	0	0	6	0	0	1	0	0	0	0	0	0	14	60
7:45 AM	0	0	5	3	0	0	3	0	0	3	0	1	0	0	0	0	15	62
8:00 AM	0	0	2	1	0	0	0	0	0	1	0	2	0	0	0	0	6	54
8:15 AM	0	0	4	1	0	2	3	0	0	17	0	1	0	0	0	0	28	63
8:30 AM	0	0	1	0	0	1	2	0	0	16	1	0	0	0	0	0	21	70
8:45 AM	0	0	4	1	0	0	3	0	0	8	0	2	0	0	0	0	18	73
Count Total	0	0	82	24	0	9	85	0	0	75	4	18	0	1	0	2	300	0
Peak Hour	0	0	11	3	0	3	8	0	0	42	1	5	0	0	0	0	73	0

Five-Hour Count Summaries - Bikes

Interval Start	Promontory Pkwy			Promontory Pkwy			Hansen Rd			Hansen Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

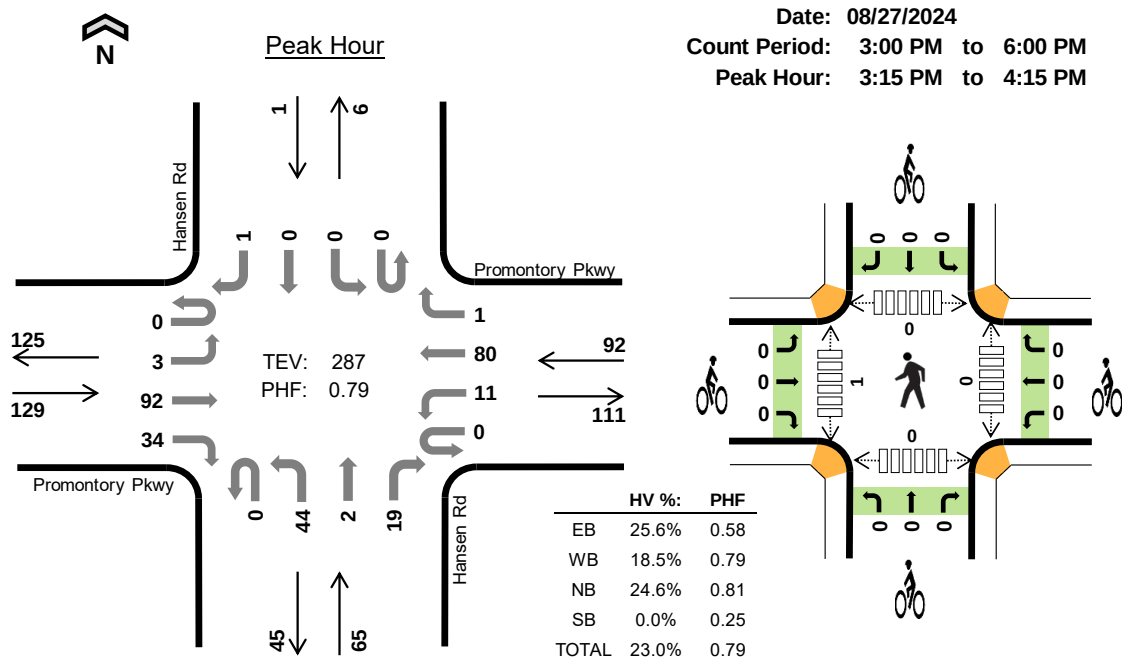
Hansen Rd
Promontory Pkwy



Date: 08/27/2024

Count Period: 3:00 PM to 6:00 PM

Peak Hour: 3:15 PM to 4:15 PM



Three-Hour Count Summaries

Interval Start		Promontory Pkwy				Promontory Pkwy				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:15 PM		0	0	15	9	0	2	20	0	0	14	0	6	0	0	0	0	66	0
3:30 PM		0	1	24	11	0	1	24	1	0	8	0	4	0	0	0	1	75	0
3:45 PM		0	2	47	7	0	1	14	0	0	10	2	8	0	0	0	0	91	0
4:00 PM		0	0	6	7	0	7	22	0	0	12	0	1	0	0	0	0	55	287
Peak Hour	All	0	3	92	34	0	11	80	1	0	44	2	19	0	0	0	1	287	0
	HV	0	0	9	24	0	2	15	0	0	11	0	5	0	0	0	0	66	0
	HV%	-	0%	10%	71%	-	18%	19%	0%	-	25%	0%	26%	-	-	-	0%	23%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:15 PM	5	5	3	0	13	0	0	0	0	0	0	0	0	0	0
3:30 PM	13	3	4	0	20	0	0	0	0	0	0	0	0	0	0
3:45 PM	9	4	6	0	19	0	0	0	0	0	0	0	0	0	0
4:00 PM	6	5	3	0	14	0	0	0	0	0	0	1	0	0	1
Peak Hour	33	17	16	0	66	0	0	0	0	0	0	1	0	0	1

Three-Hour Count Summaries																			
Interval Start		Promontory Pkwy				Promontory Pkwy				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	0	7	12	0	1	18	0	0	12	0	1	0	0	0	0	51	0
3:15 PM		0	0	15	9	0	2	20	0	0	14	0	6	0	0	0	0	66	0
3:30 PM		0	1	24	11	0	1	24	1	0	8	0	4	0	0	0	1	75	0
3:45 PM		0	2	47	7	0	1	14	0	0	10	2	8	0	0	0	0	91	283
4:00 PM		0	0	6	7	0	7	22	0	0	12	0	1	0	0	0	0	55	287
4:15 PM		0	0	4	9	0	5	15	0	0	20	0	0	0	0	0	0	53	274
4:30 PM		0	0	6	9	0	3	15	0	0	11	0	4	0	0	0	0	48	247
4:45 PM		0	0	9	8	0	0	15	0	1	10	1	1	0	0	0	0	45	201
5:00 PM		0	0	9	8	0	1	10	0	0	8	0	0	0	0	0	0	36	182
5:15 PM		0	1	11	10	0	3	23	1	0	8	2	0	0	0	0	1	60	189
5:30 PM		0	0	13	9	0	9	27	0	0	5	0	3	0	0	0	0	66	207
5:45 PM		0	0	16	9	0	2	9	0	0	9	0	1	0	0	0	0	46	208
Count Total		0	4	167	108	0	35	212	2	1	127	5	29	0	0	0	2	692	0
Peak Hour	All	0	3	92	34	0	11	80	1	0	44	2	19	0	0	0	1	287	0
	HV	0	0	9	24	0	2	15	0	0	11	0	5	0	0	0	0	66	0
	HV%	-	0%	10%	71%	-	18%	19%	0%	-	25%	0%	26%	-	-	-	0%	23%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
3:00 PM		7	7	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM		5	5	3	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM		13	3	4	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM		9	4	6	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM		6	5	3	0	14	0	0	0	0	0	0	0	0	1	0	0	1	1
4:15 PM		6	1	4	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM		11	3	3	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM		10	6	3	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM		6	2	2	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM		7	2	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM		10	4	3	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM		10	3	3	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		100	45	35	0	180	0	0	0	0	0	0	0	0	1	0	0	1	1
Peak Hour		33	17	16	0	66	0	0	0	0	0	0	0	0	1	0	0	1	1

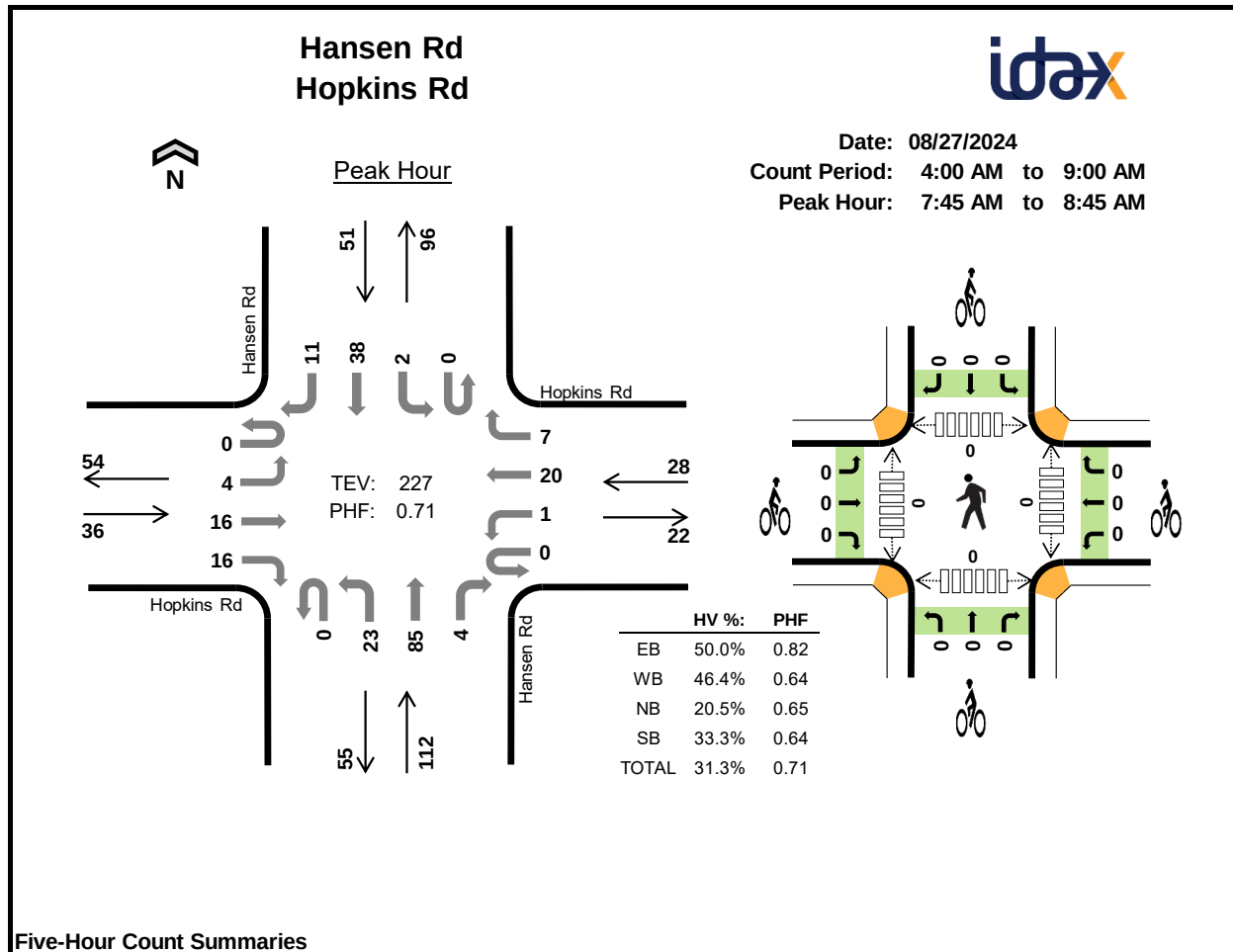
Three-Hour Count Summaries - Heavy Vehicles

Interval Start	Promontory Pkwy				Promontory Pkwy				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	1	6	0	0	7	0	0	0	0	0	0	0	0	0	14	0
3:15 PM	0	0	1	4	0	0	5	0	0	2	0	1	0	0	0	0	13	0
3:30 PM	0	0	4	9	0	0	3	0	0	2	0	2	0	0	0	0	20	0
3:45 PM	0	0	4	5	0	1	3	0	0	5	0	1	0	0	0	0	19	66
4:00 PM	0	0	0	6	0	1	4	0	0	2	0	1	0	0	0	0	14	66
4:15 PM	0	0	1	5	0	0	1	0	0	4	0	0	0	0	0	0	11	64
4:30 PM	0	0	4	7	0	0	3	0	0	2	0	1	0	0	0	0	17	61
4:45 PM	0	0	4	6	0	0	6	0	0	3	0	0	0	0	0	0	19	61
5:00 PM	0	0	2	4	0	0	2	0	0	2	0	0	0	0	0	0	10	57
5:15 PM	0	0	5	2	0	1	1	0	0	1	0	0	0	0	0	0	10	56
5:30 PM	0	0	5	5	0	1	3	0	0	1	0	2	0	0	0	0	17	56
5:45 PM	0	0	5	5	0	1	2	0	0	2	0	1	0	0	0	0	16	53
Count Total	0	0	36	64	0	5	40	0	0	26	0	9	0	0	0	0	180	0
Peak Hour	0	0	9	24	0	2	15	0	0	11	0	5	0	0	0	0	66	0

Three-Hour Count Summaries - Bikes

Interval Start	Promontory Pkwy			Promontory Pkwy			Hansen Rd			Hansen Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Five-Hour Count Summaries

Interval Start		Hopkins Rd				Hopkins Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	1	6	4	0	0	5	4	0	12	13	2	0	1	8	0	56	0
8:00 AM		0	2	1	2	0	0	4	0	0	2	19	0	0	0	6	1	37	0
8:15 AM		0	1	3	7	0	1	8	2	0	6	37	0	0	0	11	4	80	0
8:30 AM		0	0	6	3	0	0	3	1	0	3	16	2	0	1	13	6	54	227
Peak Hour	All	0	4	16	16	0	1	20	7	0	23	85	4	0	2	38	11	227	0
	HV	0	2	10	6	0	1	12	0	0	8	14	1	0	0	11	6	71	0
	HV%	-	50%	63%	38%	-	100%	60%	0%	-	35%	16%	25%	-	0%	29%	55%	31%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:45 AM	6	4	7	3	20	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	1	3	2	7	0	0	0	0	0	0	0	0	0	0
8:15 AM	5	8	7	4	24	0	0	0	0	0	0	0	0	0	0
8:30 AM	6	0	6	8	20	0	0	0	0	0	0	0	0	0	0
Peak Hour	18	13	23	17	71	0	0	0	0	0	0	0	0	0	0

Five-Hour Count Summaries																			
Interval Start		Hopkins Rd				Hopkins Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM		0	1	3	8	0	0	0	1	0	3	6	1	0	0	5	0	28	0
4:15 AM		0	1	3	4	0	2	5	2	0	1	7	0	0	2	12	1	40	0
4:30 AM		0	0	1	7	0	1	2	2	0	13	8	2	0	0	13	2	51	0
4:45 AM		0	1	5	1	0	0	4	3	0	6	10	1	0	0	8	0	39	158
5:00 AM		0	0	5	4	0	0	4	4	0	3	4	0	0	0	8	0	32	162
5:15 AM		0	1	5	4	0	0	7	3	0	1	2	0	0	0	4	0	27	149
5:30 AM		0	0	9	4	0	0	0	2	0	0	9	1	0	0	3	0	28	126
5:45 AM		0	0	14	7	0	0	5	7	0	4	9	1	0	0	2	0	49	136
6:00 AM		0	0	9	4	0	0	6	1	0	5	6	0	0	0	3	0	34	138
6:15 AM		0	0	2	3	0	1	12	1	0	3	6	0	0	0	3	2	33	144
6:30 AM		0	1	3	3	0	0	9	2	0	3	12	1	0	0	5	0	39	155
6:45 AM		0	0	5	6	0	0	9	3	0	11	14	1	0	0	5	0	54	160
7:00 AM		0	0	4	3	0	0	11	3	0	6	9	0	0	0	4	1	41	167
7:15 AM		1	0	4	2	0	0	2	2	0	7	6	0	0	0	2	3	29	163
7:30 AM		0	2	6	2	0	3	1	1	0	15	7	0	0	0	2	1	40	164
7:45 AM		0	1	6	4	0	0	5	4	0	12	13	2	0	1	8	0	56	166
8:00 AM		0	2	1	2	0	0	4	0	0	2	19	0	0	0	6	1	37	162
8:15 AM		0	1	3	7	0	1	8	2	0	6	37	0	0	0	11	4	80	213
8:30 AM		0	0	6	3	0	0	3	1	0	3	16	2	0	1	13	6	54	227
8:45 AM		0	0	8	6	0	0	2	1	0	4	12	2	0	0	10	1	46	217
Count Total		1	11	102	84	0	8	99	45	0	108	212	14	0	4	127	22	837	0
Peak Hour	All	0	4	16	16	0	1	20	7	0	23	85	4	0	2	38	11	227	0
	HV	0	2	10	6	0	1	12	0	0	8	14	1	0	0	11	6	71	0
	HV%	-	50%	63%	38%	-	100%	60%	0%	-	35%	16%	25%	-	0%	29%	55%	31%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
4:00 AM		2	0	1	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM		3	6	4	8	21	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM		0	2	4	9	15	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM		1	0	4	6	11	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM		2	0	2	3	7	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM		2	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM		3	0	3	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM		4	4	2	2	12	0	0	0	0	0	0	0	0	0	1	0	1	1
6:00 AM		4	3	6	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM		3	5	5	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM		3	4	5	2	14	0	0	0	0	0	0	0	0	0	0	1	1	1
6:45 AM		4	3	5	1	13	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM		4	2	4	4	14	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM		3	2	8	4	17	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM		6	3	8	2	19	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM		6	4	7	3	20	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM		1	1	3	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM		5	8	7	4	24	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM		6	0	6	8	20	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM		7	0	7	3	17	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		69	47	91	66	273	0	0	0	0	0	0	0	0	0	1	1	2	2
Peak Hour		18	13	23	17	71	0	0	0	0	0	0	0	0	0	0	0	0	0

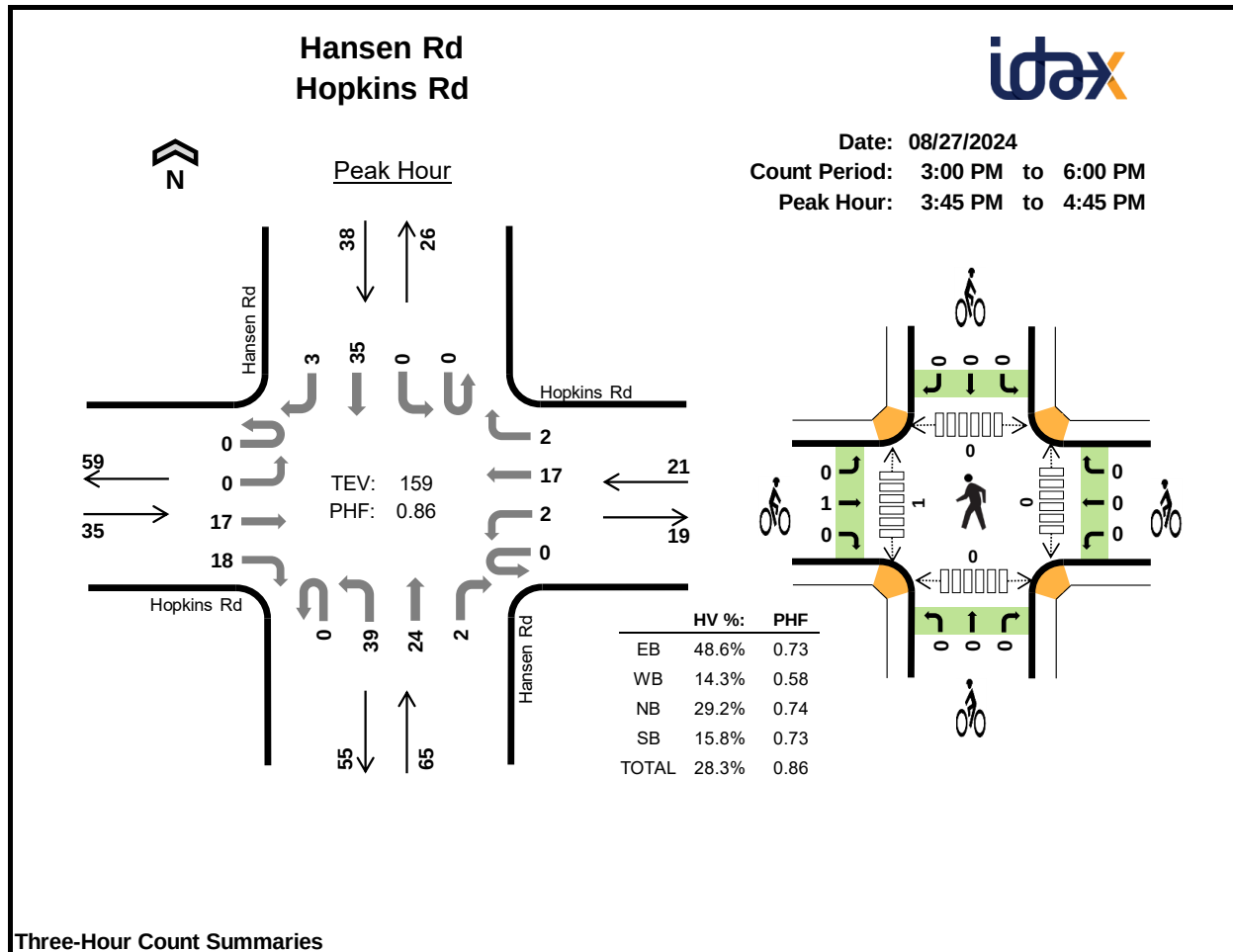
Five-Hour Count Summaries - Heavy Vehicles

Interval Start	Hopkins Rd				Hopkins Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 AM	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	2	0	5	0
4:15 AM	0	0	1	2	0	2	3	1	0	1	3	0	0	1	6	1	21	0	
4:30 AM	0	0	0	0	0	0	2	0	0	2	1	1	0	0	8	1	15	0	
4:45 AM	0	0	1	0	0	0	0	0	0	1	2	1	0	0	6	0	11	52	
5:00 AM	0	0	1	1	0	0	0	0	0	2	0	0	0	0	3	0	7	54	
5:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	3	36	
5:30 AM	0	0	3	0	0	0	0	0	0	0	3	0	0	0	1	0	7	28	
5:45 AM	0	0	3	1	0	0	4	0	0	1	1	0	0	0	2	0	12	29	
6:00 AM	0	0	2	2	0	0	3	0	0	1	5	0	0	0	0	0	13	35	
6:15 AM	0	0	2	1	0	1	4	0	0	2	3	0	0	0	0	1	14	46	
6:30 AM	0	0	2	1	0	0	4	0	0	1	3	1	0	0	2	0	14	53	
6:45 AM	0	0	2	2	0	0	3	0	0	1	3	1	0	0	1	0	13	54	
7:00 AM	0	0	2	2	0	0	2	0	0	0	4	0	0	0	4	0	14	55	
7:15 AM	1	0	1	1	0	0	1	1	0	6	2	0	0	0	1	3	17	58	
7:30 AM	0	0	5	1	0	2	1	0	0	7	1	0	0	0	1	1	19	63	
7:45 AM	0	1	4	1	0	0	4	0	0	5	2	0	0	0	3	0	20	70	
8:00 AM	0	1	0	0	0	0	1	0	0	1	2	0	0	0	2	0	7	63	
8:15 AM	0	0	1	4	0	1	7	0	0	0	7	0	0	0	2	2	24	70	
8:30 AM	0	0	5	1	0	0	0	0	0	2	3	1	0	0	4	4	20	71	
8:45 AM	0	0	4	3	0	0	0	0	0	3	4	0	0	0	3	0	17	68	
Count Total	1	3	41	24	0	6	39	2	0	37	49	5	0	1	52	13	273	0	
Peak Hour	0	2	10	6	0	1	12	0	0	8	14	1	0	0	11	6	71	0	

Five-Hour Count Summaries - Bikes

Interval Start	Hopkins Rd			Hopkins Rd			Hansen Rd			Hansen Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Three-Hour Count Summaries

Interval Start		Hopkins Rd				Hopkins Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:45 PM		0	0	6	6	0	0	2	2	0	12	10	0	0	0	4	1	43	0
4:00 PM		0	0	4	2	0	1	2	0	0	7	4	0	0	0	7	1	28	0
4:15 PM		0	0	3	5	0	0	9	0	0	10	2	0	0	0	13	0	42	0
4:30 PM		0	0	4	5	0	1	4	0	0	10	8	2	0	0	11	1	46	159
Peak Hour	All	0	0	17	18	0	2	17	2	0	39	24	2	0	0	35	3	159	0
	HV	0	0	13	4	0	1	2	0	0	8	9	2	0	0	4	2	45	0
	HV%	-	-	76%	22%	-	50%	12%	0%	-	21%	38%	100%	-	-	11%	67%	28%	0

Note: For all three-hour count summary, see next page.

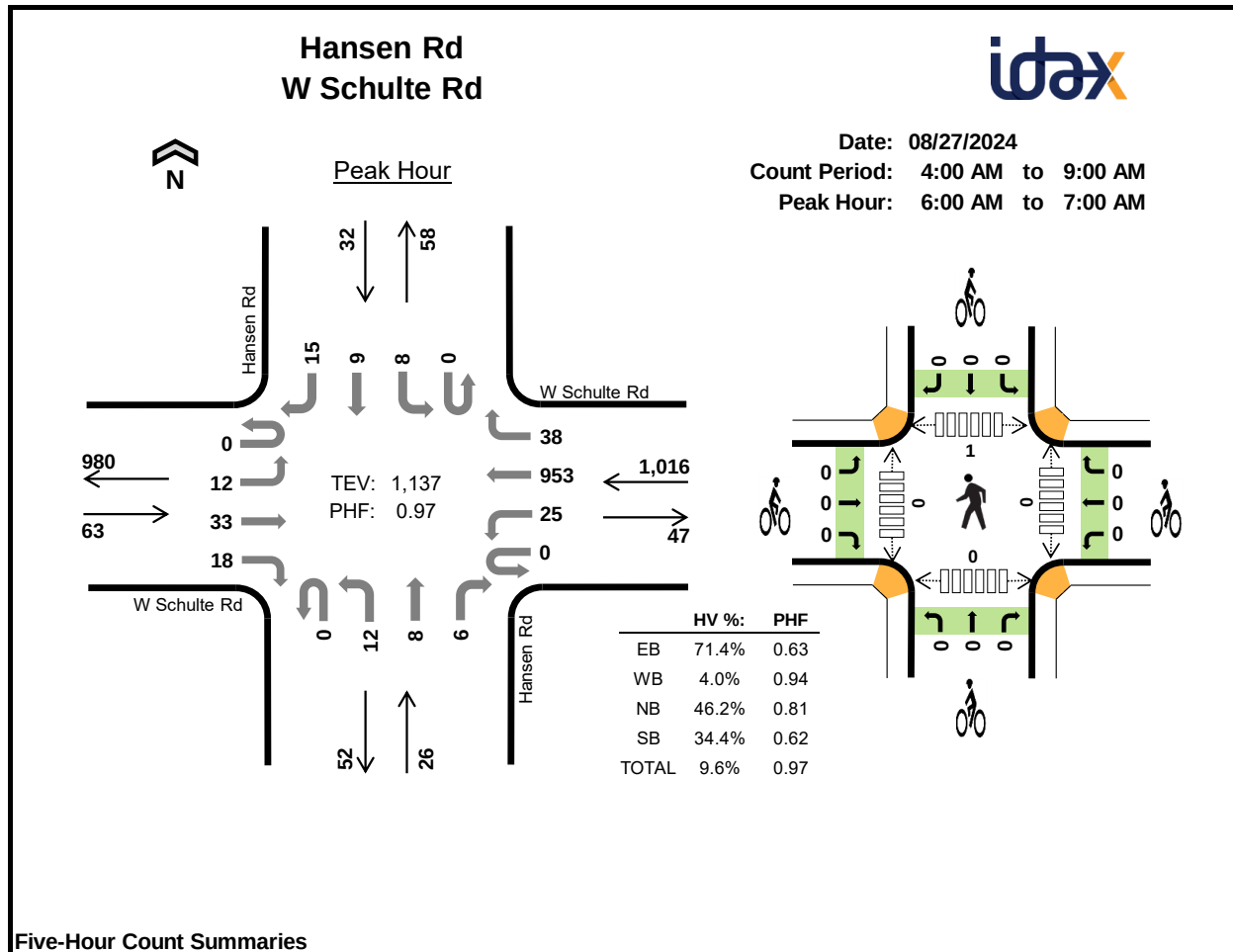
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:45 PM	6	1	8	1	16	0	0	0	0	0	0	1	0	0	1
4:00 PM	2	1	4	2	9	1	0	0	0	1	0	0	0	0	0
4:15 PM	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0
4:30 PM	6	1	5	3	15	0	0	0	0	0	0	0	0	0	0
Peak Hour	17	3	19	6	45	1	0	0	0	1	0	1	0	0	1

Three-Hour Count Summaries																			
Interval Start		Hopkins Rd				Hopkins Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	1	2	5	0	4	9	2	0	4	5	0	0	0	7	1	40	0
3:15 PM		0	0	2	4	0	0	1	1	0	4	5	0	0	0	6	0	23	0
3:30 PM		0	2	4	11	0	0	6	0	0	3	5	0	0	0	6	2	39	0
3:45 PM		0	0	6	6	0	0	2	2	0	12	10	0	0	0	4	1	43	145
4:00 PM		0	0	4	2	0	1	2	0	0	7	4	0	0	0	7	1	28	133
4:15 PM		0	0	3	5	0	0	9	0	0	10	2	0	0	0	13	0	42	152
4:30 PM		0	0	4	5	0	1	4	0	0	10	8	2	0	0	11	1	46	159
4:45 PM		0	0	2	3	0	0	2	1	0	5	4	0	0	1	6	1	25	141
5:00 PM		0	1	3	4	0	0	3	0	0	3	5	0	0	0	9	0	28	141
5:15 PM		0	1	1	4	0	1	3	2	0	1	2	0	0	0	10	0	25	124
5:30 PM		0	1	6	5	0	2	5	1	0	5	2	0	0	0	11	0	38	116
5:45 PM		0	1	1	6	0	0	2	0	0	2	4	0	0	1	5	0	22	113
Count Total		0	7	38	60	0	9	48	9	0	66	56	2	0	2	95	7	399	0
Peak Hour	All	0	0	17	18	0	2	17	2	0	39	24	2	0	0	35	3	159	0
	HV	0	0	13	4	0	1	2	0	0	8	9	2	0	0	4	2	45	0
	HV%	-	-	76%	22%	-	50%	12%	0%	-	21%	38%	100%	-	-	11%	67%	28%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
3:00 PM		3	2	2	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM		2	2	2	0	6	0	0	0	0	0	0	0	0	1	0	0	0	1
3:30 PM		4	2	1	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM		6	1	8	1	16	0	0	0	0	0	0	0	0	1	0	0	0	1
4:00 PM		2	1	4	2	9	1	0	0	0	0	1	0	0	0	0	0	0	0
4:15 PM		3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM		6	1	5	3	15	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM		2	1	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM		5	1	4	2	12	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM		1	2	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM		3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM		0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		37	14	29	17	97	1	0	0	0	1	0	0	0	2	0	0	2	2
Peak Hour		17	3	19	6	45	1	0	0	0	1	0	1	0	1	0	0	1	1

Three-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Hopkins Rd				Hopkins Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
3:00 PM	0	1	1	1	0	0	2	0	0	2	0	0	0	0	0	2	1	10	0
3:15 PM	0	0	2	0	0	0	1	1	0	1	1	0	0	0	0	0	0	6	0
3:30 PM	0	1	1	2	0	0	2	0	0	0	1	0	0	0	1	1	1	9	0
3:45 PM	0	0	4	2	0	0	1	0	0	4	4	0	0	0	1	0	16	41	
4:00 PM	0	0	2	0	0	0	1	0	0	2	2	0	0	0	1	1	9	40	
4:15 PM	0	0	3	0	0	0	0	0	0	2	0	0	0	0	0	0	5	39	
4:30 PM	0	0	4	2	0	1	0	0	0	0	3	2	0	0	2	1	15	45	
4:45 PM	0	0	1	1	0	0	1	0	0	0	0	0	0	0	1	1	5	34	
5:00 PM	0	1	3	1	0	0	1	0	0	1	3	0	0	0	2	0	12	37	
5:15 PM	0	1	0	0	0	1	1	0	0	0	0	0	0	0	2	0	5	37	
5:30 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	25	
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	22	
Count Total	0	4	24	9	0	2	11	1	0	13	14	2	0	0	12	5	97	0	
Peak Hour	0	0	13	4	0	1	2	0	0	8	9	2	0	0	4	2	45	0	

Three-Hour Count Summaries - Bikes																	
Interval Start	Hopkins Rd			Hopkins Rd			Hansen Rd			Hansen Rd			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	1			
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Count Total	0	1	0	0	0	0	0	0	0	0	0	0	1	0			
Peak Hour	0	1	0	0	0	0	0	0	0	0	0	0	1	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Five-Hour Count Summaries

Interval Start		W Schulte Rd				W Schulte Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
6:00 AM		0	3	8	4	0	7	245	4	0	4	2	2	0	1	0	5	285	0
6:15 AM		0	2	6	4	0	10	247	3	0	4	3	1	0	1	2	3	286	0
6:30 AM		0	2	8	1	0	5	254	12	0	1	1	2	0	1	3	3	293	0
6:45 AM		0	5	11	9	0	3	207	19	0	3	2	1	0	5	4	4	273	1,137
Peak Hour	All	0	12	33	18	0	25	953	38	0	12	8	6	0	8	9	15	1,137	0
	HV	0	10	19	16	0	0	36	5	0	9	3	0	0	3	3	5	109	0
	HV%	-	83%	58%	89%	-	0%	4%	13%	-	75%	38%	0%	-	38%	33%	33%	10%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
6:00 AM	9	12	5	2	28	0	0	0	0	0	0	0	0	0	0
6:15 AM	10	9	4	3	26	0	0	0	0	0	0	0	0	0	0
6:30 AM	8	10	1	2	21	0	0	0	0	0	0	0	0	0	0
6:45 AM	18	10	2	4	34	0	0	0	0	0	0	0	1	0	1
Peak Hour	45	41	12	11	109	0	0	0	0	0	0	0	1	0	1

Five-Hour Count Summaries																			
Interval Start		W Schulte Rd				W Schulte Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	4:00 AM	0	4	6	17	0	6	44	4	1	4	1	0	0	2	8	4	101	
	4:15 AM	0	4	4	10	0	6	63	2	0	3	1	1	0	4	3	11	112	
	4:30 AM	0	5	10	5	0	11	147	7	0	2	13	3	0	5	5	11	224	
	4:45 AM	0	7	12	16	0	10	197	6	0	6	5	1	0	0	1	8	269	
	5:00 AM	0	8	15	3	0	16	195	10	0	2	6	0	0	1	5	5	266	
	5:15 AM	0	1	4	15	0	32	226	0	0	1	0	1	0	3	3	2	288	
	5:30 AM	0	3	9	3	0	33	191	6	0	1	0	2	0	1	4	2	255	
	5:45 AM	0	3	10	5	0	24	168	10	0	3	2	1	0	2	3	6	237	
	6:00 AM	0	3	8	4	0	7	245	4	0	4	2	2	0	1	0	5	285	
	6:15 AM	0	2	6	4	0	10	247	3	0	4	3	1	0	1	2	3	286	
	6:30 AM	0	2	8	1	0	5	254	12	0	1	1	2	0	1	3	3	293	
	6:45 AM	0	5	11	9	0	3	207	19	0	3	2	1	0	5	4	4	273	
	7:00 AM	0	2	7	5	0	5	214	9	0	5	1	3	0	2	1	2	256	
	7:15 AM	0	3	19	2	0	3	159	6	0	6	3	3	0	2	0	3	209	
	7:30 AM	0	6	13	5	0	5	159	10	0	3	3	2	0	2	4	3	215	
	7:45 AM	0	7	11	4	0	8	192	18	0	4	5	3	0	6	3	2	263	
	8:00 AM	0	4	20	3	0	5	173	15	0	1	1	1	0	4	1	4	232	
	8:15 AM	0	10	13	7	0	2	144	31	0	4	2	4	0	6	6	7	236	
	8:30 AM	0	10	19	4	0	4	98	12	0	8	1	2	0	3	2	11	174	
	8:45 AM	0	6	10	8	0	6	103	7	0	5	1	2	0	5	2	9	164	
Count Total		0	95	215	130	0	201	3,426	191	1	70	53	35	0	56	60	105	4,638	
Peak Hour	All	0	12	33	18	0	25	953	38	0	12	8	6	0	8	9	15	1,137	
	HV	0	10	19	16	0	0	36	5	0	9	3	0	0	3	3	5	109	
	HV%	-	83%	58%	89%	-	0%	4%	13%	-	75%	38%	0%	-	38%	33%	33%	10%	
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	4:00 AM	5	3	3	2	13	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 AM	6	4	2	10	22	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 AM	4	6	1	8	19	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 AM	7	8	4	6	25	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 AM	8	6	4	4	22	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 AM	10	4	1	2	17	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 AM	5	13	2	1	21	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 AM	11	7	3	3	24	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 AM	9	12	5	2	28	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	10	9	4	3	26	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	8	10	1	2	21	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	18	10	2	4	34	0	0	0	0	0	0	0	0	0	1	0	1	
	7:00 AM	10	11	4	4	29	0	0	3	0	3	0	0	0	0	0	1	1	
	7:15 AM	12	16	9	3	40	0	0	0	0	0	0	0	0	0	1	0	1	
	7:30 AM	14	13	2	4	33	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	8	14	6	4	32	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	12	10	2	2	26	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	20	11	3	7	41	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	18	7	6	5	36	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	10	12	3	6	31	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total		205	186	67	82	540	0	0	3	0	3	0	0	0	0	2	1	3	
Peak Hour		45	41	12	11	109	0	0	0	0	0	0	0	0	0	1	0	1	

Five-Hour Count Summaries - Heavy Vehicles

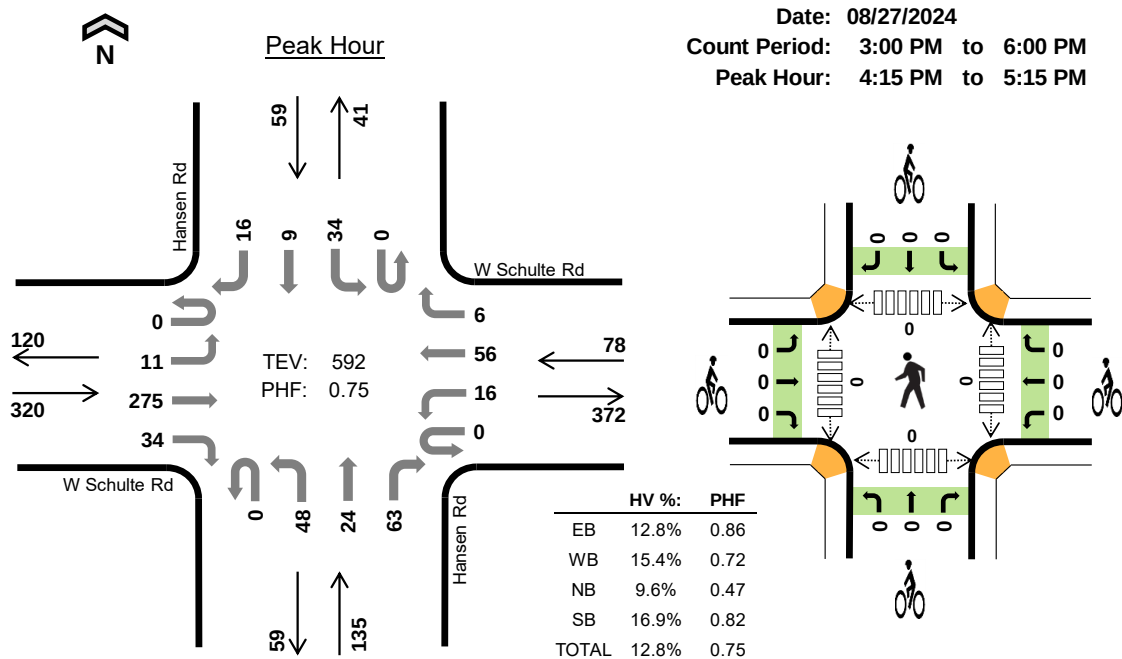
Interval Start	W Schulte Rd				W Schulte Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 AM	0	0	2	3	0	0	3	0	1	2	0	0	0	0	0	0	2	13	0
4:15 AM	0	2	0	4	0	0	4	0	0	1	1	0	0	0	1	1	8	22	0
4:30 AM	0	1	2	1	0	0	6	0	0	0	1	0	0	0	0	0	8	19	0
4:45 AM	0	3	1	3	0	1	7	0	0	2	2	0	0	0	0	0	6	25	79
5:00 AM	0	3	4	1	0	0	6	0	0	1	3	0	0	0	0	1	3	22	88
5:15 AM	0	0	2	8	0	0	4	0	0	0	0	1	0	1	0	0	1	17	83
5:30 AM	0	1	3	1	0	0	12	1	0	0	0	2	0	0	0	0	1	21	85
5:45 AM	0	1	5	5	0	0	7	0	0	2	1	0	0	0	0	1	2	24	84
6:00 AM	0	2	4	3	0	0	11	1	0	3	2	0	0	1	0	1	1	28	90
6:15 AM	0	2	4	4	0	0	8	1	0	3	1	0	0	0	1	2	2	26	99
6:30 AM	0	2	5	1	0	0	9	1	0	1	0	0	0	0	1	1	1	21	99
6:45 AM	0	4	6	8	0	0	8	2	0	2	0	0	0	2	1	1	1	34	109
7:00 AM	0	2	3	5	0	1	10	0	0	4	0	0	0	1	1	2	2	29	110
7:15 AM	0	3	8	1	0	0	14	2	0	5	3	1	0	1	0	2	2	40	124
7:30 AM	0	4	10	0	0	0	12	1	0	0	1	1	0	0	1	3	3	33	136
7:45 AM	0	2	5	1	0	2	10	2	0	2	4	0	0	1	1	2	2	32	134
8:00 AM	0	1	9	2	0	0	9	1	0	1	1	0	0	1	0	1	1	26	131
8:15 AM	0	7	9	4	0	0	11	0	0	3	0	0	0	1	3	3	3	41	132
8:30 AM	0	6	10	2	0	0	5	2	0	4	1	1	0	0	0	5	5	36	135
8:45 AM	0	0	6	4	0	1	9	2	0	2	1	0	0	2	0	4	4	31	134
Count Total	0	46	98	61	0	5	165	16	1	38	22	6	0	12	12	58	58	540	0
Peak Hour	0	10	19	16	0	0	36	5	0	9	3	0	0	3	3	5	5	109	0

Five-Hour Count Summaries - Bikes

Interval Start	W Schulte Rd			W Schulte Rd			Hansen Rd			Hansen Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	3	0	0	0	0	0	3	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	3	0	0	0	0	0	3	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Hansen Rd W Schulte Rd



Three-Hour Count Summaries

Interval Start		W Schulte Rd				W Schulte Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	0	61	6	0	1	20	2	0	7	5	8	0	13	2	3	128	0
4:30 PM		0	6	78	8	0	2	11	2	0	25	10	37	0	9	4	5	197	0
4:45 PM		0	2	55	11	0	10	15	2	0	12	4	9	0	7	0	2	129	0
5:00 PM		0	3	81	9	0	3	10	0	0	4	5	9	0	5	3	6	138	592
Peak Hour	All	0	11	275	34	0	16	56	6	0	48	24	63	0	34	9	16	592	0
	HV	0	6	18	17	0	4	8	0	0	8	2	3	0	2	3	5	76	0
	HV%	-	55%	7%	50%	-	25%	14%	0%	-	17%	8%	5%	-	6%	33%	31%	13%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:15 PM	14	4	1	0	19	0	0	0	0	0	0	0	0	0	0
4:30 PM	11	2	4	5	22	0	0	0	0	0	0	0	0	0	0
4:45 PM	8	2	4	2	16	0	0	0	0	0	0	0	0	0	0
5:00 PM	8	4	4	3	19	0	0	0	0	0	0	0	0	0	0
Peak Hour	41	12	13	10	76	0	0	0	0	0	0	0	0	0	0

Three-Hour Count Summaries																			
Interval Start		W Schulte Rd				W Schulte Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	2	52	17	0	4	11	1	0	9	2	4	0	7	4	4	117	0
3:15 PM		0	1	53	13	0	5	11	5	0	6	2	6	0	4	5	2	113	0
3:30 PM		0	1	71	11	0	8	15	5	0	5	2	7	0	7	7	1	140	0
3:45 PM		0	7	69	4	0	5	14	6	0	5	7	6	0	4	3	5	135	505
4:00 PM		0	1	51	5	0	2	11	2	0	5	6	3	0	6	0	3	95	483
4:15 PM		0	0	61	6	0	1	20	2	0	7	5	8	0	13	2	3	128	498
4:30 PM		0	6	78	8	0	2	11	2	0	25	10	37	0	9	4	5	197	555
4:45 PM		0	2	55	11	0	10	15	2	0	12	4	9	0	7	0	2	129	549
5:00 PM		0	3	81	9	0	3	10	0	0	4	5	9	0	5	3	6	138	592
5:15 PM		0	1	73	6	0	4	10	2	0	4	1	4	0	8	3	4	120	584
5:30 PM		0	2	71	10	0	4	18	0	0	9	3	4	0	10	3	5	139	526
5:45 PM		0	1	74	7	0	3	9	2	0	4	1	1	0	6	3	2	113	510
Count Total		0	27	789	107	0	51	155	29	0	95	48	98	0	86	37	42	1,564	0
Peak Hour	All	0	11	275	34	0	16	56	6	0	48	24	63	0	34	9	16	592	0
	HV	0	6	18	17	0	4	8	0	0	8	2	3	0	2	3	5	76	0
	HV%	-	55%	7%	50%	-	25%	14%	0%	-	17%	8%	5%	-	6%	33%	31%	13%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
3:00 PM		5	3	7	3	18	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM		10	6	3	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM		10	4	4	3	21	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM		15	5	5	3	28	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM		9	1	3	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM		14	4	1	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM		11	2	4	5	22	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM		8	2	4	2	16	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM		8	4	4	3	19	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM		5	4	4	3	16	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM		9	6	4	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM		4	2	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		108	43	44	23	218	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour		41	12	13	10	76	0	0	0	0	0	0	0	0	0	0	0	0	0

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	W Schulte Rd				W Schulte Rd				Hansen Rd				Hansen Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	2	3	0	1	2	0	0	6	1	0	0	0	2	1	18	0
3:15 PM	0	1	5	4	0	1	5	0	0	2	0	1	0	0	0	0	19	0
3:30 PM	0	1	5	4	0	1	3	0	0	3	0	1	0	2	1	0	21	0
3:45 PM	0	6	8	1	0	1	4	0	0	1	3	1	0	0	1	2	28	86
4:00 PM	0	1	4	4	0	0	1	0	0	0	2	1	0	0	0	1	14	82
4:15 PM	0	0	8	6	0	1	3	0	0	0	0	1	0	0	0	0	19	82
4:30 PM	0	4	5	2	0	1	1	0	0	4	0	0	0	1	2	2	22	83
4:45 PM	0	0	3	5	0	1	1	0	0	3	0	1	0	1	0	1	16	71
5:00 PM	0	2	2	4	0	1	3	0	0	1	2	1	0	0	1	2	19	76
5:15 PM	0	0	4	1	0	1	3	0	0	3	0	1	0	0	0	3	16	73
5:30 PM	0	1	2	6	0	1	5	0	0	3	0	1	0	0	0	0	19	70
5:45 PM	0	0	1	3	0	0	2	0	0	1	0	0	0	0	0	0	7	61
Count Total	0	16	49	43	0	10	33	0	0	27	8	9	0	4	7	12	218	0
Peak Hour	0	6	18	17	0	4	8	0	0	8	2	3	0	2	3	5	76	0

Three-Hour Count Summaries - Bikes

Interval Start	W Schulte Rd			W Schulte Rd			Hansen Rd			Hansen Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

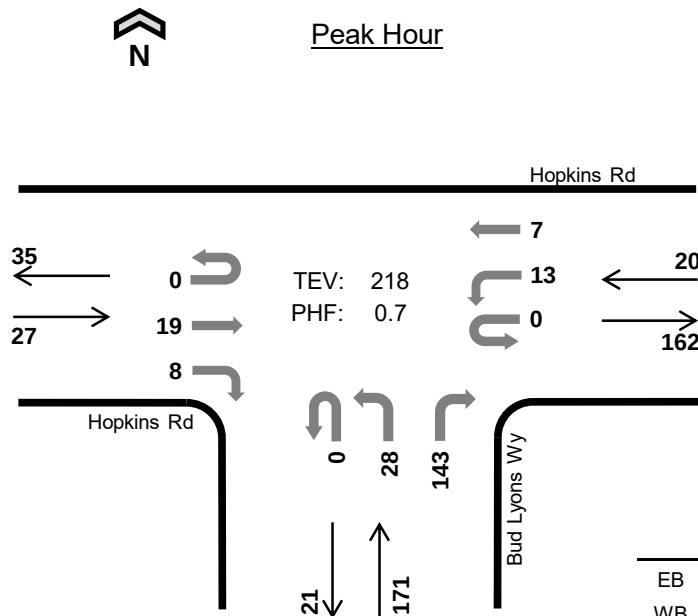
**Bud Lyons Wy
Hopkins Rd**



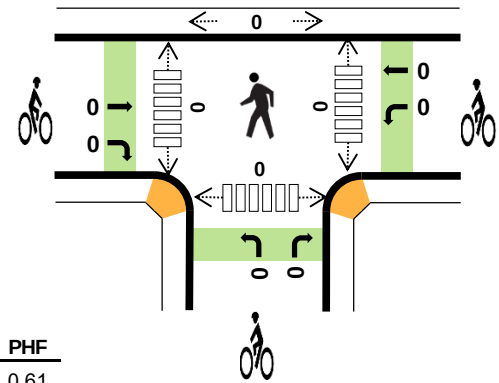
Date: 08/27/2024

Count Period: 4:00 AM to 9:00 AM

Peak Hour: 5:00 AM to 6:00 AM



	HV %:	PHF
EB	29.6%	0.61
WB	15.0%	0.45
NB	5.8%	0.68
SB	-	-
TOTAL	9.6%	0.70



Five-Hour Count Summaries

Interval Start		Hopkins Rd				Hopkins Rd				Bud Lyons Wy				n/a				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
5:00 AM		0	0	3	1	0	3	0	0	0	8	0	30	0	0	0	0	45	0
5:15 AM		0	0	3	1	0	7	4	0	0	6	0	30	0	0	0	0	51	0
5:30 AM		0	0	5	3	0	1	1	0	0	3	0	31	0	0	0	0	44	0
5:45 AM		0	0	8	3	0	2	2	0	0	11	0	52	0	0	0	0	78	218
Peak Hour	All	0	0	19	8	0	13	7	0	0	28	0	143	0	0	0	0	218	0
	HV	0	0	2	6	0	2	1	0	0	2	0	8	0	0	0	0	21	0
	HV%	-	-	11%	75%	-	15%	14%	-	-	7%	-	6%	-	-	-	-	10%	0

Note: For all three-hour count summary, see next page.

[illegible]

Five-Hour Count Summaries

Interval Start		Hopkins Rd				Hopkins Rd				Bud Lyons Wy				n/a				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM		0	0	1	2	0	5	0	0	0	3	0	2	0	0	0	0	13	0
4:15 AM		0	0	0	5	0	8	0	0	0	4	0	7	0	0	0	0	24	0
4:30 AM		0	0	2	0	0	3	1	0	0	2	0	17	0	0	0	0	25	0
4:45 AM		0	0	2	2	0	4	0	0	0	7	0	21	0	0	0	0	36	98
5:00 AM		0	0	3	1	0	3	0	0	0	8	0	30	0	0	0	0	45	130
5:15 AM		0	0	3	1	0	7	4	0	0	6	0	30	0	0	0	0	51	157
5:30 AM		0	0	5	3	0	1	1	0	0	3	0	31	0	0	0	0	44	176
5:45 AM		0	0	8	3	0	2	2	0	0	11	0	52	0	0	0	0	78	218
6:00 AM		0	0	5	1	0	6	3	0	0	5	0	14	0	0	0	0	34	207
6:15 AM		0	0	1	2	0	2	4	0	0	9	0	6	0	0	0	0	24	180
6:30 AM		0	0	2	1	0	7	2	0	0	9	0	15	0	0	0	0	36	172
6:45 AM		0	0	2	2	0	3	1	0	0	11	0	16	0	0	0	0	35	129
7:00 AM		0	0	2	1	0	4	1	0	0	13	0	25	0	0	0	0	46	141
7:15 AM		0	0	4	0	0	2	1	0	0	3	0	34	0	0	0	0	44	161
7:30 AM		0	0	1	4	0	2	1	0	0	5	0	31	0	0	0	0	44	169
7:45 AM		0	0	2	2	0	2	2	0	0	10	0	36	0	0	0	0	54	188
8:00 AM		0	0	0	1	0	4	0	0	0	3	0	19	0	0	0	0	27	169
8:15 AM		0	0	2	1	0	10	4	0	0	6	0	18	0	0	0	0	41	166
8:30 AM		0	0	3	4	0	9	3	0	0	3	0	12	0	0	0	0	34	156
8:45 AM		0	0	4	2	0	12	1	0	0	2	0	8	0	0	0	0	29	131
Count Total		0	0	52	38	0	96	31	0	0	123	0	424	0	0	0	0	764	0
Peak Hour	All	0	0	19	8	0	13	7	0	0	28	0	143	0	0	0	0	218	0
	HV	0	0	2	6	0	2	1	0	0	2	0	8	0	0	0	0	21	0
	HV%	-	-	11%	75%	-	15%	14%	-	-	7%	-	6%	-	-	-	-	10%	0

Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 AM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0
4:15 AM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0
4:30 AM	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0
4:45 AM	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0
5:00 AM	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0
5:30 AM	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0
5:45 AM	3	1	5	0	9	0	0	0	0	0	0	0	0	0	0
6:00 AM	2	3	1	0	6	0	0	0	0	0	0	0	0	0	0
6:15 AM	2	4	2	0	8	0	0	0	0	0	0	0	0	0	0
6:30 AM	3	1	3	0	7	0	0	0	0	0	0	0	0	1	1
6:45 AM	3	2	5	0	10	0	0	0	0	0	0	0	0	0	0
7:00 AM	1	1	5	0	7	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	1	9	0	12	0	0	0	0	0	0	0	0	0	0
7:30 AM	5	3	8	0	16	0	0	0	0	0	0	0	0	0	0
7:45 AM	2	0	8	0	10	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	11	10	0	22	0	0	0	0	0	0	0	0	0	0
8:30 AM	3	6	2	0	11	0	0	0	0	0	0	0	0	0	0
8:45 AM	2	3	2	0	7	0	0	0	0	0	0	0	0	0	0
Count Total	39	42	71	0	152	0	0	0	0	0	0	0	0	1	1
Peak Hr	8	3	10	0	21	0	0	0	0	0	0	0	0	0	0

Five-Hour Count Summaries - Heavy Vehicles

Interval Start	Hopkins Rd				Hopkins Rd				Bud Lyons Wy				n/a				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 AM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
4:15 AM	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0
4:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	0	4	0
4:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	3	12
5:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	0	4	14
5:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	3	14
5:30 AM	0	0	1	3	0	0	0	0	0	0	1	0	0	0	0	0	0	5	15
5:45 AM	0	0	0	3	0	0	1	0	0	0	1	0	4	0	0	0	0	9	21
6:00 AM	0	0	1	1	0	0	3	0	0	1	0	0	0	0	0	0	0	6	23
6:15 AM	0	0	0	2	0	1	3	0	0	1	0	1	0	0	0	0	0	8	28
6:30 AM	0	0	2	1	0	0	1	0	0	3	0	0	0	0	0	0	0	7	30
6:45 AM	0	0	1	2	0	1	1	0	0	2	0	3	0	0	0	0	0	10	31
7:00 AM	0	0	0	1	0	1	0	0	0	2	0	3	0	0	0	0	0	7	32
7:15 AM	0	0	2	0	0	0	1	0	0	1	0	8	0	0	0	0	0	12	36
7:30 AM	0	0	1	4	0	2	1	0	0	2	0	6	0	0	0	0	0	16	45
7:45 AM	0	0	0	2	0	0	0	0	0	4	0	4	0	0	0	0	0	10	45
8:00 AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	3	41
8:15 AM	0	0	0	1	0	7	4	0	0	3	0	7	0	0	0	0	0	22	51
8:30 AM	0	0	1	2	0	4	2	0	0	0	0	2	0	0	0	0	0	11	46
8:45 AM	0	0	1	1	0	3	0	0	0	1	0	1	0	0	0	0	0	7	43
Count Total	0	0	13	26	0	25	17	0	0	24	0	47	0	0	0	0	0	152	0
Peak Hour	0	0	2	6	0	2	1	0	0	2	0	8	0	0	0	0	0	21	0

Five-Hour Count Summaries - Bikes

Interval Start	Hopkins Rd			Hopkins Rd			Bud Lyons Wy			n/a			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Bud Lyons Wy Hopkins Rd

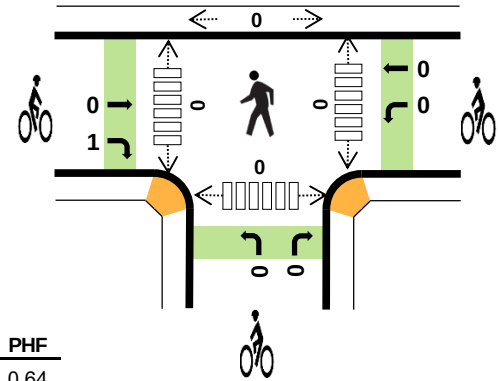
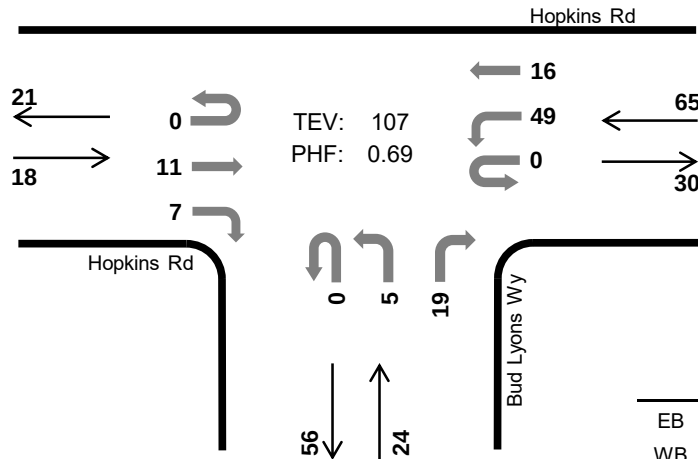


Peak Hour

Date: 08/27/2024

Count Period: 3:00 PM to 6:00 PM

Peak Hour: 3:45 PM to 4:45 PM



	HV %:	PHF
EB	72.2%	0.64
WB	1.5%	0.54
NB	45.8%	0.86
SB	-	-
TOTAL	23.4%	0.69

Three-Hour Count Summaries

Interval Start		Hopkins Rd				Hopkins Rd				Bud Lyons Wy				n/a				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:45 PM		0	0	5	2	0	5	1	0	0	3	0	3	0	0	0	0	19	0
4:00 PM		0	0	2	2	0	8	3	0	0	1	0	5	0	0	0	0	21	0
4:15 PM		0	0	3	1	0	21	9	0	0	0	0	5	0	0	0	0	39	0
4:30 PM		0	0	1	2	0	15	3	0	0	1	0	6	0	0	0	0	28	107
Peak Hour	All	0	0	11	7	0	49	16	0	0	5	0	19	0	0	0	0	107	0
	HV	0	0	8	5	0	0	1	0	0	1	0	10	0	0	0	0	25	0
	HV%	-	-	73%	71%	-	0%	6%	-	-	20%	-	53%	-	-	-	-	23%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:45 PM	5	0	3	0	8	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	1	4	0	6	1	0	0	0	1	0	0	0	0	0
4:15 PM	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0
4:30 PM	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0
Peak Hour	13	1	11	0	25	1	0	0	0	1	0	0	0	0	0

Three-Hour Count Summaries

Interval Start		Hopkins Rd				Hopkins Rd				Bud Lyons Wy				n/a				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	0	3	0	0	8	4	0	0	3	0	8	0	0	0	0	26	0
3:15 PM		0	0	1	1	0	3	0	0	0	1	0	1	0	0	0	0	7	0
3:30 PM		0	0	2	1	0	5	3	0	0	2	0	2	0	0	0	0	15	0
3:45 PM		0	0	5	2	0	5	1	0	0	3	0	3	0	0	0	0	19	67
4:00 PM		0	0	2	2	0	8	3	0	0	1	0	5	0	0	0	0	21	62
4:15 PM		0	0	3	1	0	21	9	0	0	0	0	5	0	0	0	0	39	94
4:30 PM		0	0	1	2	0	15	3	0	0	1	0	6	0	0	0	0	28	107
4:45 PM		0	0	1	2	0	5	1	0	0	2	0	2	0	0	0	0	13	101
5:00 PM		0	0	3	1	0	4	1	0	0	1	0	5	0	0	0	0	15	95
5:15 PM		0	0	1	1	0	5	0	0	0	2	0	0	0	0	0	0	9	65
5:30 PM		0	0	3	3	0	5	1	0	0	4	0	2	0	0	0	0	18	55
5:45 PM		0	0	2	0	0	4	0	0	0	0	0	4	0	0	0	0	10	52
Count Total		0	0	27	16	0	88	26	0	0	20	0	43	0	0	0	0	220	0
Peak Hour	All	0	0	11	7	0	49	16	0	0	5	0	19	0	0	0	0	107	0
	HV	0	0	8	5	0	0	1	0	0	1	0	10	0	0	0	0	25	0
	HV%	-	-	73%	71%	-	0%	6%	-	-	20%	-	53%	-	-	-	-	23%	0

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	2	1	3	0	6	0	0	0	0	0	0	0	0	0	0
3:15 PM	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0
3:30 PM	1	1	4	0	6	0	0	0	0	0	0	0	0	0	0
3:45 PM	5	0	3	0	8	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	1	4	0	6	1	0	0	0	1	0	0	0	0	0
4:15 PM	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0
4:30 PM	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0
5:00 PM	3	2	4	0	9	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
5:30 PM	3	1	1	0	5	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Count Total	25	7	28	0	60	1	0	0	0	1	0	0	0	0	0
Peak Hr	13	1	11	0	25	1	0	0	0	1	0	0	0	0	0

Three-Hour Count Summaries - Heavy Vehicles

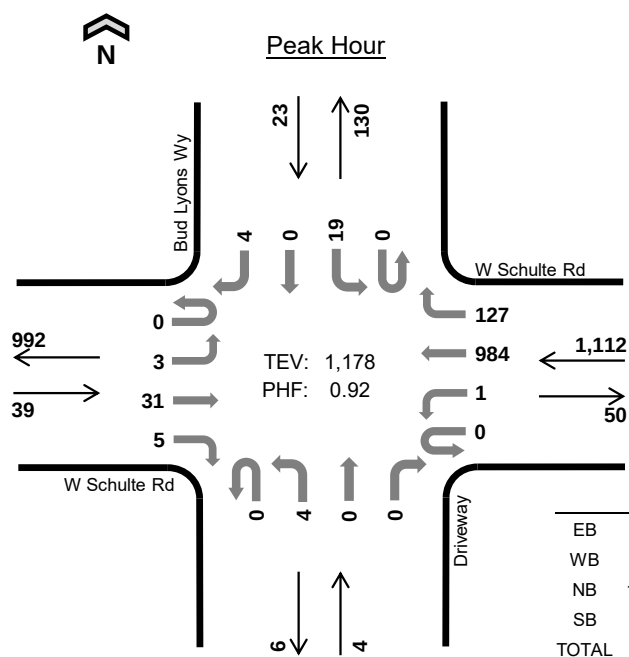
Interval Start	Hopkins Rd				Hopkins Rd				Bud Lyons Wy				n/a				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	2	0	0	1	0	0	0	1	0	2	0	0	0	0	6	0
3:15 PM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	4	0
3:30 PM	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	0	6	0
3:45 PM	0	0	4	1	0	0	0	0	0	1	0	2	0	0	0	0	8	24
4:00 PM	0	0	0	1	0	0	1	0	0	0	0	4	0	0	0	0	6	24
4:15 PM	0	0	3	1	0	0	0	0	0	0	0	1	0	0	0	0	5	25
4:30 PM	0	0	1	2	0	0	0	0	0	0	0	3	0	0	0	0	6	25
4:45 PM	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	3	20
5:00 PM	0	0	2	1	0	1	1	0	0	1	0	3	0	0	0	0	9	23
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	19
5:30 PM	0	0	1	2	0	1	0	0	0	1	0	0	0	0	0	0	5	18
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	16
Count Total	0	0	14	11	0	4	3	0	0	8	0	20	0	0	0	0	60	0
Peak Hour	0	0	8	5	0	0	1	0	0	1	0	10	0	0	0	0	25	0

Three-Hour Count Summaries - Bikes

Interval Start	Hopkins Rd			Hopkins Rd			Bud Lyons Wy			n/a			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	0	0	1	0	0	0	0	0	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Bud Lyons Wy W Schulte Rd



	HV %:	PHF
EB	43.6%	0.81
WB	3.7%	0.93
NB	100.0%	0.50
SB	39.1%	0.58
TOTAL	6.0%	0.92

Five-Hour Count Summaries

Interval Start		W Schulte Rd				W Schulte Rd				Driveway				Bud Lyons Wy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
5:45 AM		0	2	9	1	0	0	213	61	0	0	0	0	0	3	0	0	289	0
6:00 AM		0	0	8	2	0	0	251	21	0	1	0	0	0	7	0	1	291	0
6:15 AM		0	1	5	2	0	0	251	17	0	1	0	0	0	1	0	1	279	0
6:30 AM		0	0	9	0	0	1	269	28	0	2	0	0	0	8	0	2	319	1,178
Peak Hour	All	0	3	31	5	0	1	984	127	0	4	0	0	0	19	0	4	1,178	0
	HV	0	3	9	5	0	1	33	7	0	4	0	0	0	6	0	3	71	0
	HV%	-	100%	29%	100%	-	100%	3%	6%	-	100%	-	-	-	32%	-	75%	6%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
5:45 AM	5	9	0	2	16	0	1	0	0	1	0	0	0	0	0
6:00 AM	4	11	1	2	18	0	0	0	0	0	0	0	0	0	0
6:15 AM	4	9	1	1	15	0	0	0	0	0	0	0	0	0	0
6:30 AM	4	12	2	4	22	0	0	0	0	0	0	0	0	0	0
Peak Hour	17	41	4	9	71	0	1	0	0	1	0	0	0	0	0

Five-Hour Count Summaries																			
Interval Start		W Schulte Rd				W Schulte Rd				Driveway				Bud Lyons Wy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	4:00 AM	0	0	5	1	0	0	51	5	0	1	0	0	0	5	0	2	70	0
	4:15 AM	0	1	7	1	0	0	73	9	0	0	0	0	0	9	0	3	103	0
	4:30 AM	0	3	17	0	0	0	151	18	0	1	0	0	0	3	0	2	195	0
	4:45 AM	0	2	10	1	0	0	211	28	0	0	0	0	0	4	0	3	259	627
	5:00 AM	0	4	12	0	0	0	213	32	0	1	0	0	0	2	0	1	265	822
	5:15 AM	0	4	4	1	0	0	262	32	0	0	0	0	0	6	0	0	309	1,028
	5:30 AM	0	0	11	1	0	0	219	40	0	2	0	0	0	5	0	2	280	1,113
	5:45 AM	0	2	9	1	0	0	213	61	0	0	0	0	0	3	0	0	289	1,143
	6:00 AM	0	0	8	2	0	0	251	21	0	1	0	0	0	7	0	1	291	1,169
	6:15 AM	0	1	5	2	0	0	251	17	0	1	0	0	0	1	0	1	279	1,139
	6:30 AM	0	0	9	0	0	1	269	28	0	2	0	0	0	8	0	2	319	1,178
	6:45 AM	0	1	13	3	0	0	228	28	0	3	0	0	0	2	0	2	280	1,169
	7:00 AM	0	1	10	1	0	0	215	41	0	1	0	0	0	5	0	1	275	1,153
	7:15 AM	0	2	10	1	0	0	170	36	0	3	0	0	0	2	0	0	224	1,098
	7:30 AM	0	3	10	5	0	1	180	37	0	0	0	1	0	4	0	3	244	1,023
	7:45 AM	0	4	17	1	0	0	207	42	0	2	0	0	0	5	0	1	279	1,022
	8:00 AM	0	4	17	4	0	0	190	26	0	4	1	0	0	3	0	1	250	997
	8:15 AM	0	7	16	2	0	0	169	17	0	3	0	0	0	8	0	3	225	998
	8:30 AM	0	6	17	2	0	0	125	9	0	1	0	0	0	11	0	2	173	927
	8:45 AM	0	1	15	4	0	0	93	12	0	4	0	0	0	9	0	6	144	792
Count Total		0	46	222	33	0	2	3,741	539	0	30	1	1	0	102	0	36	4,753	0
Peak Hour	All	0	3	31	5	0	1	984	127	0	4	0	0	0	19	0	4	1,178	0
	HV	0	3	9	5	0	1	33	7	0	4	0	0	0	6	0	3	71	0
	HV%	-	100%	29%	100%	-	100%	3%	6%	-	100%	-	-	-	32%	-	75%	6%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	4:00 AM	1	2	1	1	5	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 AM	2	2	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 AM	2	4	1	2	9	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 AM	1	5	0	3	9	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 AM	4	6	1	1	12	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 AM	4	4	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 AM	5	11	2	4	22	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 AM	5	9	0	2	16	0	1	0	0	1	0	0	0	0	0	0	0	
	6:00 AM	4	11	1	2	18	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	4	9	1	1	15	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	4	12	2	4	22	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	9	10	3	3	25	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	5	11	1	2	19	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	7	21	3	0	31	0	0	0	0	0	0	0	0	0	1	0	1	
	7:30 AM	11	18	0	7	36	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	6	15	2	3	26	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	10	9	5	2	26	2	0	0	0	0	2	0	0	0	0	0	0	
	8:15 AM	12	9	3	7	31	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	11	2	1	6	20	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	8	5	4	5	22	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total		115	175	31	58	379	2	1	0	0	3	0	0	1	0	0	1	0	1
Peak Hour		17	41	4	9	71	0	1	0	0	1	0	0	0	0	0	0	0	0

Five-Hour Count Summaries - Heavy Vehicles

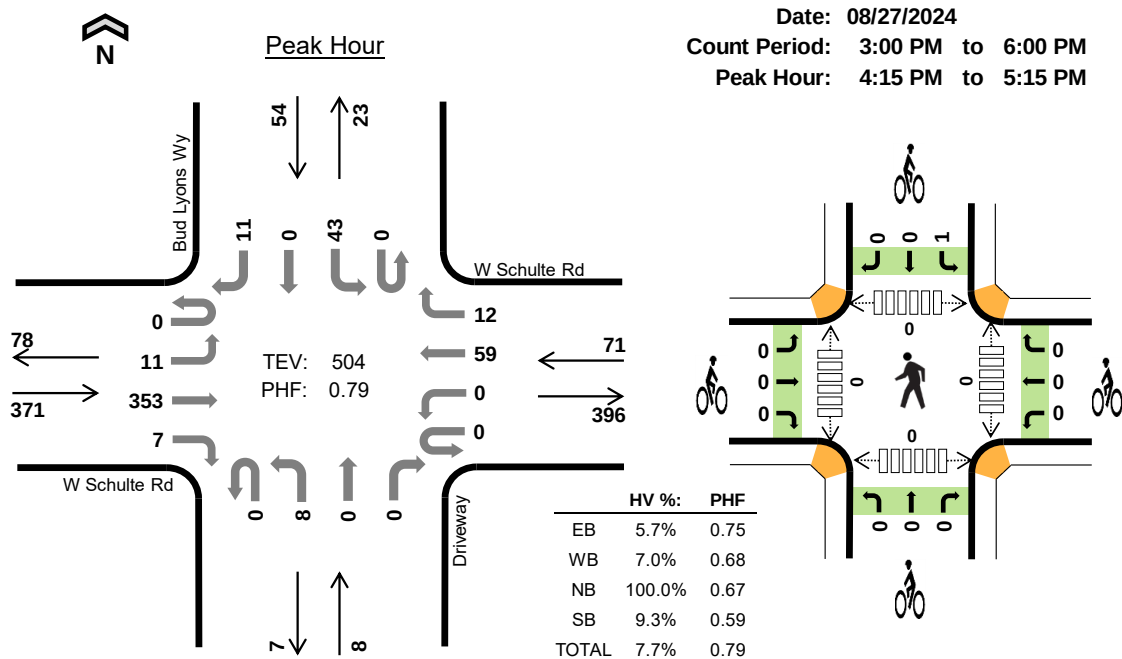
Interval Start	W Schulte Rd				W Schulte Rd				Driveway				Bud Lyons Wy				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 AM	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	1	5	0
4:15 AM	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	2	6	0
4:30 AM	0	1	1	0	0	0	3	1	0	1	0	0	0	0	0	0	2	9	0
4:45 AM	0	0	0	1	0	0	4	1	0	0	0	0	0	0	1	0	2	9	29
5:00 AM	0	2	2	0	0	0	5	1	0	1	0	0	0	0	0	0	1	12	36
5:15 AM	0	2	1	1	0	0	4	0	0	0	0	0	0	0	1	0	0	9	39
5:30 AM	0	0	4	1	0	0	10	1	0	2	0	0	0	0	2	0	2	22	52
5:45 AM	0	2	2	1	0	0	7	2	0	0	0	0	0	0	2	0	0	16	59
6:00 AM	0	0	2	2	0	0	10	1	0	1	0	0	0	0	1	0	1	18	65
6:15 AM	0	1	1	2	0	0	8	1	0	1	0	0	0	0	0	0	1	15	71
6:30 AM	0	0	4	0	0	1	8	3	0	2	0	0	0	0	3	0	1	22	71
6:45 AM	0	1	5	3	0	0	6	4	0	3	0	0	0	0	1	0	2	25	80
7:00 AM	0	1	3	1	0	0	8	3	0	1	0	0	0	0	1	0	1	19	81
7:15 AM	0	2	4	1	0	0	14	7	0	3	0	0	0	0	0	0	0	31	97
7:30 AM	0	0	6	5	0	0	10	8	0	0	0	0	0	0	4	0	3	36	111
7:45 AM	0	3	2	1	0	0	11	4	0	2	0	0	0	0	2	0	1	26	112
8:00 AM	0	2	4	4	0	0	6	3	0	4	1	0	0	0	1	0	1	26	119
8:15 AM	0	5	5	2	0	0	5	4	0	3	0	0	0	0	4	0	3	31	119
8:30 AM	0	2	7	2	0	0	2	0	0	1	0	0	0	0	4	0	2	20	103
8:45 AM	0	1	4	3	0	0	4	1	0	4	0	0	0	0	1	0	4	22	99
Count Total	0	25	58	32	0	1	128	46	0	30	1	0	0	0	28	0	30	379	0
Peak Hour	0	3	9	5	0	1	33	7	0	4	0	0	0	0	6	0	3	71	0

Five-Hour Count Summaries - Bikes

Interval Start	W Schulte Rd			W Schulte Rd			Driveway			Bud Lyons Wy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	1
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	2	0	0	0	1	0	0	0	0	0	0	3	0
Peak Hour	0	0	0	0	0	1	0	0	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Bud Lyons Wy W Schulte Rd



Three-Hour Count Summaries

Interval Start		W Schulte Rd				W Schulte Rd				Driveway				Bud Lyons Wy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	3	80	3	0	0	12	2	0	3	0	0	0	16	0	7	126	0
4:30 PM		0	3	119	1	0	0	12	4	0	2	0	0	0	17	0	1	159	0
4:45 PM		0	2	71	2	0	0	23	3	0	2	0	0	0	7	0	2	112	0
5:00 PM		0	3	83	1	0	0	12	3	0	1	0	0	0	3	0	1	107	504
Peak Hour	All	0	11	353	7	0	0	59	12	0	8	0	0	0	43	0	11	504	0
	HV	0	7	7	7	0	0	3	2	0	8	0	0	0	4	0	1	39	0
	HV%	-	64%	2%	100%	-	-	5%	17%	-	100%	-	-	-	9%	-	9%	8%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:15 PM	8	1	3	1	13	0	0	0	1	1	0	0	0	0	0
4:30 PM	6	0	2	1	9	0	0	0	0	0	0	0	0	0	0
4:45 PM	4	1	2	1	8	0	0	0	0	0	0	0	0	0	0
5:00 PM	3	3	1	2	9	0	0	0	0	0	0	0	0	0	0
Peak Hour	21	5	8	5	39	0	0	0	1	1	0	0	0	0	0

Three-Hour Count Summaries																			
Interval Start		W Schulte Rd				W Schulte Rd				Driveway				Bud Lyons Wy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	1	60	2	0	0	12	9	0	2	0	0	0	7	0	3	96	0
3:15 PM		0	1	65	2	0	0	14	2	0	1	0	0	0	7	0	2	94	0
3:30 PM		0	1	88	3	0	0	24	2	0	2	0	0	0	10	0	3	133	0
3:45 PM		0	2	73	3	0	0	20	5	0	3	0	0	0	7	0	0	113	436
4:00 PM		0	3	58	1	0	0	10	2	0	1	0	1	0	11	0	2	89	429
4:15 PM		0	3	80	3	0	0	12	2	0	3	0	0	0	16	0	7	126	461
4:30 PM		0	3	119	1	0	0	12	4	0	2	0	0	0	17	0	1	159	487
4:45 PM		0	2	71	2	0	0	23	3	0	2	0	0	0	7	0	2	112	486
5:00 PM		0	3	83	1	0	0	12	3	0	1	0	0	0	3	0	1	107	504
5:15 PM		0	1	89	2	0	0	14	1	0	1	0	0	0	7	0	0	115	493
5:30 PM		0	0	83	5	0	0	17	5	0	3	0	0	0	6	0	2	121	455
5:45 PM		0	2	83	0	0	0	13	2	0	1	0	1	0	5	0	0	107	450
Count Total		0	22	952	25	0	0	183	40	0	22	0	2	0	103	0	23	1,372	0
Peak Hour	All	0	11	353	7	0	0	59	12	0	8	0	0	0	43	0	11	504	0
	HV	0	7	7	7	0	0	3	2	0	8	0	0	0	4	0	1	39	0
	HV%	-	64%	2%	100%	-	-	5%	17%	-	100%	-	-	-	9%	-	9%	8%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
3:00 PM		4	1	2	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM		6	7	1	2	16	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM		6	2	2	2	12	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM		10	4	3	1	18	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM		5	0	1	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM		8	1	3	1	13	0	0	0	1	1	0	0	0	0	0	0	0	0
4:30 PM		6	0	2	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM		4	1	2	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM		3	3	1	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM		5	3	1	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM		3	2	2	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM		1	2	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		61	26	21	14	122	0	0	0	1	1	0	0	0	0	0	0	0	0
Peak Hour		21	5	8	5	39	0	0	0	1	1	0	0	0	0	0	0	0	0

Three-Hour Count Summaries - Heavy Vehicles

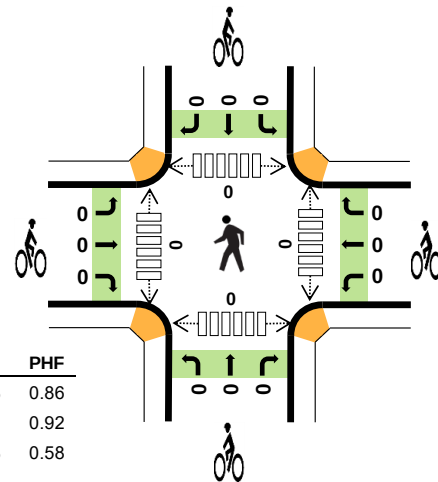
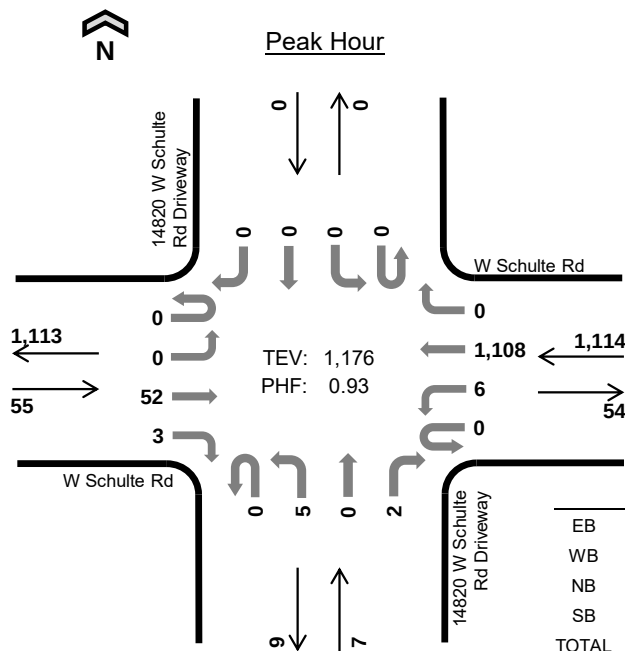
Interval Start	W Schulte Rd				W Schulte Rd				Driveway				Bud Lyons Wy				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
3:00 PM	0	1	1	2	0	0	0	1	0	2	0	0	0	0	0	0	1	8	0
3:15 PM	0	1	3	2	0	0	5	2	0	1	0	0	0	0	1	0	1	16	0
3:30 PM	0	1	3	2	0	0	0	2	0	2	0	0	0	0	0	0	2	12	0
3:45 PM	0	2	5	3	0	0	2	2	0	3	0	0	0	0	1	0	0	18	54
4:00 PM	0	3	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	7	53
4:15 PM	0	1	4	3	0	0	1	0	0	3	0	0	0	0	1	0	0	13	50
4:30 PM	0	3	2	1	0	0	0	0	0	2	0	0	0	0	1	0	0	9	47
4:45 PM	0	1	1	2	0	0	1	0	0	2	0	0	0	0	1	0	0	8	37
5:00 PM	0	2	0	1	0	0	1	2	0	1	0	0	0	0	1	0	1	9	39
5:15 PM	0	1	2	2	0	0	3	0	0	1	0	0	0	0	0	0	0	9	35
5:30 PM	0	0	0	3	0	0	2	0	0	2	0	0	0	0	0	0	2	9	35
5:45 PM	0	0	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	4	31
Count Total	0	16	23	22	0	0	16	10	0	21	0	0	0	0	7	0	7	122	0
Peak Hour	0	7	7	7	0	0	3	2	0	8	0	0	0	0	4	0	1	39	0

Three-Hour Count Summaries - Bikes

Interval Start	W Schulte Rd			W Schulte Rd			Driveway			Bud Lyons Wy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	1	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

14820 W Schulte Rd Driveway W Schulte Rd



	HV %:	PHF
EB	29.1%	0.86
WB	2.5%	0.92
NB	57.1%	0.58
SB	-	-
TOTAL	4.1%	0.93

Five-Hour Count Summaries

Interval Start		W Schulte Rd				W Schulte Rd				14820 W Schulte Rd Driveway				14820 W Schulte Rd Driveway				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
5:00 AM		0	0	14	1	0	2	264	0	0	0	0	1	0	0	0	0	282	0
5:15 AM		0	0	11	0	0	1	301	0	0	2	0	1	0	0	0	0	316	0
5:30 AM		0	0	16	0	0	3	260	0	0	3	0	0	0	0	0	0	282	0
5:45 AM		0	0	11	2	0	0	283	0	0	0	0	0	0	0	0	0	296	1,176
Peak Hour	All	0	0	52	3	0	6	1,108	0	0	5	0	2	0	0	0	0	1,176	0
	HV	0	0	15	1	0	1	27	0	0	4	0	0	0	0	0	0	48	0
	HV%	-	-	29%	33%	-	17%	2%	-	-	80%	-	0%	-	-	-	-	4%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
5:00 AM	3	5	0	0	8	0	0	0	0	0	0	0	0	0	0
5:15 AM	2	3	1	0	6	0	0	0	0	0	0	0	0	0	0
5:30 AM	6	10	3	0	19	0	0	0	0	0	0	0	0	0	0
5:45 AM	5	10	0	0	15	0	0	0	0	0	0	0	0	0	0
Peak Hour	16	28	4	0	48	0	0	0	0	0	0	0	0	0	0

Five-Hour Count Summaries																			
Interval Start		W Schulte Rd				W Schulte Rd				14820 W Schulte Rd Driveway				14820 W Schulte Rd Driveway				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	4:00 AM	0	0	10	0	0	0	54	0	0	1	0	0	0	0	0	0	65	0
	4:15 AM	0	0	13	2	0	1	86	0	0	0	0	0	0	0	0	0	102	0
	4:30 AM	0	0	19	1	0	1	181	0	0	2	0	0	0	0	0	0	204	0
	4:45 AM	0	0	11	2	0	1	232	0	0	1	0	0	0	0	0	0	247	618
	5:00 AM	0	0	14	1	0	2	264	0	0	0	0	1	0	0	0	0	282	835
	5:15 AM	0	0	11	0	0	1	301	0	0	2	0	1	0	0	0	0	316	1,049
	5:30 AM	0	0	16	0	0	3	260	0	0	3	0	0	0	0	0	0	282	1,127
	5:45 AM	0	0	11	2	0	0	283	0	0	0	0	0	0	0	0	0	296	1,176
	6:00 AM	0	0	13	0	0	2	255	0	0	1	0	0	0	0	0	0	271	1,165
	6:15 AM	0	0	6	0	0	0	280	0	0	0	1	2	0	1	0	0	290	1,139
	6:30 AM	0	0	18	3	0	2	290	0	0	1	1	1	0	0	0	0	316	1,173
	6:45 AM	0	0	16	0	0	5	255	0	0	1	0	4	0	0	1	0	282	1,159
	7:00 AM	0	0	16	1	1	4	235	0	0	2	0	3	0	0	0	0	262	1,150
	7:15 AM	0	0	12	0	0	0	205	0	0	0	0	1	0	0	0	0	218	1,078
	7:30 AM	0	0	15	0	0	1	234	0	0	0	0	0	0	0	0	0	250	1,012
	7:45 AM	0	0	24	0	0	1	241	0	0	1	0	1	0	0	0	0	268	998
	8:00 AM	0	0	21	0	0	0	202	0	0	2	0	0	0	0	0	0	225	961
	8:15 AM	0	0	23	1	0	2	184	0	0	0	0	0	0	0	0	0	210	953
	8:30 AM	0	0	25	2	0	0	131	0	0	0	0	0	0	0	0	0	158	861
	8:45 AM	0	0	24	0	0	0	102	0	0	2	0	0	0	0	0	0	128	721
Count Total		0	0	318	15	1	26	4,275	0	0	19	2	14	0	1	1	0	4,672	0
Peak Hour	All	0	0	52	3	0	6	1,108	0	0	5	0	2	0	0	0	0	1,176	0
	HV	0	0	15	1	0	1	27	0	0	4	0	0	0	0	0	0	48	0
	HV%	-	-	29%	33%	-	17%	2%	-	-	80%	-	0%	-	-	-	-	4%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	4:00 AM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 AM	1	4	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 AM	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 AM	3	5	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 AM	2	3	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 AM	6	10	3	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 AM	5	10	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 AM	3	7	1	0	11	0	0	0	0	0	0	0	1	0	0	0	0	1
	6:15 AM	1	9	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	10	10	1	0	21	0	0	0	0	0	0	0	2	0	2	0	0	4
	6:45 AM	6	9	3	1	19	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	4	11	2	0	17	0	0	0	0	0	0	0	2	0	1	0	0	3
	7:15 AM	5	12	0	0	17	0	1	0	0	1	0	1	0	0	0	0	0	0
	7:30 AM	10	14	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	4	9	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	5	6	1	0	12	2	0	0	0	0	0	2	0	0	0	0	0	0
	8:15 AM	9	7	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	11	3	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	7	5	2	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		93	140	17	1	251	2	1	0	0	3			5	0	3	0	8	
Peak Hour		16	28	4	0	48	0	0	0	0	0			0	0	0	0	0	

Five-Hour Count Summaries - Heavy Vehicles

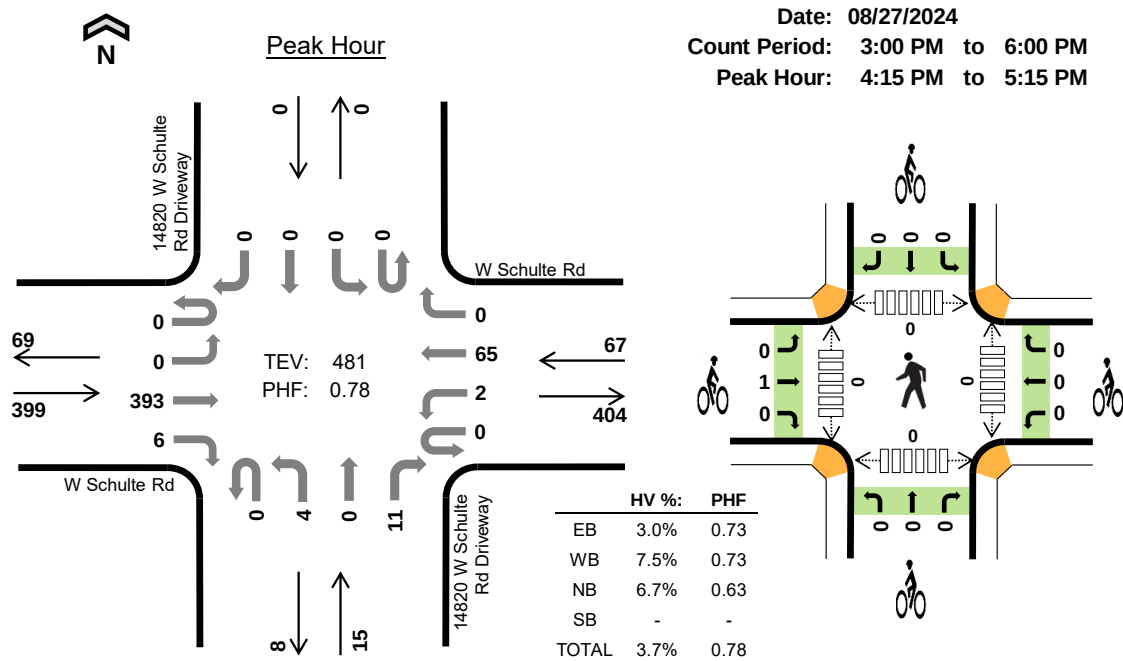
Interval Start	W Schulte Rd				W Schulte Rd				14820 W Schulte Rd Driveway				14820 W Schulte Rd Driveway				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 AM	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	3	0
4:15 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
4:30 AM	0	0	1	0	0	0	4	0	0	1	0	0	0	0	0	0	0	6	0
4:45 AM	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	4	15
5:00 AM	0	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	8	20
5:15 AM	0	0	2	0	0	0	3	0	0	1	0	0	0	0	0	0	0	6	24
5:30 AM	0	0	6	0	0	1	9	0	0	3	0	0	0	0	0	0	0	19	37
5:45 AM	0	0	4	1	0	0	10	0	0	0	0	0	0	0	0	0	0	15	48
6:00 AM	0	0	3	0	0	0	7	0	0	1	0	0	0	0	0	0	0	11	51
6:15 AM	0	0	1	0	0	0	9	0	0	0	0	0	0	0	0	0	0	10	55
6:30 AM	0	0	7	3	0	0	10	0	0	0	0	1	0	0	0	0	0	21	57
6:45 AM	0	0	6	0	0	0	9	0	0	1	0	0	2	0	0	1	0	19	61
7:00 AM	0	0	4	0	0	1	10	0	0	0	0	0	2	0	0	0	0	17	67
7:15 AM	0	0	5	0	0	0	12	0	0	0	0	0	0	0	0	0	0	17	74
7:30 AM	0	0	10	0	0	0	14	0	0	0	0	0	0	0	0	0	0	24	77
7:45 AM	0	0	4	0	0	0	9	0	0	0	0	0	0	0	0	0	0	13	71
8:00 AM	0	0	5	0	0	0	6	0	0	1	0	0	0	0	0	0	0	12	66
8:15 AM	0	0	9	0	0	0	7	0	0	0	0	0	0	0	0	0	0	16	65
8:30 AM	0	0	9	2	0	0	3	0	0	0	0	0	0	0	0	0	0	14	55
8:45 AM	0	0	7	0	0	0	5	0	0	2	0	0	0	0	0	0	0	14	56
Count Total	0	0	87	6	0	2	138	0	0	12	0	5	0	0	0	1	0	251	0
Peak Hour	0	0	15	1	0	1	27	0	0	4	0	0	0	0	0	0	0	48	0

Five-Hour Count Summaries - Bikes

Interval Start	W Schulte Rd			W Schulte Rd			14820 W Schulte Rd Driveway			14820 W Schulte Rd Driveway			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	2	0	0	1	0	0	0	0	0	0	0	3	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

14820 W Schulte Rd Driveway W Schulte Rd



Three-Hour Count Summaries

Interval Start		W Schulte Rd				W Schulte Rd				14820 W Schulte Rd Driveway				14820 W Schulte Rd Driveway				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	0	92	2	0	2	15	0	0	0	0	5	0	0	0	0	116	0
4:30 PM		0	0	134	2	0	0	12	0	0	3	0	3	0	0	0	0	154	0
4:45 PM		0	0	83	1	0	0	23	0	0	1	0	0	0	0	0	0	108	0
5:00 PM		0	0	84	1	0	0	15	0	0	0	0	3	0	0	0	0	103	481
Peak Hour	All	0	0	393	6	0	2	65	0	0	4	0	11	0	0	0	0	481	0
	HV	0	0	9	3	0	0	5	0	0	0	0	1	0	0	0	0	18	0
	HV%	-	-	2%	50%	-	0%	8%	-	-	0%	-	9%	-	-	-	-	4%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:15 PM	5	1	1	0	7	1	0	0	0	1	0	0	0	0	0
4:30 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0
4:45 PM	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0
5:00 PM	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0
Peak Hour	12	5	1	0	18	1	0	0	0	1	0	0	0	0	0

Three-Hour Count Summaries																			
Interval Start		W Schulte Rd				W Schulte Rd				14820 W Schulte Rd Driveway				14820 W Schulte Rd Driveway				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	3:00 PM	0	0	68	1	0	0	20	0	0	1	1	1	0	0	1	0	93	0
	3:15 PM	0	0	69	1	0	1	16	0	0	0	0	2	0	0	2	0	91	0
	3:30 PM	0	0	103	0	0	1	25	0	0	0	0	5	0	0	0	0	134	0
	3:45 PM	0	0	76	3	0	0	25	0	0	0	0	0	0	0	0	0	104	422
	4:00 PM	0	0	69	2	0	0	11	0	0	0	0	2	0	0	0	0	84	413
	4:15 PM	0	0	92	2	0	2	15	0	0	0	0	5	0	0	0	0	116	438
	4:30 PM	0	0	134	2	0	0	12	0	0	3	0	3	0	0	0	0	154	458
	4:45 PM	0	0	83	1	0	0	23	0	0	1	0	0	0	0	0	0	108	462
	5:00 PM	0	0	84	1	0	0	15	0	0	0	0	3	0	0	0	0	103	481
	5:15 PM	0	0	88	1	0	1	17	0	0	1	0	0	0	0	0	0	108	473
	5:30 PM	0	0	97	0	0	1	17	0	0	2	0	1	0	0	0	0	118	437
	5:45 PM	0	0	85	2	0	0	17	0	0	0	0	4	0	0	0	0	108	437
Count Total		0	0	1,048	16	0	6	213	0	0	8	1	26	0	0	3	0	1,321	0
Peak Hour	All	0	0	393	6	0	2	65	0	0	4	0	11	0	0	0	0	481	0
	HV	0	0	9	3	0	0	5	0	0	0	0	1	0	0	0	0	18	0
	HV%	-	-	2%	50%	-	0%	8%	-	-	0%	-	9%	-	-	-	-	4%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	3:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	4	6	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	7	4	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	5	1	1	0	7	1	0	0	0	0	1	0	0	0	0	0	0	0
	4:30 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	2	3	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		33	24	1	0	58	1	0	0	0	1	0	0	0	0	0	0	0	0
Peak Hour		12	5	1	0	18	1	0	0	0	1	0	0	0	0	0	0	0	0

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	W Schulte Rd				W Schulte Rd				14820 W Schulte Rd Driveway				14820 W Schulte Rd Driveway				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
3:15 PM	0	0	4	0	0	0	6	0	0	0	0	0	0	0	0	0	10	0
3:30 PM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	6	0
3:45 PM	0	0	4	3	0	0	4	0	0	0	0	0	0	0	0	0	11	28
4:00 PM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	30
4:15 PM	0	0	3	2	0	0	1	0	0	0	0	1	0	0	0	0	7	27
4:30 PM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	24
4:45 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	17
5:00 PM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	18
5:15 PM	0	0	1	1	0	0	3	0	0	0	0	0	0	0	0	0	5	16
5:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	15
5:45 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	13
Count Total	0	0	25	8	0	0	24	0	0	0	0	1	0	0	0	0	58	0
Peak Hour	0	0	9	3	0	0	5	0	0	0	0	1	0	0	0	0	18	0

Three-Hour Count Summaries - Bikes

Interval Start	W Schulte Rd			W Schulte Rd			14820 W Schulte Rd Driveway			14820 W Schulte Rd Driveway			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	0	1	0	0	0	0	0	0	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Lammers Rd Eleventh St

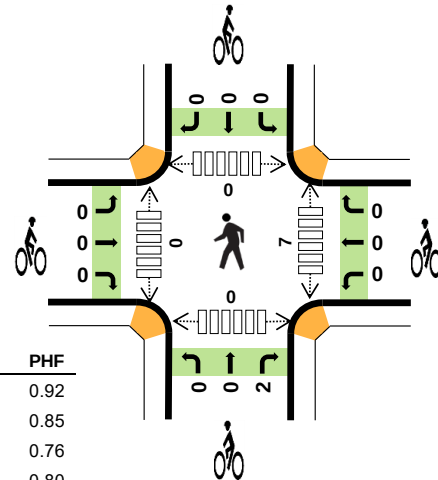
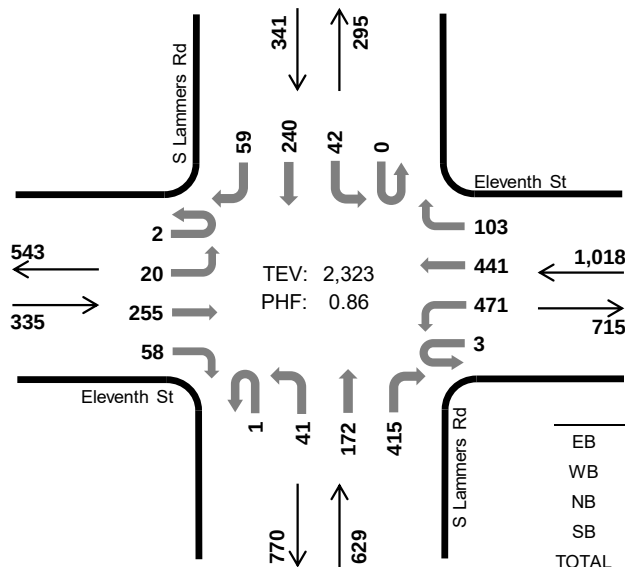


Peak Hour

Date: 08/27/2024

Count Period: 4:00 AM to 9:00 AM

Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	3.3%	0.92
WB	2.0%	0.85
NB	3.0%	0.76
SB	2.9%	0.80
TOTAL	2.6%	0.86

Five-Hour Count Summaries

Interval Start		Eleventh St				Eleventh St				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM		0	4	63	16	0	128	106	21	0	9	42	56	0	13	50	14	522	0
8:15 AM		0	6	61	24	0	150	113	35	0	13	47	104	0	10	78	12	653	0
8:30 AM		0	4	60	11	1	146	103	33	0	12	44	152	0	8	86	13	673	0
8:45 AM		2	6	71	7	2	47	119	14	1	7	39	103	0	11	26	20	475	2,323
Peak Hour	All	2	20	255	58	3	471	441	103	1	41	172	415	0	42	240	59	2,323	0
	HV	0	0	8	3	0	10	8	2	0	2	3	14	0	1	6	3	60	0
	HV%	0%	0%	3%	5%	0%	2%	2%	2%	0%	5%	2%	3%	-	2%	3%	5%	3%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
8:00 AM	3	6	1	4	14	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	7	5	2	15	0	0	2	0	2	1	0	0	0	1
8:30 AM	5	6	7	3	21	0	0	0	0	0	6	0	0	0	6
8:45 AM	2	1	6	1	10	0	0	0	0	0	0	0	0	0	0
Peak Hour	11	20	19	10	60	0	0	2	0	2	7	0	0	0	7

Five-Hour Count Summaries																			
Interval Start		Eleventh St				Eleventh St				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	4:00 AM	0	0	10	1	0	15	190	1	0	2	0	3	0	0	5	16	243	0
	4:15 AM	0	0	9	0	0	57	196	3	0	1	2	3	1	0	12	26	310	0
	4:30 AM	0	2	18	1	0	90	180	2	0	6	6	10	0	1	9	15	340	0
	4:45 AM	0	1	22	1	0	134	134	1	0	0	4	8	0	1	13	13	332	1,225
	5:00 AM	0	2	16	1	0	130	104	8	0	4	1	8	0	0	32	9	315	1,297
	5:15 AM	0	0	16	4	0	157	96	2	0	2	5	11	0	1	28	7	329	1,316
	5:30 AM	0	0	20	4	0	142	82	6	0	1	7	6	0	2	27	8	305	1,281
	5:45 AM	0	2	34	5	0	129	91	8	0	2	6	1	0	3	27	4	312	1,261
	6:00 AM	0	7	32	2	0	127	116	11	0	1	17	10	0	3	30	7	363	1,309
	6:15 AM	0	5	47	3	0	123	99	5	0	1	10	15	0	3	21	10	342	1,322
	6:30 AM	0	3	35	4	0	148	102	7	0	4	7	12	0	0	33	12	367	1,384
	6:45 AM	0	2	61	13	0	158	111	16	0	2	9	13	0	3	37	11	436	1,508
	7:00 AM	0	6	55	12	0	75	135	13	1	4	19	20	0	4	27	13	384	1,529
	7:15 AM	0	4	50	12	1	88	92	18	0	3	20	23	0	11	31	7	360	1,547
	7:30 AM	0	6	61	16	1	135	87	19	0	3	30	40	0	8	55	8	469	1,649
	7:45 AM	0	4	73	18	0	95	77	18	1	4	24	48	0	16	63	8	449	1,662
	8:00 AM	0	4	63	16	0	128	106	21	0	9	42	56	0	13	50	14	522	1,800
	8:15 AM	0	6	61	24	0	150	113	35	0	13	47	104	0	10	78	12	653	2,093
	8:30 AM	0	4	60	11	1	146	103	33	0	12	44	152	0	8	86	13	673	2,297
	8:45 AM	2	6	71	7	2	47	119	14	1	7	39	103	0	11	26	20	475	2,323
Count Total		2	64	814	155	5	2,274	2,333	241	3	81	339	646	1	98	690	233	7,979	0
Peak Hour	All	2	20	255	58	3	471	441	103	1	41	172	415	0	42	240	59	2,323	0
	HV	0	0	8	3	0	10	8	2	0	2	3	14	0	1	6	3	60	0
	HV%	0%	0%	3%	5%	0%	2%	2%	2%	0%	5%	2%	3%	-	2%	3%	5%	3%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	4:00 AM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 AM	2	6	1	0	9	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 AM	1	6	0	1	8	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 AM	2	4	3	0	9	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 AM	3	6	2	0	11	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 AM	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 AM	2	11	1	3	17	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 AM	3	6	1	1	11	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	3	6	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	2	8	1	1	12	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	5	13	1	0	19	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	1	4	6	3	14	0	0	0	1	1	0	1	0	1	0	0	1	
	7:15 AM	4	6	3	2	15	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	4	11	2	4	21	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	4	6	2	5	17	0	0	1	0	1	5	0	0	0	0	0	5	
	8:00 AM	3	6	1	4	14	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	1	7	5	2	15	0	0	2	0	2	1	0	0	0	0	0	1	
	8:30 AM	5	6	7	3	21	0	0	0	0	0	6	0	0	0	0	0	6	
	8:45 AM	2	1	6	1	10	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total		50	123	42	30	245	0	0	3	1	4	12	1	0	0	0	0	13	
Peak Hour		11	20	19	10	60	0	0	2	0	2	7	0	0	0	0	0	7	

Five-Hour Count Summaries - Heavy Vehicles

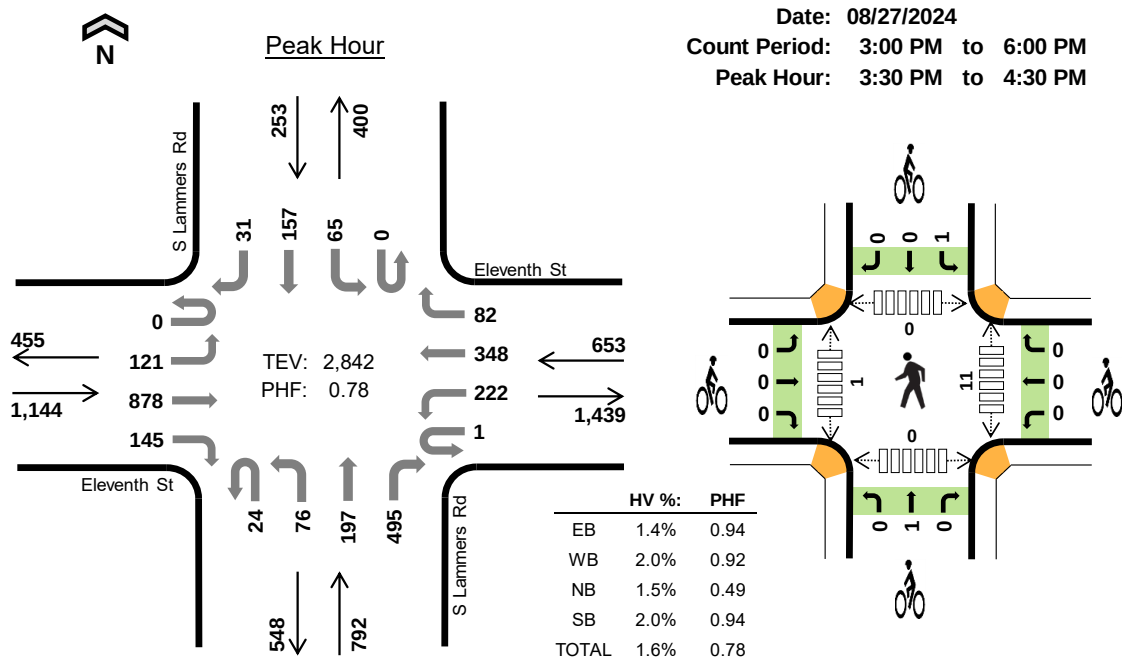
Interval Start	Eleventh St				Eleventh St				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	3	0
4:15 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0
4:30 AM	0	0	2	0	0	0	6	0	0	0	1	0	0	0	0	0	9	0
4:45 AM	0	0	1	0	0	3	3	0	0	0	0	0	0	0	1	0	8	23
5:00 AM	0	0	2	0	0	0	4	0	0	3	0	0	0	0	0	0	9	29
5:15 AM	0	0	3	0	0	5	1	0	0	1	0	1	0	0	0	0	11	37
5:30 AM	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0	7	35
5:45 AM	0	0	2	0	0	6	4	1	0	0	1	0	0	0	3	0	17	44
6:00 AM	0	0	2	1	0	4	2	0	0	0	1	0	0	0	1	0	11	46
6:15 AM	0	0	3	0	0	3	2	1	0	0	0	0	0	0	0	0	9	44
6:30 AM	0	0	2	0	0	3	4	1	0	0	0	0	1	0	0	1	12	49
6:45 AM	0	0	5	0	0	7	6	0	0	0	0	0	1	0	0	0	19	51
7:00 AM	0	0	1	0	0	2	1	1	0	1	0	5	0	1	1	1	14	54
7:15 AM	0	0	4	0	0	3	1	2	0	0	0	3	0	2	0	0	15	60
7:30 AM	0	1	3	0	0	6	3	2	0	1	1	0	0	2	2	0	21	69
7:45 AM	0	0	2	2	0	4	1	1	0	0	1	1	0	3	2	0	17	67
8:00 AM	0	0	1	2	0	3	2	1	0	0	1	0	0	0	3	1	14	67
8:15 AM	0	0	1	0	0	3	4	0	0	0	1	4	0	0	1	1	15	67
8:30 AM	0	0	4	1	0	3	2	1	0	0	1	6	0	1	2	0	21	67
8:45 AM	0	0	2	0	0	1	0	0	0	2	0	4	0	0	0	1	10	60
Count Total	0	1	42	7	0	57	55	11	0	8	8	26	0	9	17	4	245	0
Peak Hour	0	0	8	3	0	10	8	2	0	2	3	14	0	1	6	3	60	0

Five-Hour Count Summaries - Bikes

Interval Start	Eleventh St			Eleventh St			S Lammers Rd			S Lammers Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	2	0	0	0	2	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	0	1	2	0	1	0	4	0
Peak Hour	0	0	0	0	0	0	0	0	2	0	0	0	2	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Lammers Rd Eleventh St



Three-Hour Count Summaries

Interval Start		Eleventh St				Eleventh St				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM		0	30	223	40	0	69	91	18	1	29	45	49	0	16	42	8	661	0
3:45 PM		0	29	195	38	0	61	93	17	0	18	15	71	0	20	42	4	603	0
4:00 PM		0	42	228	35	1	55	63	27	23	16	87	275	0	14	34	6	906	0
4:15 PM		0	20	232	32	0	37	101	20	0	13	50	100	0	15	39	13	672	2,842
Peak Hour	All	0	121	878	145	1	222	348	82	24	76	197	495	0	65	157	31	2,842	0
	HV	0	2	13	1	0	4	6	3	0	1	3	8	0	2	1	2	46	0
	HV%	-	2%	1%	1%	0%	2%	2%	4%	0%	1%	2%	2%	-	3%	1%	6%	2%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	3	2	3	2	10	0	0	0	0	0	0	0	0	0	0
3:45 PM	2	2	1	1	6	0	0	0	0	0	0	0	0	0	0
4:00 PM	5	7	7	1	20	0	0	1	0	1	10	1	0	0	11
4:15 PM	6	2	1	1	10	0	0	0	1	1	1	0	0	0	1
Peak Hour	16	13	12	5	46	0	0	1	1	2	11	1	0	0	12

Three-Hour Count Summaries																			
Interval Start		Eleventh St				Eleventh St				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	22	222	28	2	32	87	27	1	11	34	43	0	17	20	4	550	0
3:15 PM		0	19	203	34	0	51	82	26	0	14	35	44	0	23	42	2	575	0
3:30 PM		0	30	223	40	0	69	91	18	1	29	45	49	0	16	42	8	661	0
3:45 PM		0	29	195	38	0	61	93	17	0	18	15	71	0	20	42	4	603	2,389
4:00 PM		0	42	228	35	1	55	63	27	23	16	87	275	0	14	34	6	906	2,745
4:15 PM		0	20	232	32	0	37	101	20	0	13	50	100	0	15	39	13	672	2,842
4:30 PM		0	21	250	27	1	27	94	14	0	23	35	72	0	14	35	14	627	2,808
4:45 PM		0	23	245	25	1	30	104	15	0	15	43	49	0	11	44	7	612	2,817
5:00 PM		0	33	240	35	1	34	80	28	0	17	23	48	0	19	39	9	606	2,517
5:15 PM		0	35	223	33	0	25	86	22	0	19	25	50	0	22	31	8	579	2,424
5:30 PM		1	21	200	42	0	20	98	24	0	14	35	48	0	0	35	11	549	2,346
5:45 PM		0	22	296	36	1	31	86	25	1	18	31	35	0	13	32	4	631	2,365
Count Total		1	317	2,757	405	7	472	1,065	263	26	207	458	884	0	184	435	90	7,571	0
Peak Hour	All	0	121	878	145	1	222	348	82	24	76	197	495	0	65	157	31	2,842	0
	HV	0	2	13	1	0	4	6	3	0	1	3	8	0	2	1	2	46	0
	HV%	-	2%	1%	1%	0%	2%	2%	4%	0%	1%	2%	2%	-	3%	1%	6%	2%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
3:00 PM		9	2	4	1	16	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM		4	4	1	2	11	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM		3	2	3	2	10	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM		2	2	1	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM		5	7	7	1	20	0	0	1	0	1	10	1	0	1	0	0	11	11
4:15 PM		6	2	1	1	10	0	0	0	1	1	1	0	0	0	0	0	1	1
4:30 PM		3	2	1	1	7	0	0	0	0	0	0	0	1	0	0	0	1	1
4:45 PM		7	2	3	1	13	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM		3	3	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM		4	1	1	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM		3	3	0	0	6	0	0	1	0	1	0	1	1	0	0	0	1	1
5:45 PM		3	4	0	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		52	34	22	12	120	0	0	2	1	3	13	1	0	0	0	0	14	14
Peak Hour		16	13	12	5	46	0	0	1	1	2	11	1	0	0	0	0	12	12

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	Eleventh St				Eleventh St				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	8	1	0	0	1	1	0	2	1	1	0	1	0	0	16	0
3:15 PM	0	0	4	0	0	3	0	1	0	0	1	0	0	2	0	0	11	0
3:30 PM	0	0	2	1	0	0	2	0	0	1	2	0	0	0	0	2	10	0
3:45 PM	0	0	2	0	0	1	1	0	0	0	1	0	0	0	1	0	6	43
4:00 PM	0	1	4	0	0	3	2	2	0	0	0	7	0	1	0	0	20	47
4:15 PM	0	1	5	0	0	0	1	1	0	0	0	1	0	1	0	0	10	46
4:30 PM	0	0	2	1	0	0	2	0	0	0	1	0	0	0	0	1	7	43
4:45 PM	0	0	6	1	0	1	1	0	0	1	0	2	0	0	1	0	13	50
5:00 PM	0	0	2	1	0	1	2	0	0	0	0	0	0	0	0	0	6	36
5:15 PM	0	1	2	1	0	0	0	1	0	0	1	0	0	1	0	0	7	33
5:30 PM	0	0	2	1	0	0	1	2	0	0	0	0	0	0	0	0	6	32
5:45 PM	0	0	3	0	0	2	2	0	0	0	0	0	0	0	1	0	8	27
Count Total	0	3	42	7	0	11	15	8	0	4	7	11	0	6	3	3	120	0
Peak Hour	0	2	13	1	0	4	6	3	0	1	3	8	0	2	1	2	46	0

Three-Hour Count Summaries - Bikes

Interval Start	Eleventh St			Eleventh St			S Lammers Rd			S Lammers Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	2	0	1	0	0	3	0
Peak Hour	0	0	0	0	0	0	0	1	0	1	0	0	2	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Lammers Rd W Schulte Rd

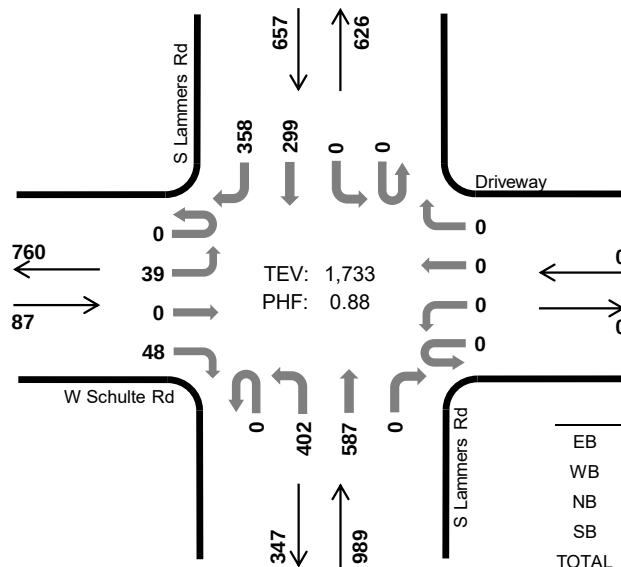


Peak Hour

Date: 08/27/2024

Count Period: 4:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	21.8%	0.91
WB	-	-
NB	1.5%	0.81
SB	2.9%	0.88
TOTAL	3.1%	0.88

Five-Hour Count Summaries

Interval Start		W Schulte Rd				Driveway				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	10	0	12	0	0	0	0	0	121	64	0	0	0	56	131	394	0
8:00 AM		0	9	0	11	0	0	0	0	0	119	102	0	0	0	37	95	373	0
8:15 AM		0	13	0	11	0	0	0	0	0	85	193	0	0	0	93	76	471	0
8:30 AM		0	7	0	14	0	0	0	0	0	77	228	0	0	0	113	56	495	1,733
Peak Hour	All	0	39	0	48	0	0	0	0	0	402	587	0	0	0	299	358	1,733	0
	HV	0	6	0	13	0	0	0	0	0	8	7	0	0	0	10	9	53	0
	HV%	-	15%	-	27%	-	-	-	-	-	2%	1%	-	-	-	3%	3%	3%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:45 AM	4	0	3	7	14	0	0	1	0	1	0	0	0	0	0
8:00 AM	3	0	6	7	16	0	0	0	0	0	0	0	0	0	0
8:15 AM	7	0	3	3	13	2	0	0	0	2	0	0	0	0	0
8:30 AM	5	0	3	2	10	0	0	0	0	0	0	0	0	0	0
Peak Hour	19	0	15	19	53	2	0	1	0	3	0	0	0	0	0

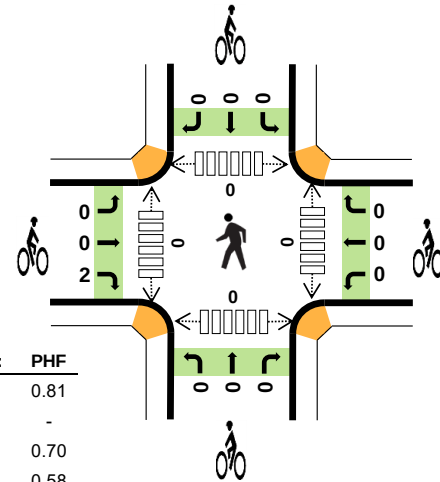
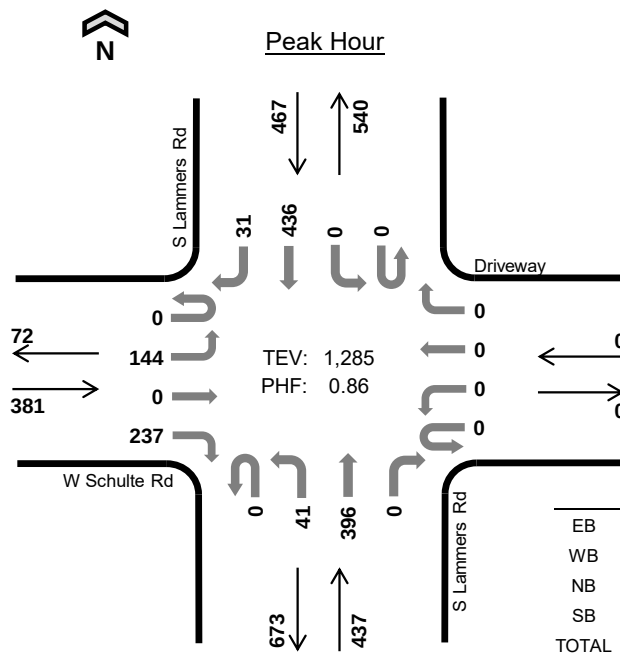
Five-Hour Count Summaries																			
Interval Start		W Schulte Rd				Driveway				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM		0	5	0	1	0	0	0	0	0	35	2	0	0	0	4	21	68	0
4:15 AM		0	5	0	4	0	0	0	0	0	43	2	0	0	0	4	55	113	0
4:30 AM		0	11	0	8	0	0	0	0	0	97	9	0	0	0	4	110	239	0
4:45 AM		0	8	0	2	0	0	0	0	0	100	3	0	0	0	4	135	252	672
5:00 AM		0	5	0	6	0	0	0	0	0	130	5	0	0	0	3	171	320	924
5:15 AM		0	8	0	3	0	0	0	0	0	109	3	0	0	0	10	181	314	1,125
5:30 AM		0	6	0	4	0	0	0	0	0	106	5	0	0	0	7	163	291	1,177
5:45 AM		0	1	0	2	0	0	0	0	0	138	3	0	0	0	14	174	332	1,257
6:00 AM		0	19	0	13	0	0	0	0	0	99	9	0	0	0	4	146	290	1,227
6:15 AM		0	7	0	1	0	0	0	0	0	149	6	0	0	0	12	160	335	1,248
6:30 AM		0	10	0	7	0	0	0	0	0	140	10	0	0	0	11	156	334	1,291
6:45 AM		0	6	0	6	0	0	0	0	0	94	10	0	0	0	21	149	286	1,245
7:00 AM		0	95	0	6	0	0	0	0	0	107	21	0	0	0	23	116	368	1,323
7:15 AM		0	9	0	2	0	0	0	0	0	84	25	0	0	0	32	125	277	1,265
7:30 AM		0	3	0	7	0	0	0	0	0	82	61	0	0	0	38	147	338	1,269
7:45 AM		0	10	0	12	0	0	0	0	0	121	64	0	0	0	56	131	394	1,377
8:00 AM		0	9	0	11	0	0	0	0	0	119	102	0	0	0	37	95	373	1,382
8:15 AM		0	13	0	11	0	0	0	0	0	85	193	0	0	0	93	76	471	1,576
8:30 AM		0	7	0	14	0	0	0	0	0	77	228	0	0	0	113	56	495	1,733
8:45 AM		0	8	0	10	0	0	0	0	0	47	38	0	0	0	101	50	254	1,593
Count Total		0	245	0	130	0	0	0	0	0	1,962	799	0	0	0	591	2,417	6,144	0
Peak Hour	All	0	39	0	48	0	0	0	0	0	402	587	0	0	0	299	358	1,733	0
	HV	0	6	0	13	0	0	0	0	0	8	7	0	0	0	10	9	53	0
	HV%	-	15%	-	27%	-	-	-	-	-	2%	1%	-	-	-	3%	3%	3%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
4:00 AM		0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM		1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM		0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM		0	0	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM		1	0	5	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM		1	0	4	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM		2	0	2	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM		0	0	4	9	13	0	0	1	0	1	0	0	0	0	0	0	0	0
6:00 AM		0	0	1	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM		0	0	7	5	12	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM		3	0	3	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM		1	0	5	3	9	0	0	0	0	0	0	0	4	0	1	0	5	0
7:00 AM		1	0	7	4	12	0	0	0	0	0	0	0	4	0	0	0	4	0
7:15 AM		0	0	9	4	13	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM		3	0	8	7	18	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM		4	0	3	7	14	0	0	1	0	1	0	1	0	0	0	0	0	0
8:00 AM		3	0	6	7	16	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM		7	0	3	3	13	2	0	0	0	0	2	0	0	0	0	0	0	0
8:30 AM		5	0	3	2	10	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM		2	0	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		34	0	77	68	179	2	0	2	0	4	8	0	1	0	9	0	9	0
Peak Hour		19	0	15	19	53	2	0	1	0	3	0	0	0	0	0	0	0	0

Five-Hour Count Summaries - Heavy Vehicles																			
Interval Start	W Schulte Rd				Driveway				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0
4:15 AM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
4:30 AM	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	0
4:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3	5	12
5:00 AM	0	0	0	1	0	0	0	0	0	2	3	0	0	0	0	0	0	6	16
5:15 AM	0	1	0	0	0	0	0	0	0	3	1	0	0	0	0	0	1	6	20
5:30 AM	0	0	0	2	0	0	0	0	0	1	1	0	0	0	0	0	1	5	22
5:45 AM	0	0	0	0	0	0	0	0	0	3	1	0	0	0	3	6		13	30
6:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5		6	30
6:15 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	1	4	12	36
6:30 AM	0	0	0	3	0	0	0	0	0	2	1	0	0	0	0	1	2	9	40
6:45 AM	0	0	0	1	0	0	0	0	0	4	1	0	0	0	0	2	1	9	36
7:00 AM	0	0	0	1	0	0	0	0	0	7	0	0	0	0	0	0	4	12	42
7:15 AM	0	0	0	0	0	0	0	0	0	7	2	0	0	0	0	1	3	13	43
7:30 AM	0	0	0	3	0	0	0	0	0	7	1	0	0	0	0	1	6	18	52
7:45 AM	0	2	0	2	0	0	0	0	0	3	0	0	0	0	0	3	4	14	57
8:00 AM	0	0	0	3	0	0	0	0	0	2	4	0	0	0	0	5	2	16	61
8:15 AM	0	2	0	5	0	0	0	0	0	1	2	0	0	0	0	1	2	13	61
8:30 AM	0	2	0	3	0	0	0	0	0	2	1	0	0	0	0	1	1	10	53
8:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	5	44
Count Total	0	8	0	26	0	0	0	0	0	58	19	0	0	0	20	48		179	0
Peak Hour	0	6	0	13	0	0	0	0	0	8	7	0	0	0	10	9		53	0

Five-Hour Count Summaries - Bikes																			
Interval Start	W Schulte Rd			Driveway			S Lammers Rd			S Lammers Rd			15-min Total	Rolling One Hour					
	Eastbound			Westbound			Northbound			Southbound									
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT							
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
5:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	4	0	0
Peak Hour	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Lammers Rd W Schulte Rd



Three-Hour Count Summaries

Interval Start		W Schulte Rd				Driveway				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM		0	46	0	71	0	0	0	0	0	14	111	0	0	0	55	13	310	0
3:45 PM		0	27	0	52	0	0	0	0	0	14	141	0	0	0	67	8	309	0
4:00 PM		0	32	0	52	0	0	0	0	0	7	80	0	0	0	196	5	372	0
4:15 PM		0	39	0	62	0	0	0	0	0	6	64	0	0	0	118	5	294	1,285
Peak Hour	All	0	144	0	237	0	0	0	0	0	41	396	0	0	0	436	31	1,285	0
	HV	0	2	0	10	0	0	0	0	0	4	1	0	0	0	3	1	21	0
	HV%	-	1%	-	4%	-	-	-	-	-	10%	0%	-	-	-	1%	3%	2%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	2	0	4	0	6	0	0	0	0	0	0	0	0	0	0
3:45 PM	4	0	1	2	7	1	0	0	0	1	0	0	0	0	0
4:00 PM	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0
4:15 PM	5	0	0	1	6	1	0	0	0	1	0	0	0	0	0
Peak Hour	12	0	5	4	21	2	0	0	0	2	0	0	0	0	0

Three-Hour Count Summaries																			
Interval Start		W Schulte Rd				Driveway				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	36	0	40	0	0	0	0	0	10	45	0	0	0	47	10	188	0
3:15 PM		0	30	0	38	0	0	0	0	0	6	82	0	0	0	65	9	230	0
3:30 PM		0	46	0	71	0	0	0	0	0	14	111	0	0	0	55	13	310	0
3:45 PM		0	27	0	52	0	0	0	0	0	14	141	0	0	0	67	8	309	1,037
4:00 PM		0	32	0	52	0	0	0	0	0	7	80	0	0	0	196	5	372	1,221
4:15 PM		0	39	0	62	0	0	0	0	0	6	64	0	0	0	118	5	294	1,285
4:30 PM		0	47	0	93	0	0	0	0	0	8	34	0	0	0	64	7	253	1,228
4:45 PM		0	38	0	48	0	0	0	0	0	18	54	0	0	0	80	6	244	1,163
5:00 PM		0	26	0	63	0	0	0	0	0	9	40	0	0	0	75	10	223	1,014
5:15 PM		0	33	0	61	0	0	0	0	0	11	42	0	0	0	74	8	229	949
5:30 PM		0	37	0	60	0	0	0	0	0	16	50	0	0	0	68	13	244	940
5:45 PM		0	38	0	46	0	0	0	0	0	14	37	0	0	0	70	7	212	908
Count Total		0	429	0	686	0	0	0	0	0	133	780	0	0	0	979	101	3,108	0
Peak Hour	All	0	144	0	237	0	0	0	0	0	41	396	0	0	0	436	31	1,285	0
	HV	0	2	0	10	0	0	0	0	0	4	1	0	0	0	3	1	21	0
	HV%	-	1%	-	4%	-	-	-	-	-	10%	0%	-	-	-	1%	3%	2%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
3:00 PM		1	0	4	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM		2	0	4	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM		2	0	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM		4	0	1	2	7	1	0	0	0	1	0	0	0	0	0	0	0	0
4:00 PM		1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM		5	0	0	1	6	1	0	0	0	1	0	0	0	0	0	0	0	0
4:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM		1	0	2	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM		1	0	1	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM		0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM		1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM		0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		18	0	19	14	51	2	0	0	0	2	0	0	0	0	0	0	0	0
Peak Hour		12	0	5	4	21	2	0	0	0	2	0	0	0	0	0	0	0	0

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	W Schulte Rd				Driveway				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	0	1	0	0	0	0	0	1	3	0	0	0	2	0	7	0
3:15 PM	0	0	0	2	0	0	0	0	0	3	1	0	0	0	1	0	7	0
3:30 PM	0	0	0	2	0	0	0	0	0	3	1	0	0	0	0	0	6	0
3:45 PM	0	1	0	3	0	0	0	0	0	1	0	0	0	0	2	0	7	27
4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	22
4:15 PM	0	1	0	4	0	0	0	0	0	0	0	0	0	0	1	0	6	21
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
4:45 PM	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	1	6	14
5:00 PM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1	4	16
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	12
5:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	2	14
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	10
Count Total	0	3	0	15	0	0	0	0	0	12	7	0	0	0	10	4	51	0
Peak Hour	0	2	0	10	0	0	0	0	0	4	1	0	0	0	3	1	21	0

Three-Hour Count Summaries - Bikes

Interval Start	W Schulte Rd			Driveway			S Lammers Rd			S Lammers Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	2	0	0	0	0	0	0	0	0	0	2	0
Peak Hour	0	0	2	0	0	0	0	0	0	0	0	0	2	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

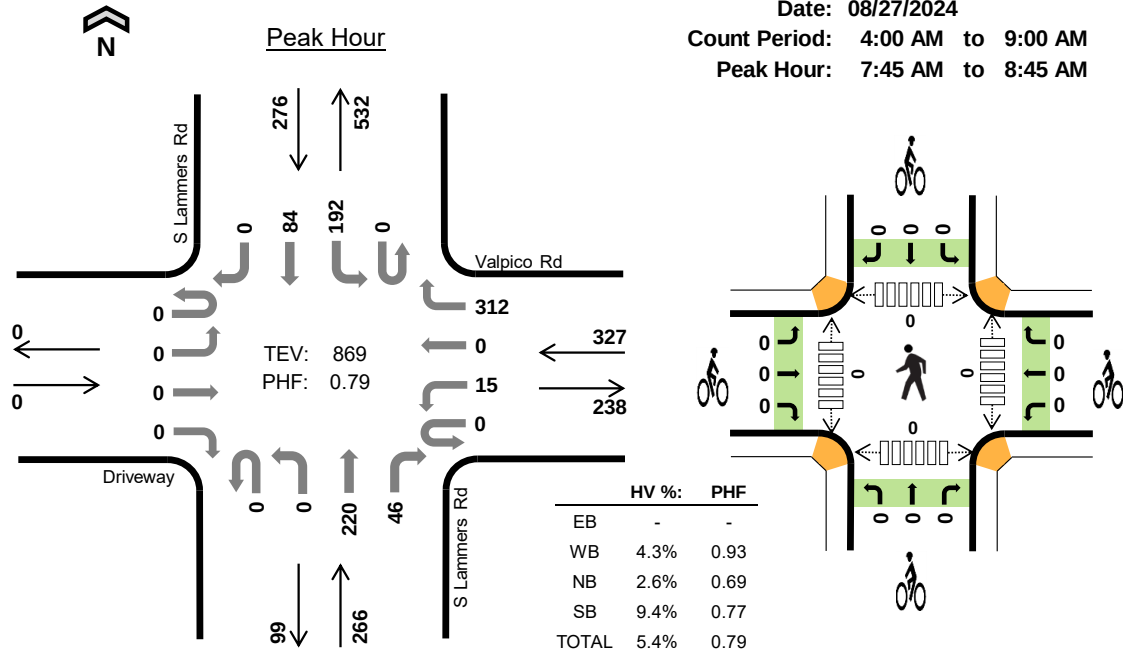
S Lammers Rd Valpico Rd



Date: 08/27/2024

Count Period: 4:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



Five-Hour Count Summaries

Interval Start		Driveway				Valpico Rd				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	0	0	0	0	2	0	62	0	0	26	30	0	50	13	0	183	0
8:00 AM		0	0	0	0	0	5	0	82	0	0	32	10	0	33	9	0	171	0
8:15 AM		0	0	0	0	0	5	0	83	0	0	69	2	0	53	28	0	240	0
8:30 AM		0	0	0	0	0	3	0	85	0	0	93	4	0	56	34	0	275	869
Peak Hour	All	0	0	0	0	0	15	0	312	0	0	220	46	0	192	84	0	869	0
	HV	0	0	0	0	0	2	0	12	0	0	3	4	0	23	3	0	47	0
	HV%	-	-	-	-	-	13%	-	4%	-	-	1%	9%	-	12%	4%	-	5%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:45 AM	0	1	1	5	7	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	6	3	10	19	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	3	2	6	11	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	4	1	5	10	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	14	7	26	47	0	0	0	0	0	0	0	0	0	0

Five-Hour Count Summaries																			
Interval Start		Driveway				Valpico Rd				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	4:00 AM	0	0	0	0	0	0	0	18	0	0	1	0	0	3	3	0	25	0
	4:15 AM	0	0	0	0	0	0	0	18	0	0	2	0	0	8	0	0	28	0
	4:30 AM	0	0	0	0	0	1	0	43	0	0	4	0	0	10	0	0	58	0
	4:45 AM	0	0	0	0	0	0	0	42	0	0	9	0	0	6	1	0	58	169
	5:00 AM	0	0	0	0	0	1	0	54	0	0	4	1	0	3	1	0	64	208
	5:15 AM	0	0	0	0	0	0	0	47	0	0	6	1	0	14	1	0	69	249
	5:30 AM	0	0	0	0	0	1	0	46	0	0	6	2	0	9	2	0	66	257
	5:45 AM	0	0	0	0	0	2	0	55	0	0	2	1	0	16	1	0	77	276
	6:00 AM	0	0	0	0	0	0	0	55	0	0	10	0	0	16	1	0	82	294
	6:15 AM	0	0	0	0	0	0	0	89	0	0	6	1	0	13	0	0	109	334
	6:30 AM	0	0	0	0	0	0	0	55	0	0	3	2	0	18	3	0	81	349
	6:45 AM	0	0	0	0	0	2	0	50	0	0	10	2	1	22	3	0	90	362
	7:00 AM	0	0	0	0	0	1	0	32	0	0	11	1	0	20	9	0	74	354
	7:15 AM	0	0	0	0	0	0	0	31	0	0	13	2	0	31	2	0	79	324
	7:30 AM	0	0	0	0	0	2	0	59	0	0	29	4	0	28	3	0	125	368
	7:45 AM	0	0	0	0	0	2	0	62	0	0	26	30	0	50	13	0	183	461
	8:00 AM	0	0	0	0	0	5	0	82	0	0	32	10	0	33	9	0	171	558
	8:15 AM	0	0	0	0	0	5	0	83	0	0	69	2	0	53	28	0	240	719
	8:30 AM	0	0	0	0	0	3	0	85	0	0	93	4	0	56	34	0	275	869
	8:45 AM	0	0	0	0	0	3	0	35	0	0	24	2	0	52	31	0	147	833
Count Total		0	0	0	0	0	28	0	1,041	0	0	360	65	1	461	145	0	2,101	0
Peak Hour	All	0	0	0	0	0	15	0	312	0	0	220	46	0	192	84	0	869	0
	HV	0	0	0	0	0	2	0	12	0	0	3	4	0	23	3	0	47	0
	HV%	-	-	-	-	-	13%	-	4%	-	-	1%	9%	-	12%	4%	-	5%	0
Note: Five-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	4:00 AM	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 AM	0	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 AM	0	2	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 AM	0	8	1	0	9	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 AM	0	4	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 AM	0	2	1	2	5	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 AM	0	5	0	4	9	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 AM	0	2	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	7	1	1	9	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	3	1	7	11	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	5	0	3	8	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	5	0	2	7	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	2	1	2	5	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	10	0	3	13	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	1	1	5	7	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	6	3	10	19	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	3	2	6	11	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	4	1	5	10	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	2	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total		0	75	14	58	147	0	0	0	0	0	0	0	0	0	0	0	0	
Peak Hour		0	14	7	26	47	0	0	0	0	0	0	0	0	0	0	0	0	

Five-Hour Count Summaries - Heavy Vehicles

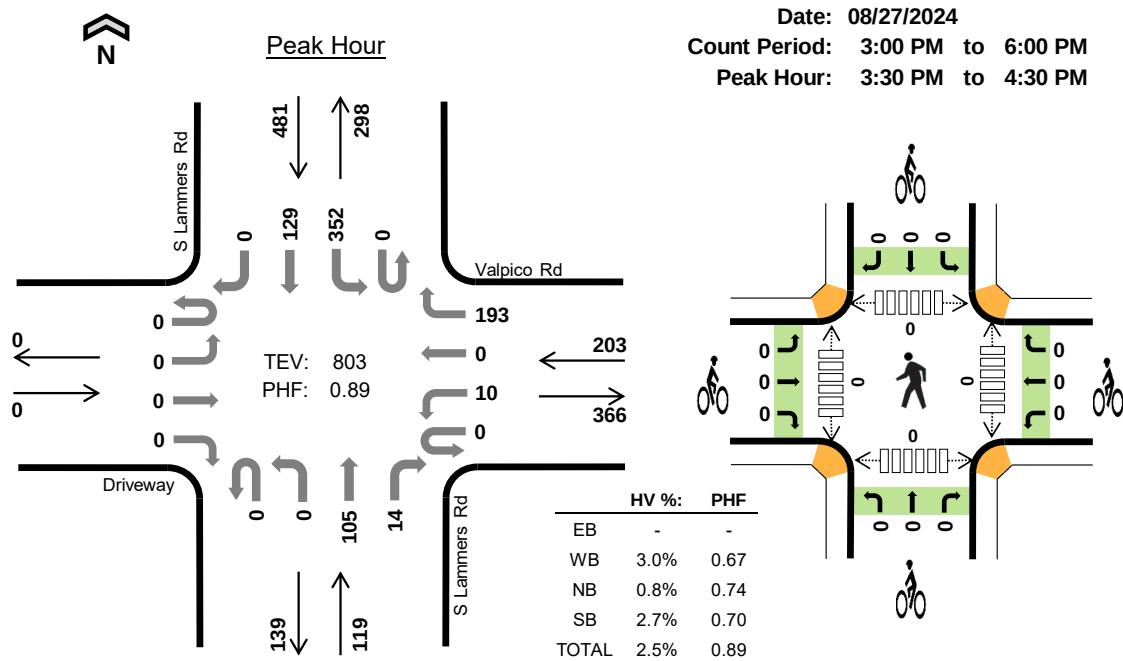
Interval Start	Driveway				Valpico Rd				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0
4:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	3	0
4:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	0	4	0
4:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	11
5:00 AM	0	0	0	0	0	1	0	7	0	0	0	1	0	0	0	0	9	18
5:15 AM	0	0	0	0	0	0	0	4	0	0	0	0	0	2	0	0	6	21
5:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	0	2	0	0	5	22
5:45 AM	0	0	0	0	0	1	0	4	0	0	0	0	0	4	0	0	9	29
6:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	3	23
6:15 AM	0	0	0	0	0	0	0	7	0	0	0	1	0	1	0	0	9	26
6:30 AM	0	0	0	0	0	0	0	3	0	0	0	1	0	6	1	0	11	32
6:45 AM	0	0	0	0	0	0	0	5	0	0	0	0	0	3	0	0	8	31
7:00 AM	0	0	0	0	0	0	0	5	0	0	0	0	0	1	1	0	7	35
7:15 AM	0	0	0	0	0	0	0	2	0	0	0	1	0	2	0	0	5	31
7:30 AM	0	0	0	0	0	2	0	8	0	0	0	0	0	3	0	0	13	33
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	5	0	0	7	32
8:00 AM	0	0	0	0	0	0	0	6	0	0	2	1	0	9	1	0	19	44
8:15 AM	0	0	0	0	0	0	0	3	0	0	1	1	0	5	1	0	11	50
8:30 AM	0	0	0	0	0	2	0	2	0	0	0	1	0	4	1	0	10	47
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	4	44
Count Total	0	0	0	0	0	6	0	69	0	0	6	8	0	52	6	0	147	0
Peak Hour	0	0	0	0	0	2	0	12	0	0	3	4	0	23	3	0	47	0

Five-Hour Count Summaries - Bikes

Interval Start	Driveway			Valpico Rd			S Lammers Rd			S Lammers Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Lammers Rd Valpico Rd



Three-Hour Count Summaries

Interval Start		Driveway				Valpico Rd				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM		0	0	0	0	0	3	0	73	0	0	27	4	0	74	14	0	195	0
3:45 PM		0	0	0	0	0	3	0	57	0	0	39	1	0	68	17	0	185	0
4:00 PM		0	0	0	0	0	1	0	28	0	0	22	2	0	117	56	0	226	0
4:15 PM		0	0	0	0	0	3	0	35	0	0	17	7	0	93	42	0	197	803
Peak Hour	All	0	0	0	0	0	10	0	193	0	0	105	14	0	352	129	0	803	0
	HV	0	0	0	0	0	0	0	6	0	0	1	0	0	7	6	0	20	0
	HV%	-	-	-	-	-	0%	-	3%	-	-	1%	0%	-	2%	5%	-	2%	0

Note: For all three-hour count summary, see next page.

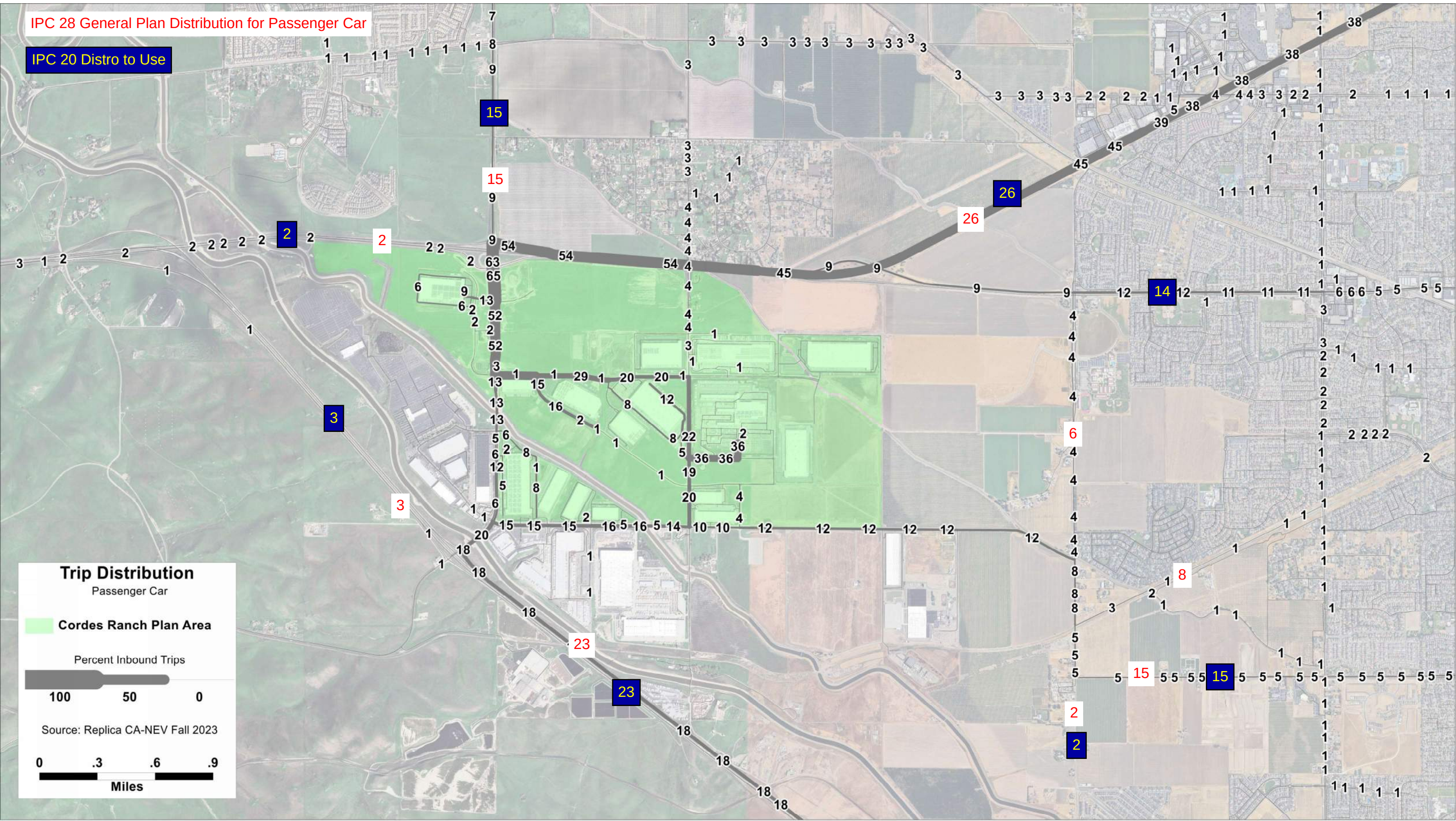
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	0	3	1	2	6	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	3	0	3	6	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	6	1	13	20	0	0	0	0	0	0	0	0	0	0

Three-Hour Count Summaries																			
Interval Start		Driveway				Valpico Rd				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	0	0	0	0	1	0	33	0	0	8	4	0	50	16	0	112	0
3:15 PM		0	0	0	0	0	5	0	54	0	0	17	2	0	59	26	0	163	0
3:30 PM		0	0	0	0	0	3	0	73	0	0	27	4	0	74	14	0	195	0
3:45 PM		0	0	0	0	0	3	0	57	0	0	39	1	0	68	17	0	185	655
4:00 PM		0	0	0	0	0	1	0	28	0	0	22	2	0	117	56	0	226	769
4:15 PM		0	0	0	0	0	3	0	35	0	0	17	7	0	93	42	0	197	803
4:30 PM		0	0	0	0	0	4	0	27	0	0	21	2	0	92	12	0	158	766
4:45 PM		0	0	0	0	0	3	1	39	0	0	17	5	0	75	20	0	160	741
5:00 PM		0	0	0	0	0	2	0	26	0	0	19	2	0	60	30	0	139	654
5:15 PM		0	0	0	0	0	3	0	34	0	0	14	5	0	88	23	0	167	624
5:30 PM		0	0	0	0	0	2	0	38	0	0	20	0	0	74	18	0	152	618
5:45 PM		0	0	0	0	0	1	0	29	0	0	11	4	0	66	21	0	132	590
Count Total		0	0	0	0	0	31	1	473	0	0	232	38	0	916	295	0	1,986	0
Peak Hour	All	0	0	0	0	0	10	0	193	0	0	105	14	0	352	129	0	803	0
	HV	0	0	0	0	0	0	0	6	0	0	1	0	0	7	6	0	20	0
	HV%	-	-	-	-	-	0%	-	3%	-	-	1%	0%	-	2%	5%	-	2%	0
Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
3:00 PM		0	4	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM		0	1	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM		0	3	1	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM		0	3	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM		0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM		0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM		0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM		0	1	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM		0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM		0	1	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total		0	14	1	23	38	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour		0	6	1	13	20	0	0	0	0	0	0	0	0	0	0	0	0	0

Three-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Driveway				Valpico Rd				S Lammers Rd				S Lammers Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	4	0	0	0	0	0	0	1	0	5	0
3:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	3	0
3:30 PM	0	0	0	0	0	0	0	3	0	0	1	0	0	1	1	0	6	0
3:45 PM	0	0	0	0	0	0	0	3	0	0	0	0	0	2	1	0	6	20
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	18
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5	20
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	15
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	4	0	0	5	14
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	12
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
5:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	3	9
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	0	0	0	0	2	0	12	0	0	1	0	0	14	9	0	38	0
Peak Hour	0	0	0	0	0	0	0	6	0	0	1	0	0	7	6	0	20	0

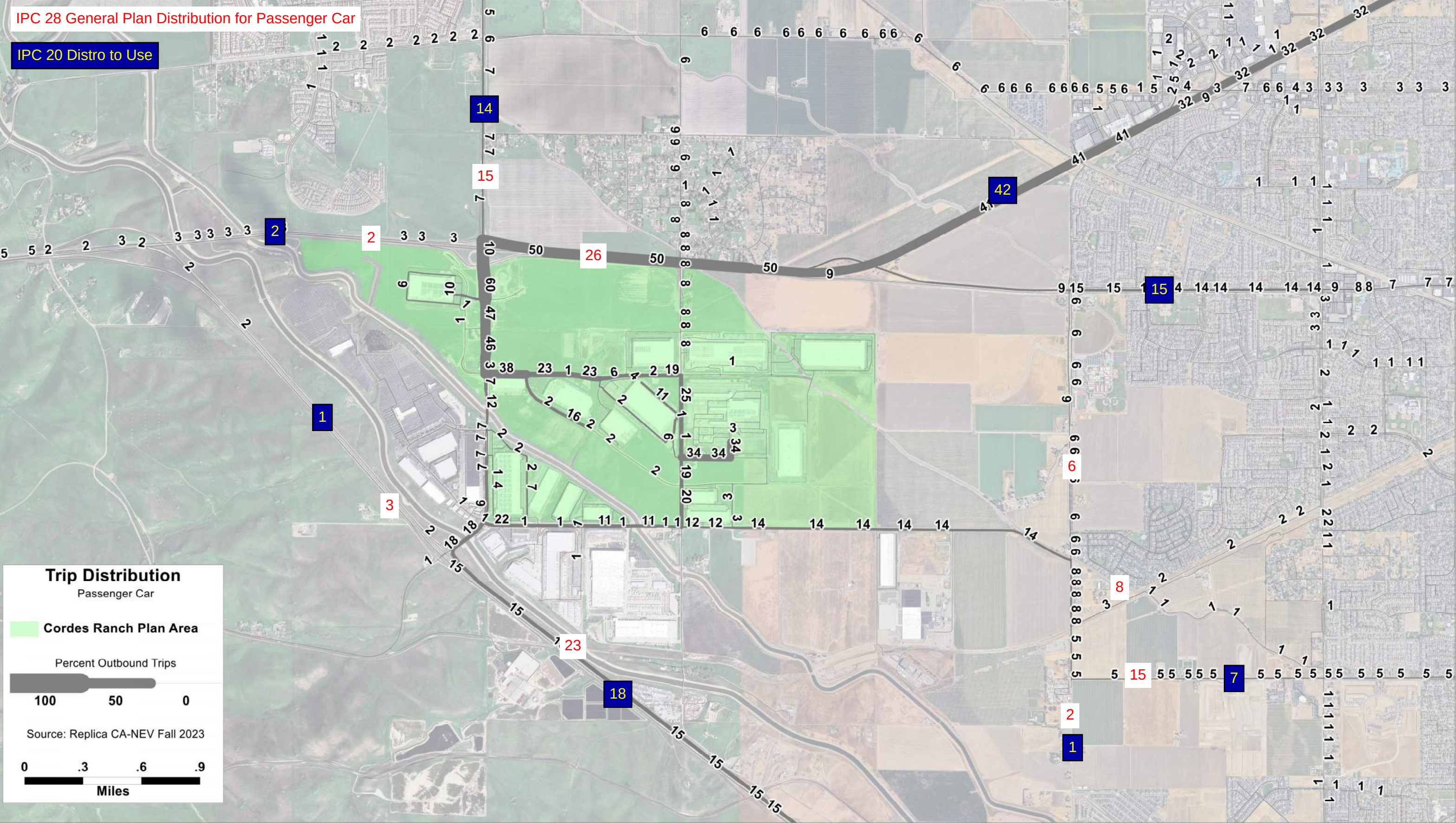
Three-Hour Count Summaries - Bikes																	
Interval Start	Driveway			Valpico Rd			S Lammers Rd			S Lammers Rd			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



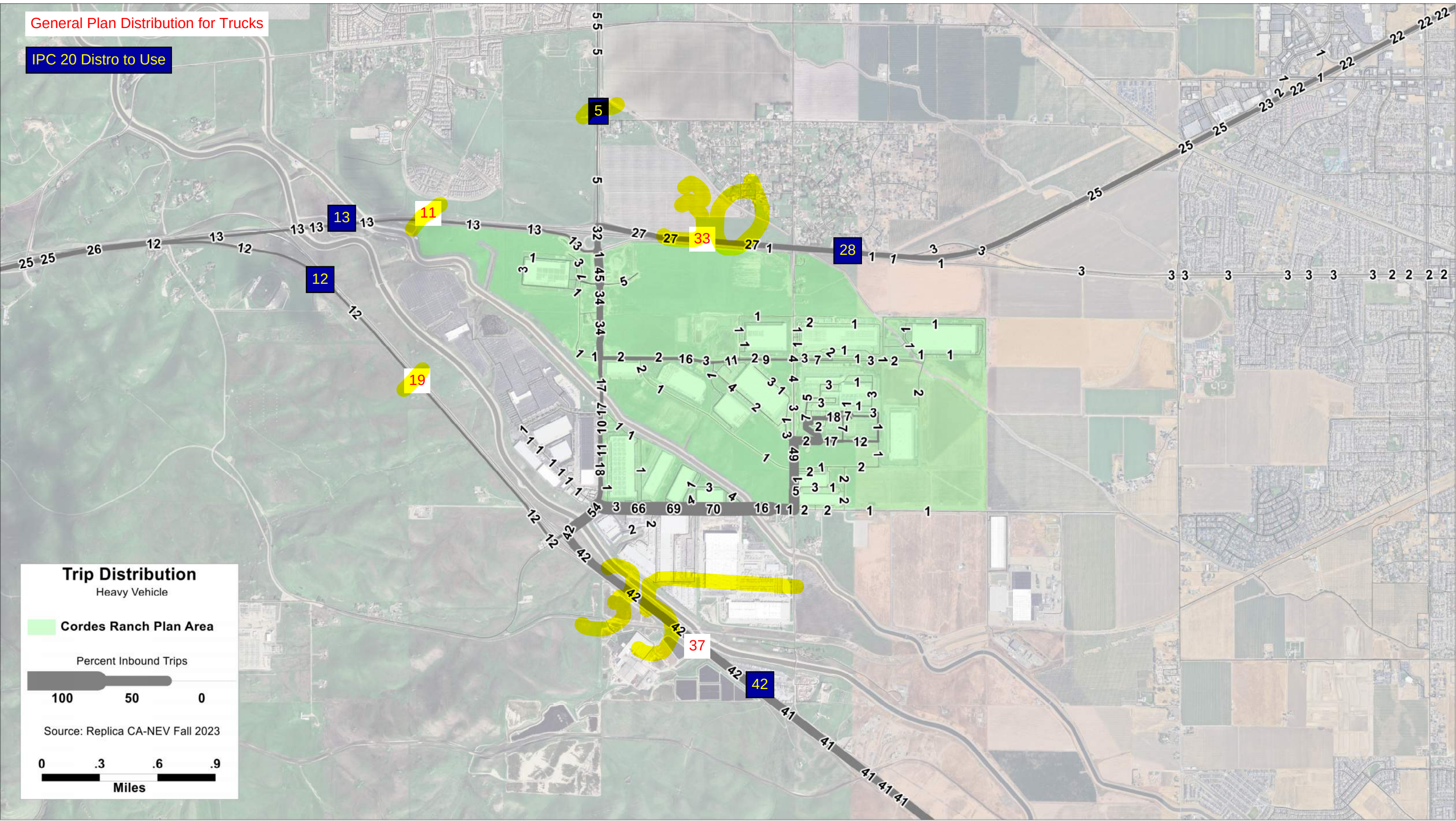
IPC 28 General Plan Distribution for Passenger Car

IPC 20 Distro to Use



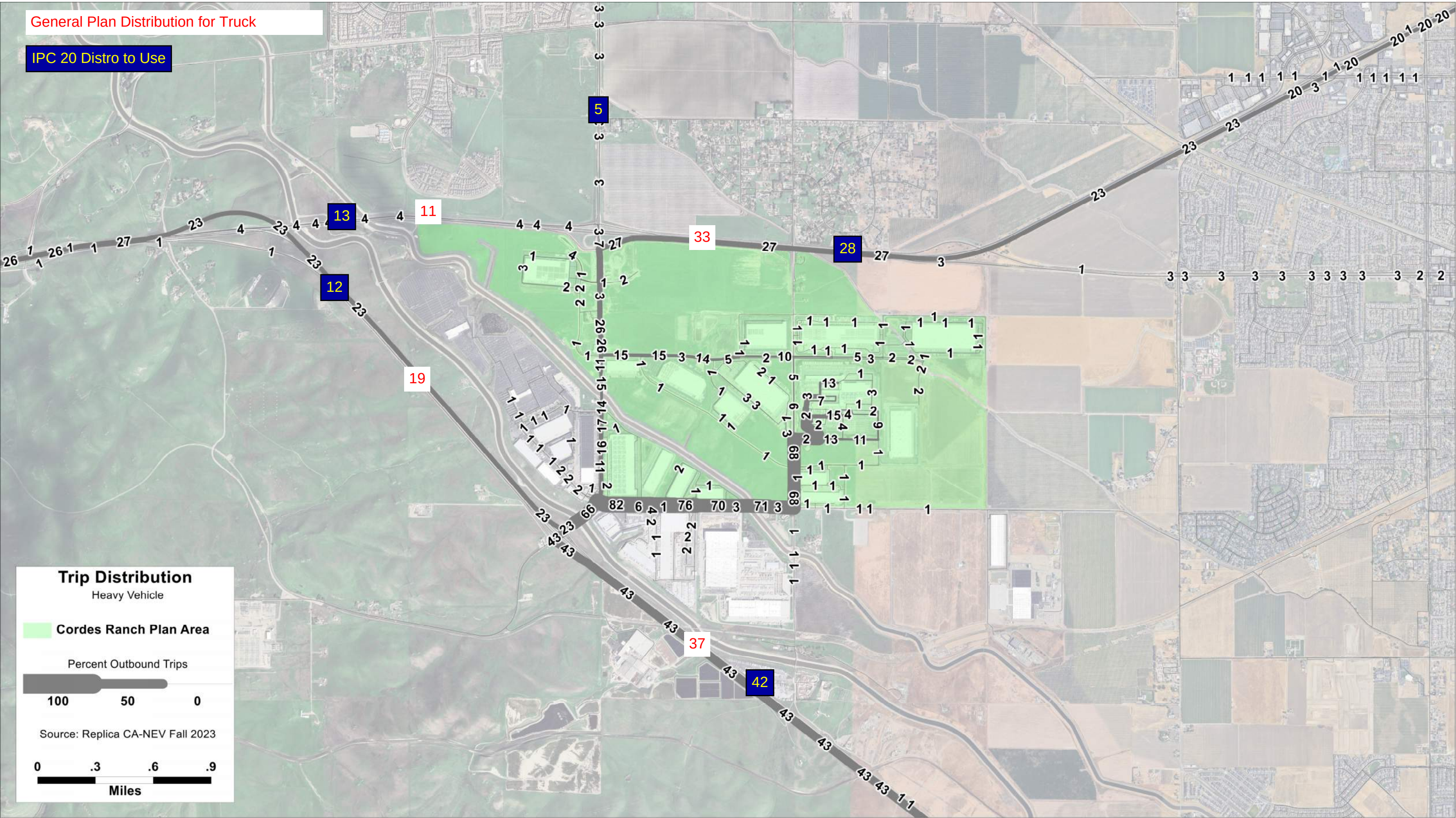
General Plan Distribution for Trucks

IPC 20 Distro to Use

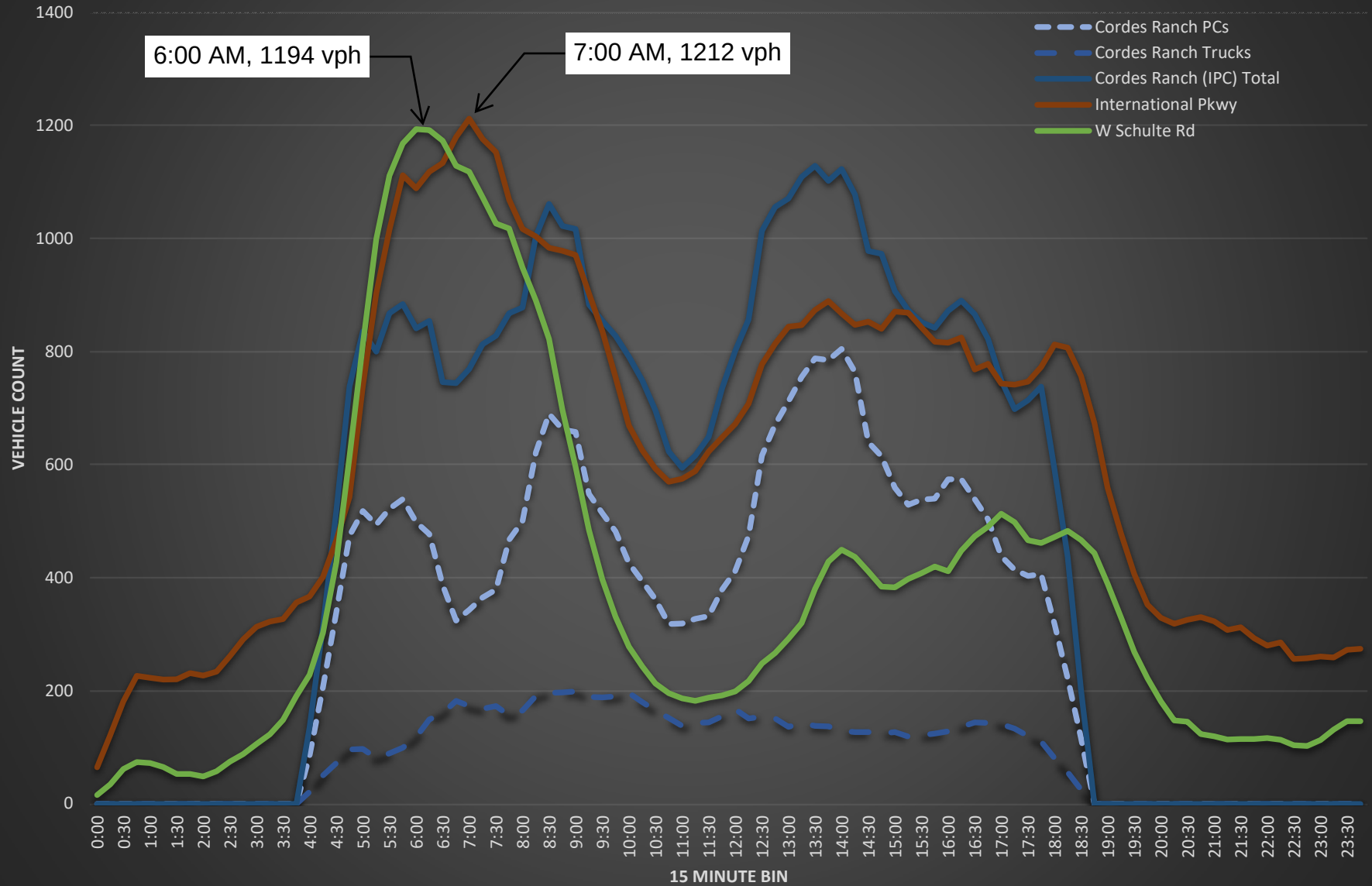


General Plan Distribution for Truck

IPC 20 Distro to Use



Driveway and Tube Count Summary in CRSP Area August 2024



J. Roadway Improvement Plans

DRAFT

INTERNATIONAL PARK OF COMMERCE

PHASE – 1K

INTERIM

SIGNING AND STRIPING PLANS

SHEET INDEX

No.	DRAWING	DESCRIPTION
1	SS-T	TITLE SHEET, LEGEND, NOTES, AND DETAILS

CAPITAL PARKS DRIVE

2	SS-1	SIGNING AND STRIPING PLANS
3	SS-2	SIGNING AND STRIPING PLANS

PROMONTORY PARKWAY

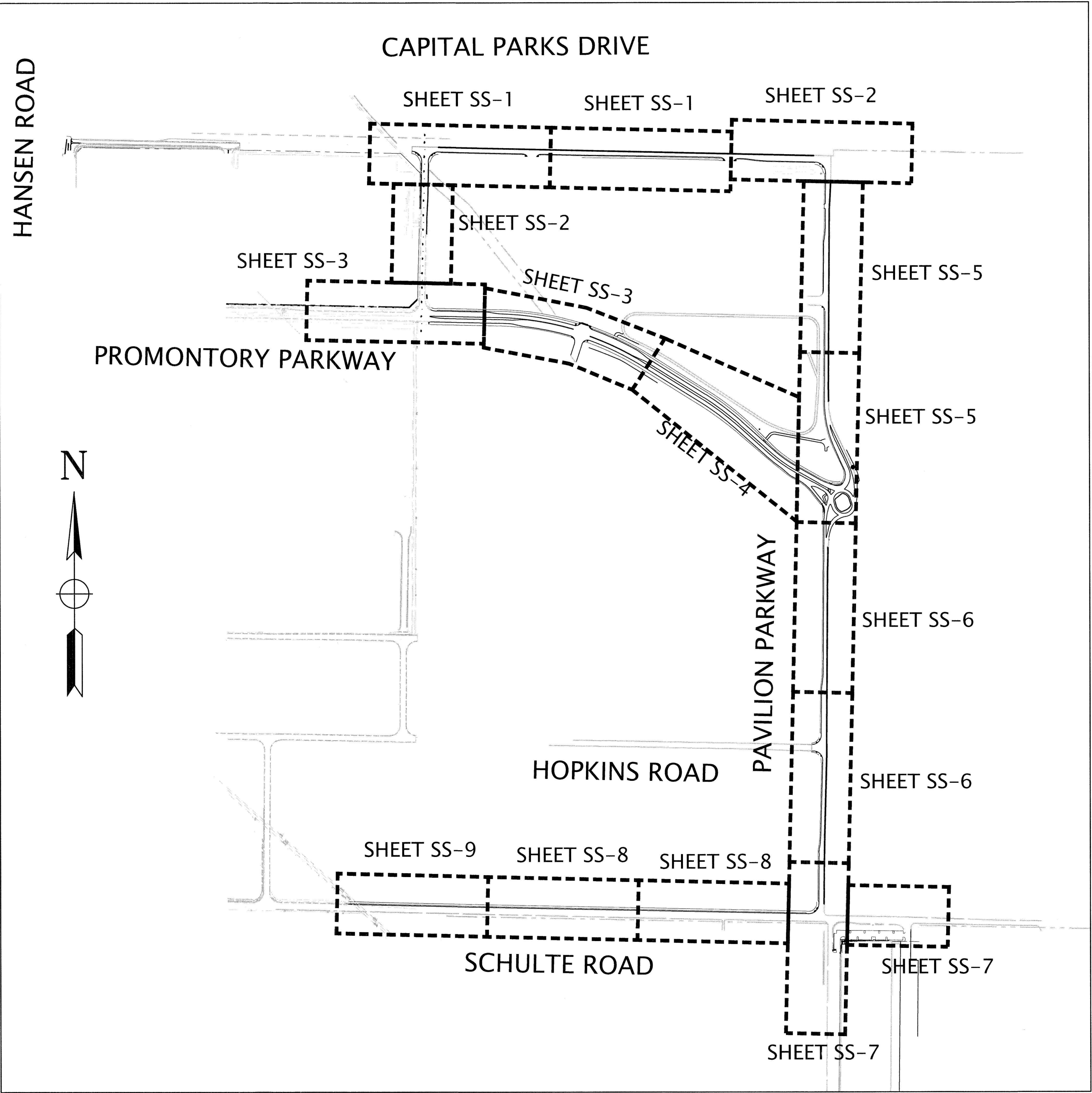
4	SS-3	SIGNING AND STRIPING PLANS
5	SS-4	SIGNING AND STRIPING PLANS

PAVILLION PARKWAY

6	SS-5	SIGNING AND STRIPING PLANS
7	SS-6	SIGNING AND STRIPING PLANS
8	SS-7	SIGNING AND STRIPING PLANS

SCHULTE ROAD

9	SS-8	SIGNING AND STRIPING PLANS
10	SS-9	SIGNING AND STRIPING PLANS



VICINITY MAP

NO SCALE

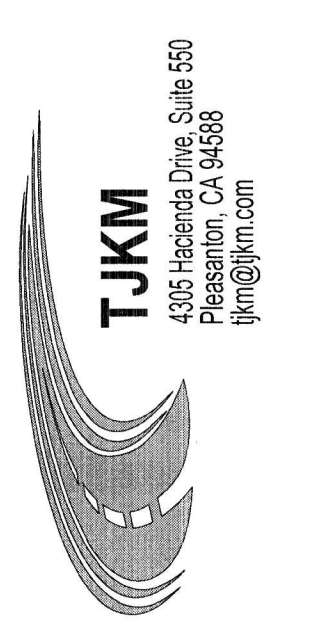
STRIPING NOTES (ALL STRIPING SHEETS)

1. SIGNING AND STRIPING SHALL CONFORM TO THE APPLICABLE DETAILS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) 2018 STANDARD PLANS, STANDARD SPECIFICATIONS, LATEST CALIFORNIA MUTCD, SIGN SPECIFICATIONS SHEETS, AND THE SPECIAL PROVISIONS.
2. EXISTING STRIPING TO BE REMOVED SHALL BE DONE BY GRINDING. AFTER GRINDING, SLURRY SEAL SHALL BE APPLIED TO THE AREA.
3. ALL STRIPING SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED. ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS SHALL BE APPLIED AT A THICKNESS OF 0.150 INCH.
4. ANY EXISTING STRIPING THAT CONFLICTS WITH THE PROPOSED STRIPING SHALL BE REMOVED AT THE APPROVAL OF THE CITY ENGINEER.
5. ALL CROSSWALKS SHALL BE INSTALLED WITH AN INSIDE WIDTH OF 10 FEET.
6. ALL SIGNS AND POSTS SHALL BE INSTALLED PER CITY STANDARD 151 AND MUST MEET MUTCD STANDARDS.
7. REMOVE SIGN POST IF ALL SIGNS ON THE POST ARE TO BE REMOVED.
8. INSTALL NEW POST WITH ALL RELOCATED SIGNS.
9. INSTALL REFLECTIVE BLUE MARKERS AT EVERY FIRE HYDRANT.
10. ALL SIGNS INSTALLED ON PROMONTORY PARKWAY, CAPITAL PARKS DRIVE, PAVILLION PARKWAY AND SCHULTE ROAD SHALL BE EXPRESSWAY SIZED SIGNS.
11. ALL STAA SIGNS INSTALLED SHALL BE EXPRESSWAY SIZED SIGNS (BIGGER SIZE). ALL ARROW PLAQUES ARE SPECIAL AND INTEGRATED WITH A BLUE BACKGROUND
12. ALL SIGN LOCATIONS SHALL BE VERIFIED BY FIELD INSPECTOR BEFORE INSTALLATION

LEGEND (ALL STRIPING SHEETS)

- INSTALL NEW SIGN
- EXISTING SIGN TO REMAIN UNLESS OTHERWISE NOTED
- EXISTING PAVEMENT MARKING TO REMAIN
- INSTALL NEW TYPE III PAVEMENT MARKING (THERMOPLASTIC)
- INSTALL NEW TYPE II (R) PAVEMENT MARKING (THERMOPLASTIC)
- INSTALL NEW TYPE III (B) PAVEMENT MARKING (THERMOPLASTIC)
- INSTALL NEW STRIPING PER DETAIL NUMBER
- CHANGE OF DETAIL NUMBERS
- EXISTING STRIPING TO REMAIN
- EXISTING STRIPING TO BE REMOVED
- EXISTING STOP PAVEMENT MARKING

CITY OF TRACY



SYMBOL	DATE	REVISIONS	DESCRIPTION	APPROVED

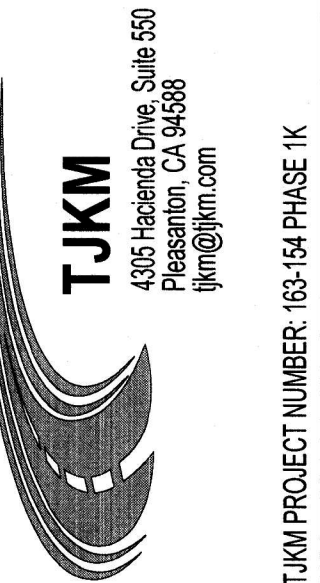
DESIGNED BY: ESB	DRAWN BY: LP	CHECKED BY: ESB	SCALE: 1"=40'
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SIGNING AND STRIPING TITLE SHEET,
LEGEND, NOTES, AND DETAILS
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS – PHASE 1K

SHEET
SS-T

OF 173 SHEETS

INTERIM PHASE 1K

[illegible]

DESIGNED BY: ESB	DRAWN BY: LP	CHECKED BY: ESB	SCALE: 1"=40'
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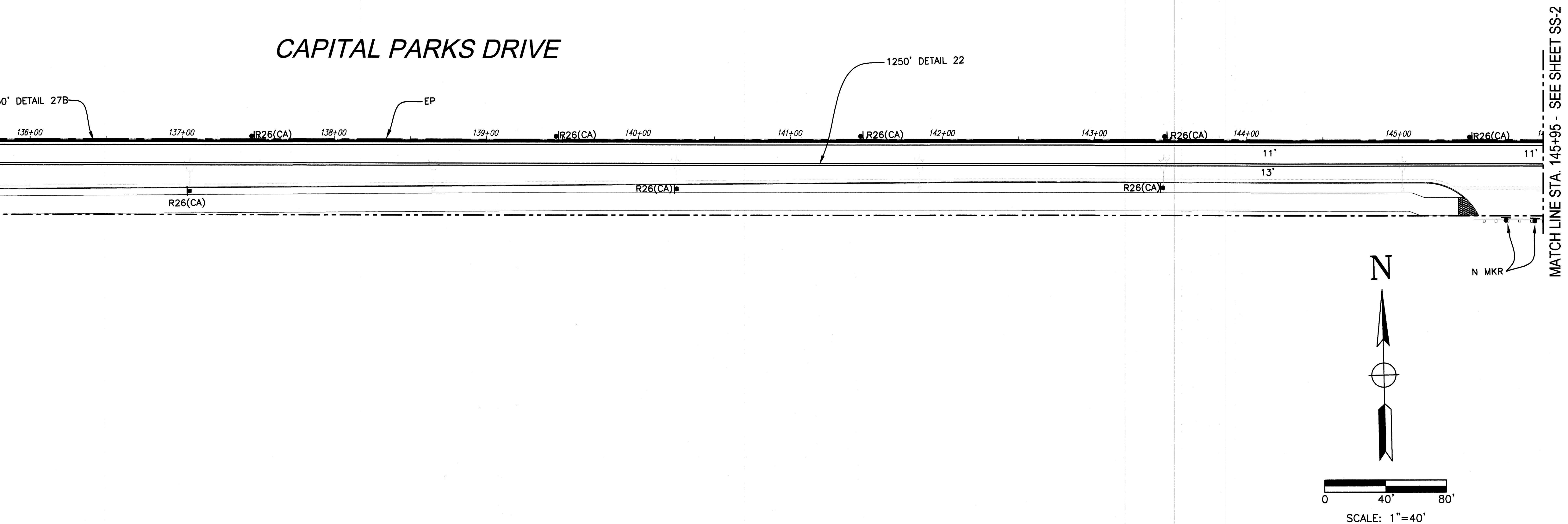
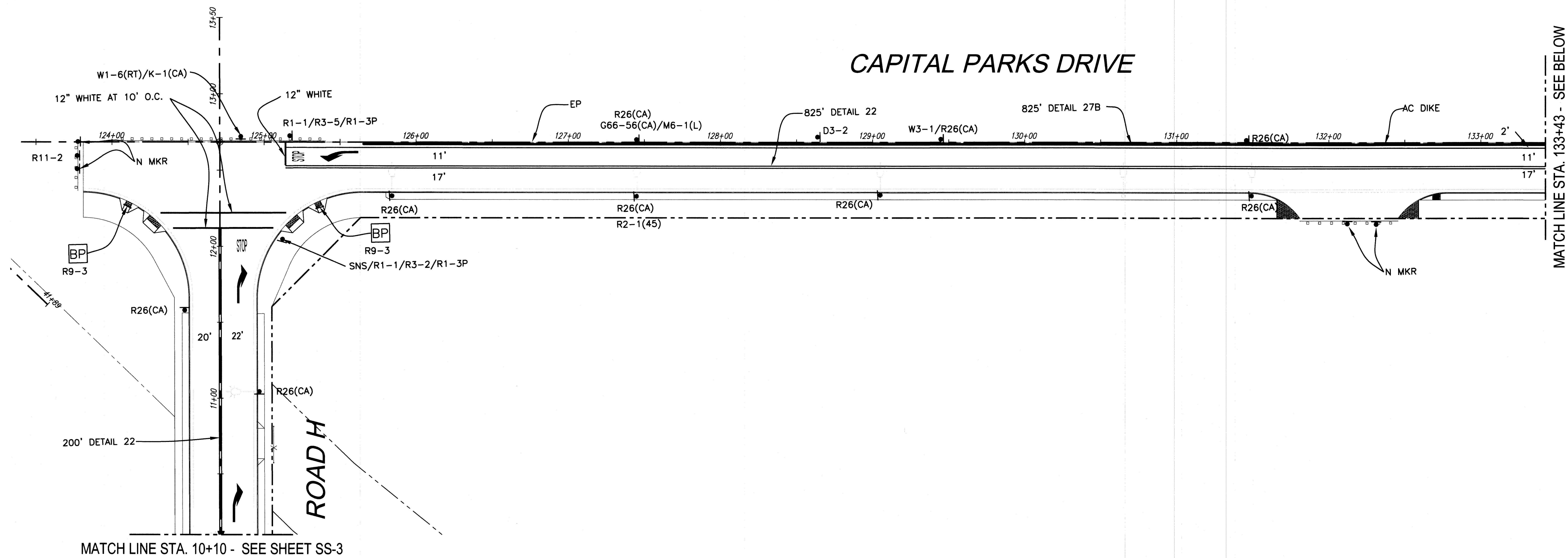
SIGNING AND STRIPING PLANS
CAPITAL PARKS DRIVE

INTERNATIONAL PARK OF COMMERCE

STREET IMPROVEMENT PLANS – PHASE 1 K

SHEET
SS-1

OF 173 SHEETS

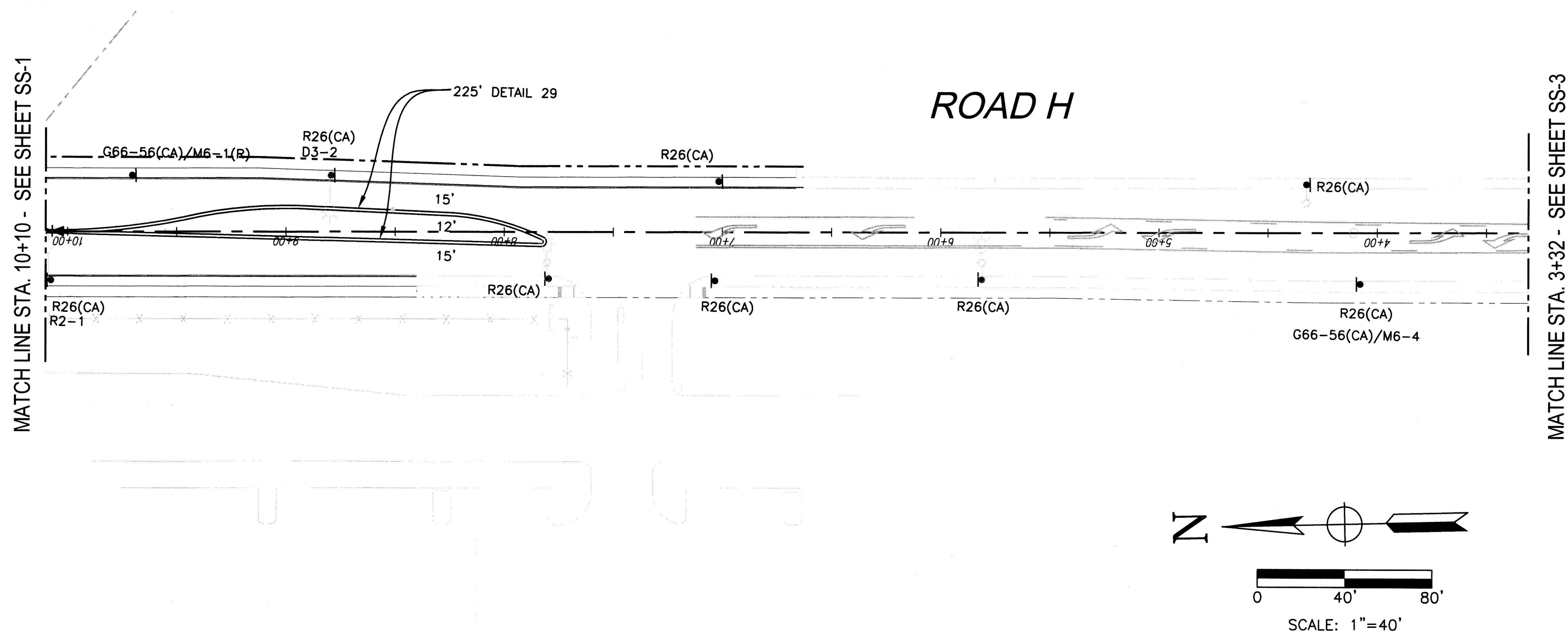
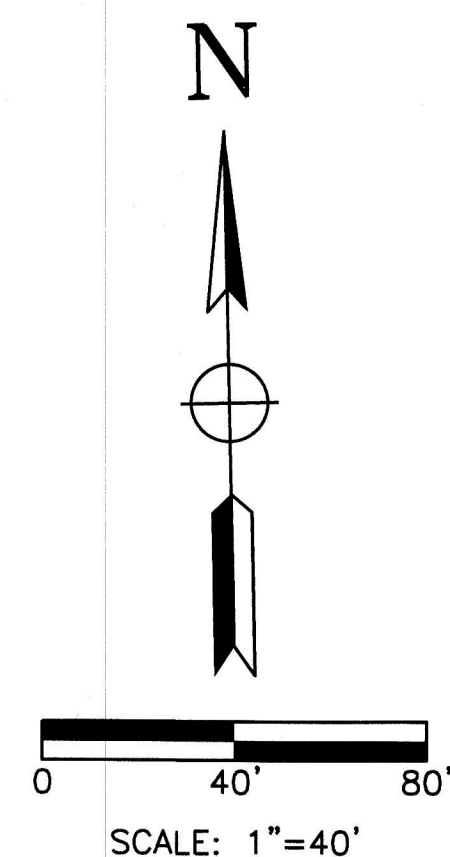


INTERIM PHASE 1K

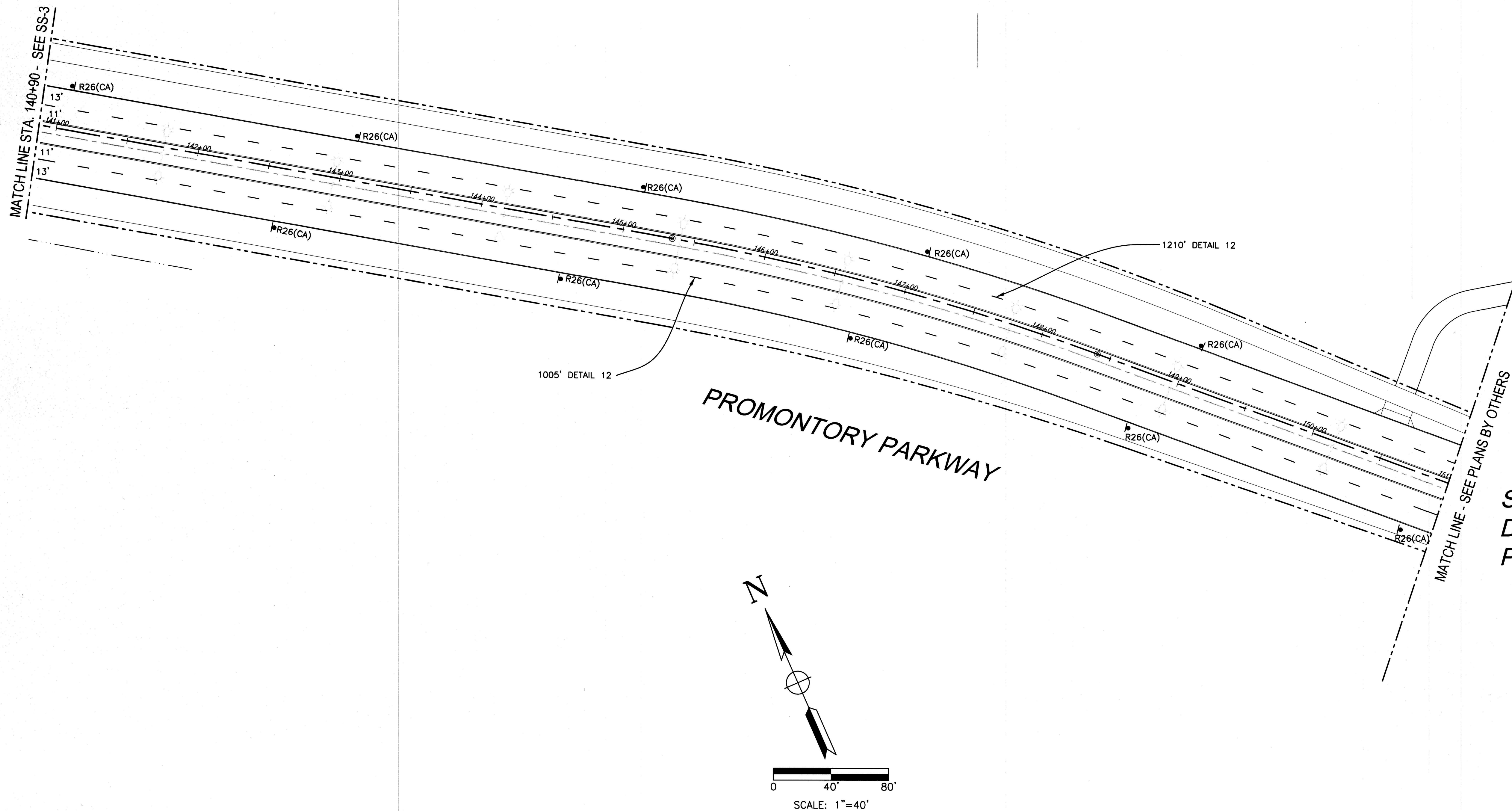


DESIGNED BY: ESB	DRAWN BY: LP	CHECKED BY: ESB	SCALE: 1"=40'
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OF 173 SHEETS



L:\GTIES\Tracy\163-154 Phase K\ACAD\163-154 Phase K SS 100.1% - Interim.dwg 4-13-21 02:32:41 PM ebjrkund



INTERIM PHASE 1K

SIGNING AND STRIPING PLANS
PROMONTORY PARKWAY
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS - PHASE 1K

SHEET
SS-4
OF 173 SHEETS

DESIGNED BY:	ESB
DRAWN BY:	LP
CHECKED BY:	ESB
SCALE:	1"=40'

REVISIONS	DATE	DESCRIPTION	APPROVED

TJKM
4305 Hacienda Drive, Suite 550
Pittsburg, CA 94566
tjkm@tjkm.com

TJKM PROJECT NUMBER: 163-154 PHASE 1K

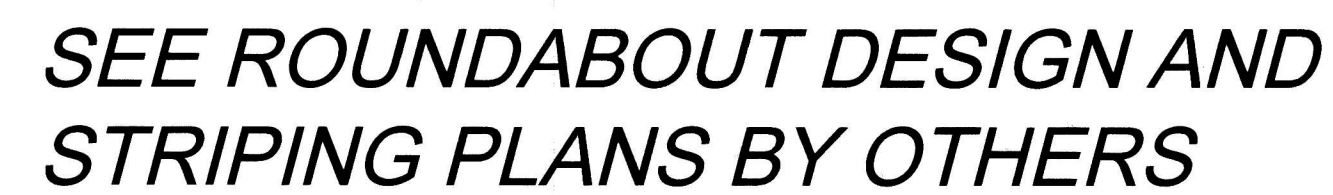
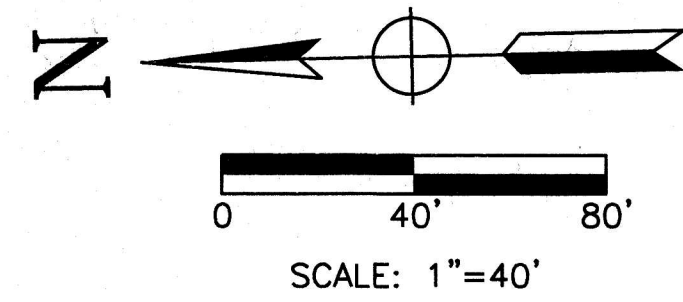


CITY OF TRACY

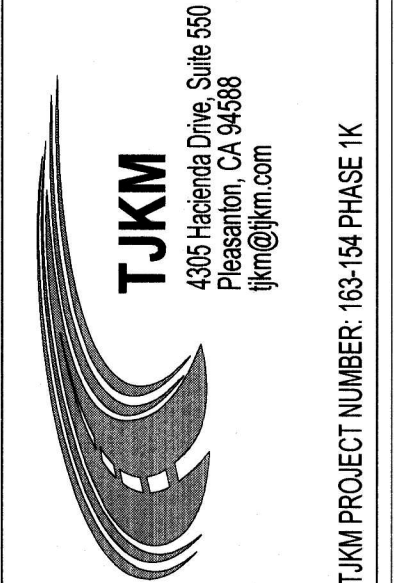
APPROVED: *Robert Armijo*
ROBERT ARMILLO, P.E. CITY ENGINEER

DATE: **2/11/21**

THE CITY ENGINEER'S REVIEW OF THESE PLANS IS LIMITED TO THE TECHNICAL ASPECTS OF THE DESIGN AND CONSTRUCTION OF THE PROJECT. THE CITY ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THE INFORMATION PROVIDED BY THE DESIGNER. THE CITY ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE SUCH MODIFICATIONS OR CORRECTIONS TO THE CITY, APPROVED AS TO DESIGN ONLY BASED ON THE INFORMATION SUBMITTED HEREON.



INTERIM PHASE 1K

[illegible]

TJCM PROJECT NUMBER: 163-154 PHASE 1K



CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELEASE THE DEVELOPER OF THE RESPONSIBILITY FOR CORRECTION OF MISTAKES, ERRORS, OR OMISSIONS CONTAINED HEREIN. IF DURING THE COURSE OF CONSTRUCTION OF THE IMPROVEMENTS, THE COMMUNITY PUBLIC INTEREST REQUIRES MODIFICATION OF A DEPARTING FROM THE SPECIFICATIONS AND DETAILS OF THE CITY OF THIRTY OF THESE PLANS, THE DEVELOPER SHALL BE RESPONSIBLE FOR THE COST OF SUCH MODIFICATIONS. THE CITY SHALL BE RESPONSIBLE FOR THE COST OF THE DEPARTMENT AND TO SECURE THE MANNER IN WHICH THE SAME IS TO BE MADE AT NO COST TO THE CITY. APPROVED AS TO DESIGN ONLY BASED ON THE INFORMATION SUBMITTED HEREON.

APPROVED FOR THE CITY OF THIRTY

Robert Armujo

ROBERT ARMUJO, P.E. CITY ENGINEER

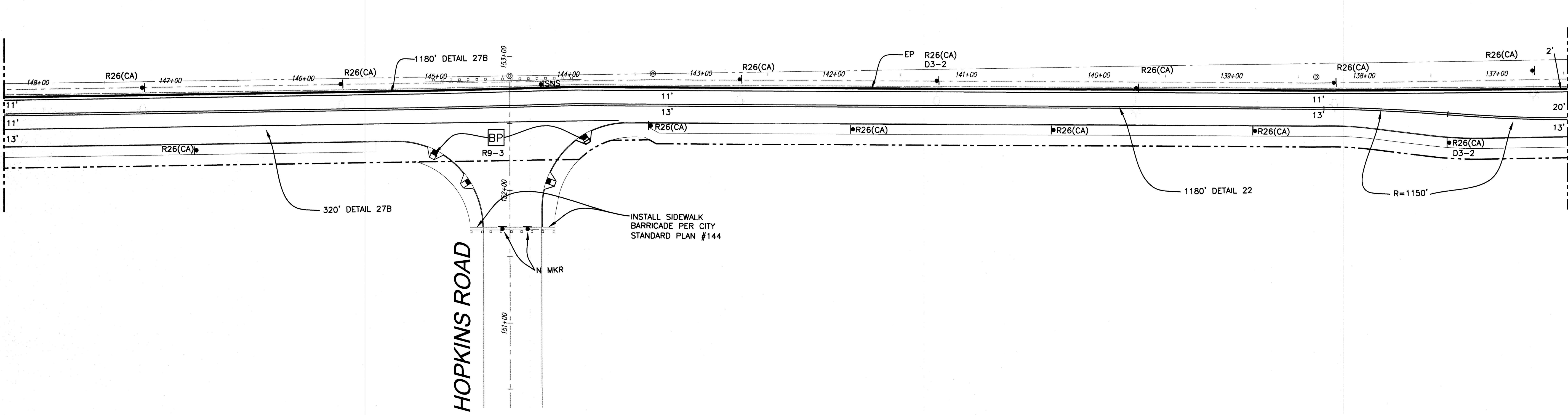
DATE: 21 MAY 21

E. CITY ENGINEER

DATE: _____

L:\CITIES\Tracy\163-154 Phase K\ACAD\163-154 Phase K SS 100.1% - Interim.dwg 4-13-21 02:33:14 PM ebjrkund

MATCH LINE STA. 148+27 - SEE ABOVE

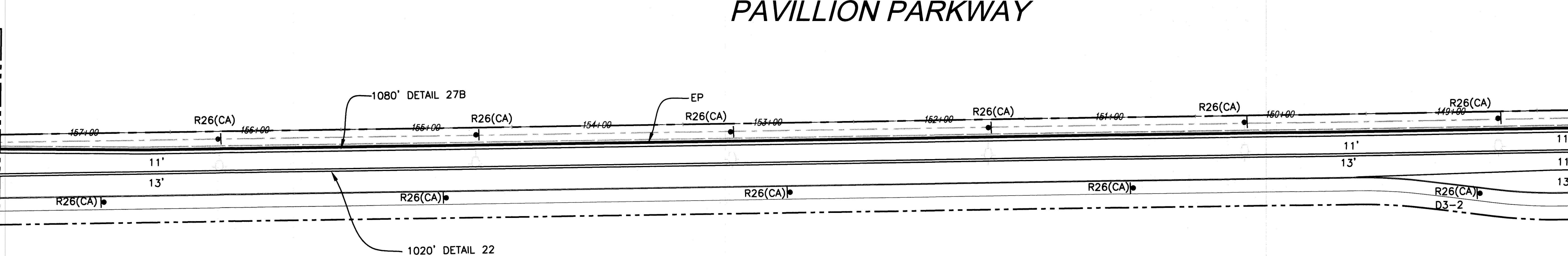


PAVILLION PARKWAY

MATCH LINE A-A - SHEET SS-5

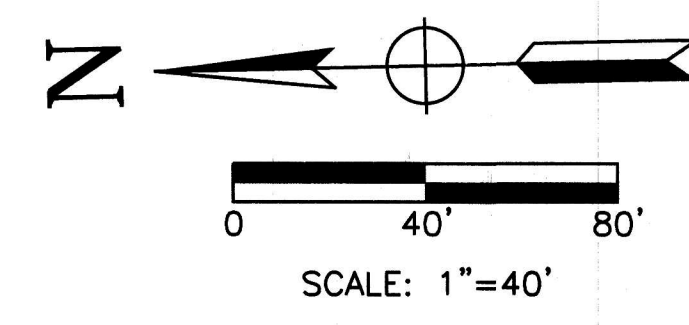
SEE ROUNDABOUT
DESIGN AND
STRIPING PLANS BY
OTHERS

MATCH LINE STA. 157+50 - SEE PLANS BY OTHERS



PAVILLION PARKWAY

MATCH LINE STA. 148+27 - SEE BELOW



INTERIM PHASE 1K

SIGNING AND STRIPING PLANS
PAVILLION PARKWAY
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS - PHASE 1K

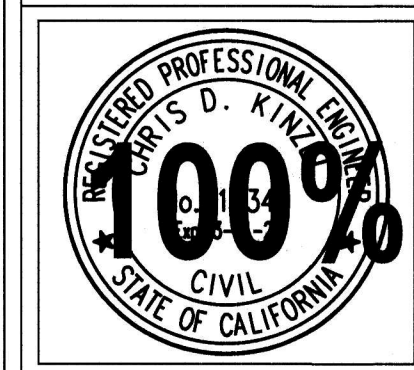
SHEET
SS-6
OF 173 SHEETS

DESIGNED BY:	ESB
DRAWN BY:	LP
CHECKED BY:	ESB
SCALE:	1"=40'

SYMBOL	DATE	REVISIONS	DESCRIPTION	APPROVED

TJKM
4205 Harwood Drive, Suite 550
Folsom, CA 95686
tjkm@tjkm.com

TJKM PROJECT NUMBER: 03-154 PHASE 1K



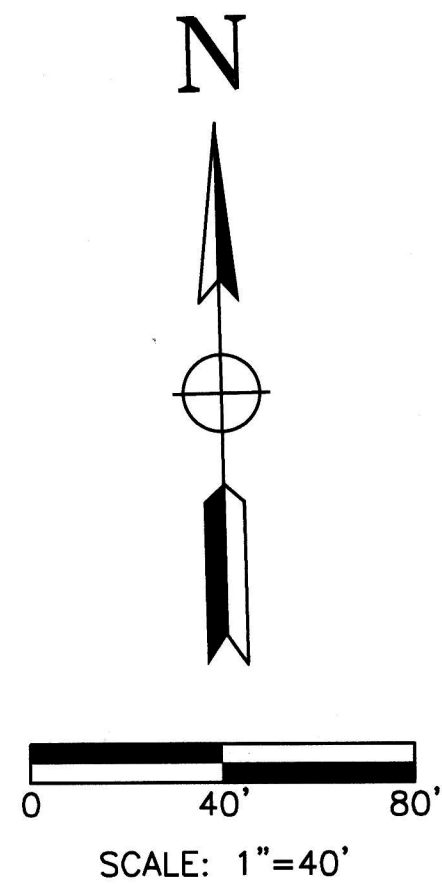
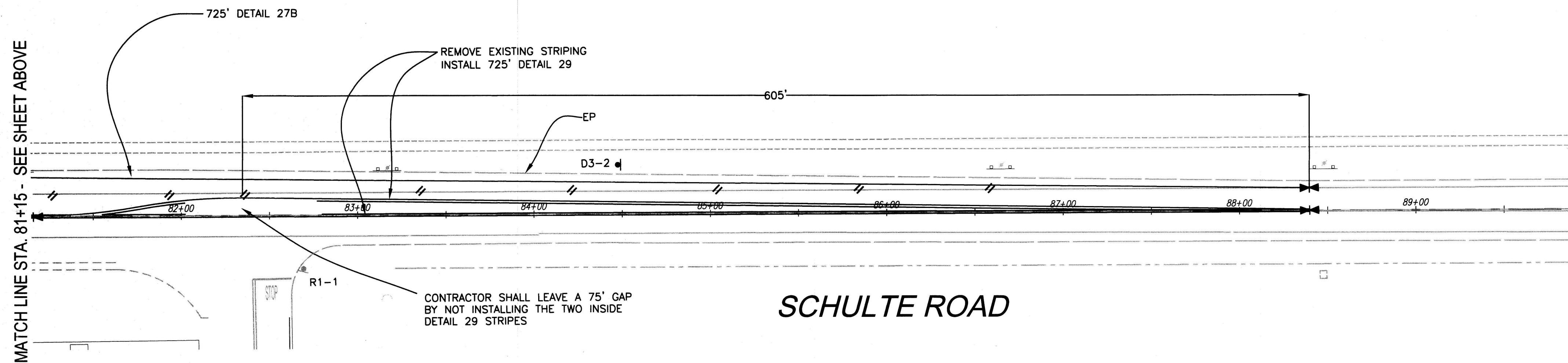
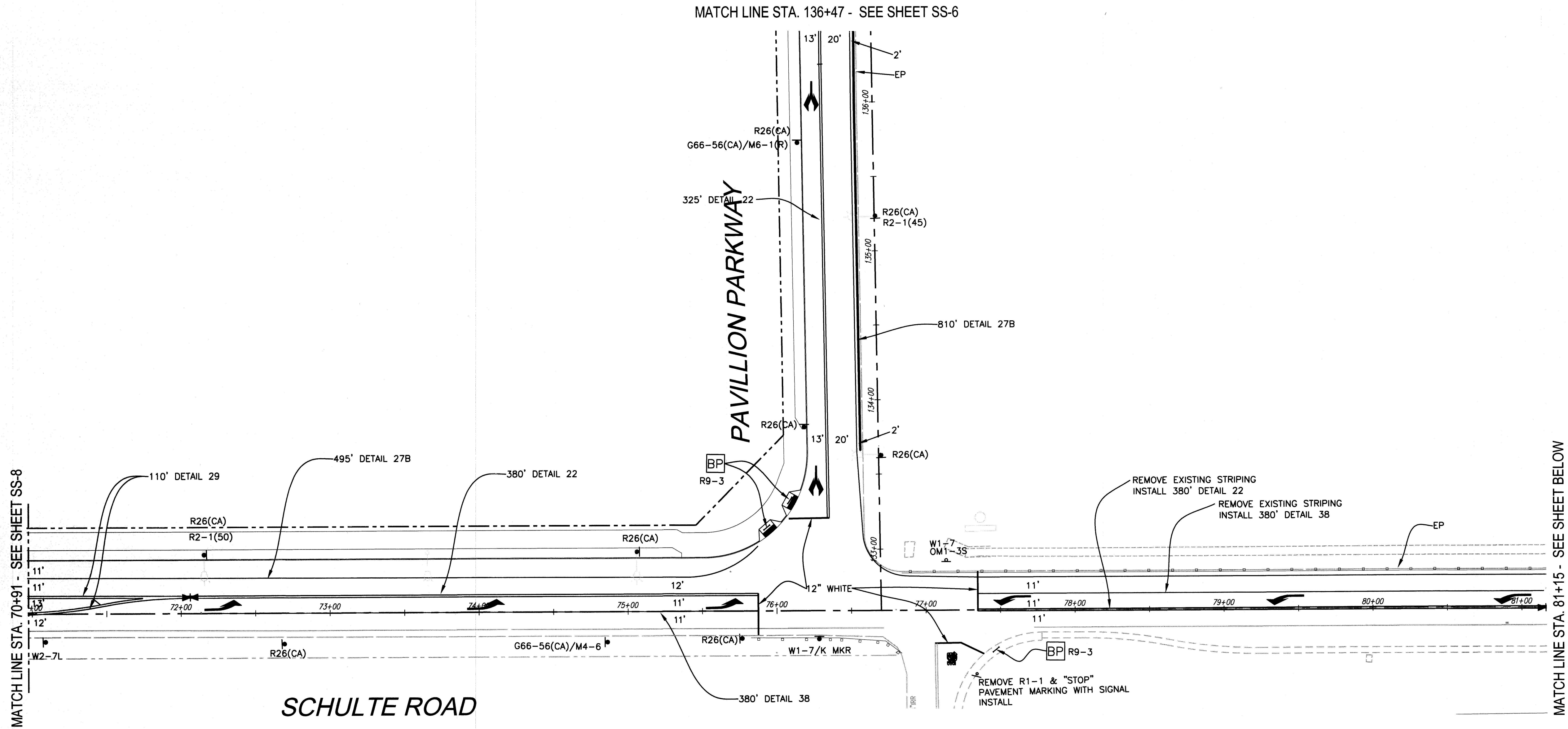
CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELEASE THE ENGINEER OF THE RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE AND OBTAIN ADDITIONAL INFORMATION FROM THE ENGINEER. THE CITY ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE AND OBTAIN ADDITIONAL INFORMATION FROM THE ENGINEER. THE CITY ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON.

Robert Armijo
ROBERT ARMILLO, P.E.
CITY ENGINEER

2/11/21
DATE

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INTERIM PHASE 1K

SIGNING AND STRIPING PLANS
PAVILLION PARKWAY
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS - PHASE 1K

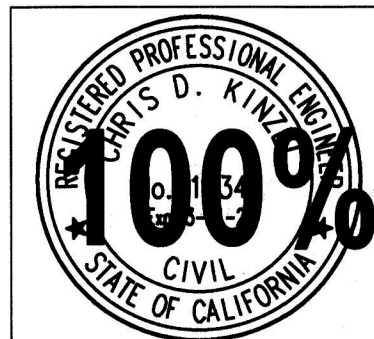
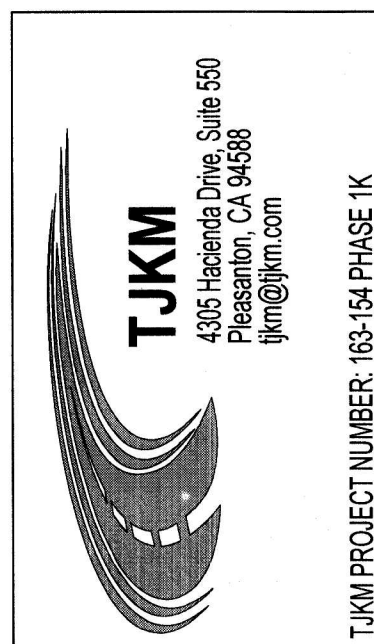
DESIGNED BY:
ESB

DRAWN BY:
LP

CHECKED BY:
ESB

SCALE:
1"=40'

REVISIONS		APPROVED
SYMBOL	DATE	DESCRIPTION



CITY OF TRACY

DATE: 2/11/21

ROBERT ARMijo, P.E. CITY ENGINEER

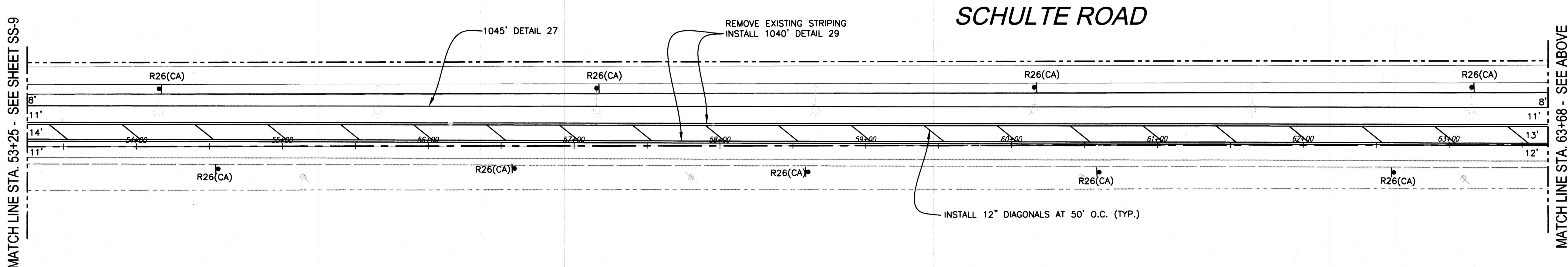
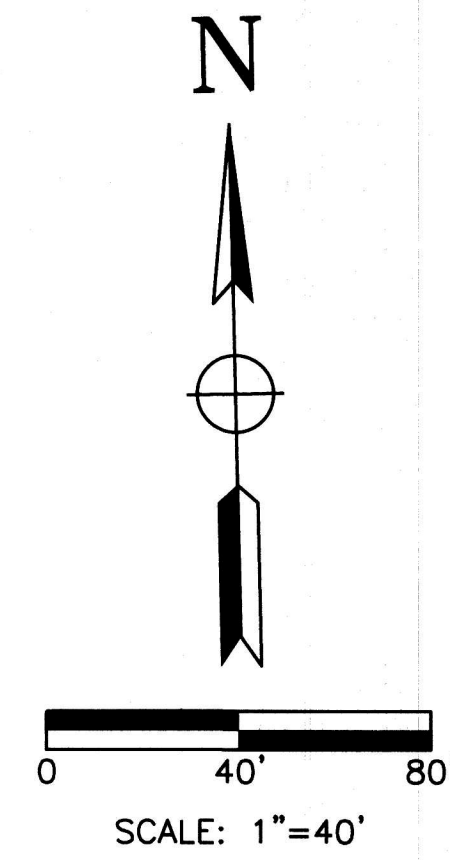
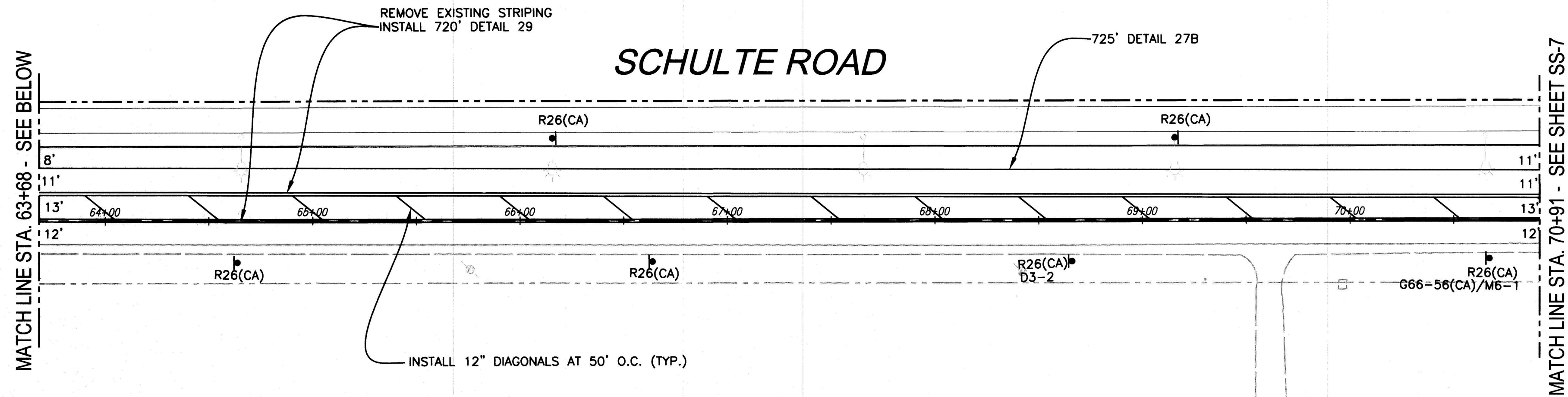
DESIGNED BY: ESB

DRAWN BY: LP

CHECKED BY: ESB

SCALE: 1"=40'

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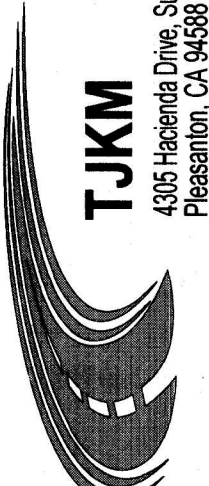


INTERIM PHASE 1K

SIGNING AND STRIPING PLANS
SCHULTE ROAD
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS - PHASE 1K

SHEET
SS-8
OF 173 SHEETS

REVISIONS			
SYMBOL	DATE	DESCRIPTION	APPROVED



TJKM
4035 Haberdorn Drive, Suite 550
Tracy, CA 95386
tjm@tjm.com

TJKM PROJECT NUMBER: 163-154 PHASE 1K



CITY OF TRACY

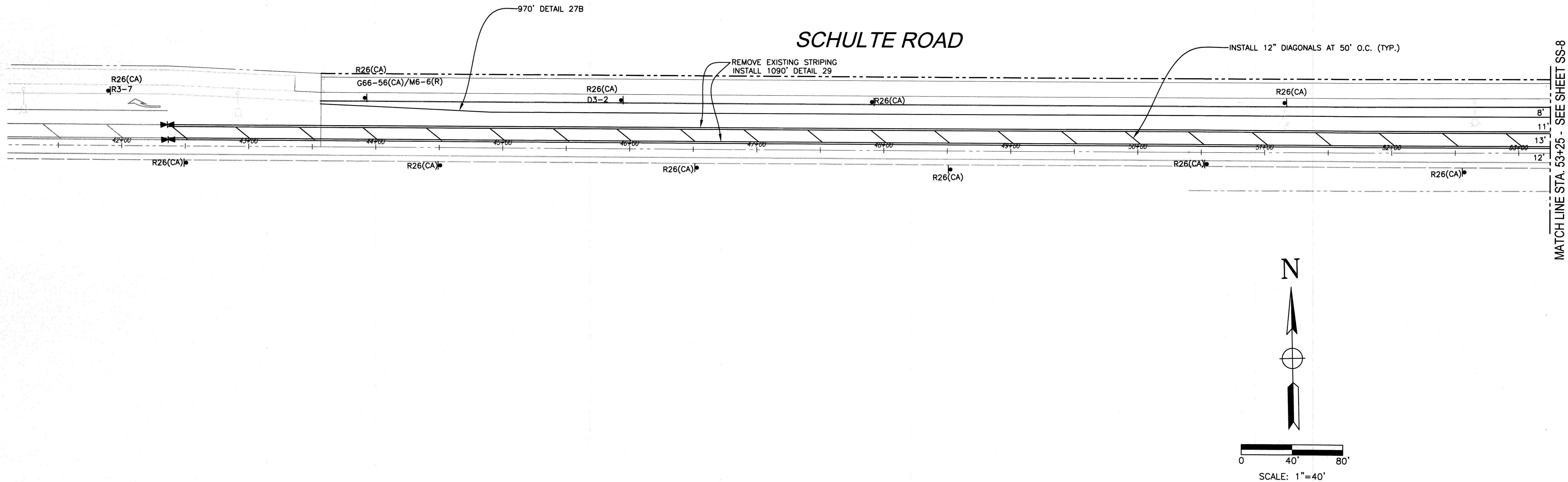
APPROVED FOR THE CITY OF TRACY: 
ROBERT ARMILLO, P.E. CITY ENGINEER

DATE: **21 MAY 21**

FOR THE CITY OF TRACY: 
ROBERT ARMILLO, P.E. CITY ENGINEER

THE CITY ENGINEER SHALL REVIEW THE PLANS FOR CONFORMANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS. THE CITY ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE SLIGHT MODIFICATIONS OR CORRECTIONS TO THE PLANS. THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT.

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INTERIM PHASE 1K

CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELIEVE THE DESIGNER OF THE RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY ENGINEER'S REVIEW IS LIMITED TO THE TECHNICAL ASPECTS OF THE PLANS AND DOES NOT CONSTITUTE AN ENDORSEMENT OF THE PROJECT OR A GUARANTEE OF THE RESULTS. THE CITY ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE SUCH MODIFICATIONS OR CORRECTIONS AS MAY BE NECESSARY TO PROTECT THE PUBLIC INTEREST AND TO THE SAFETY OF THE PUBLIC. THE CITY ENGINEER'S REVIEW IS LIMITED TO THE TECHNICAL ASPECTS OF THE PLANS AND DOES NOT CONSTITUTE AN ENDORSEMENT OF THE PROJECT OR A GUARANTEE OF THE RESULTS.

Robert Armas, P.E. CITY ENGINEER

21 MAY 21 DATE



TJKM

4320 Hacienda Drive, Suite 150
Fremont, CA 94538
tjm@tjm.com

TJKM PROJECT NUMBER: 163-154 PHASE 1K

SYMBOL	DATE	REVISIONS	DESCRIPTION	APPROVED

DESIGNED BY: ESB	DRAWN BY: LP	CHECKED BY: ESB	SCALE: 1"=40'
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**SIGNING AND STRIPING PLANS
SCHULTE ROAD
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS - PHASE 1K**



SS-1

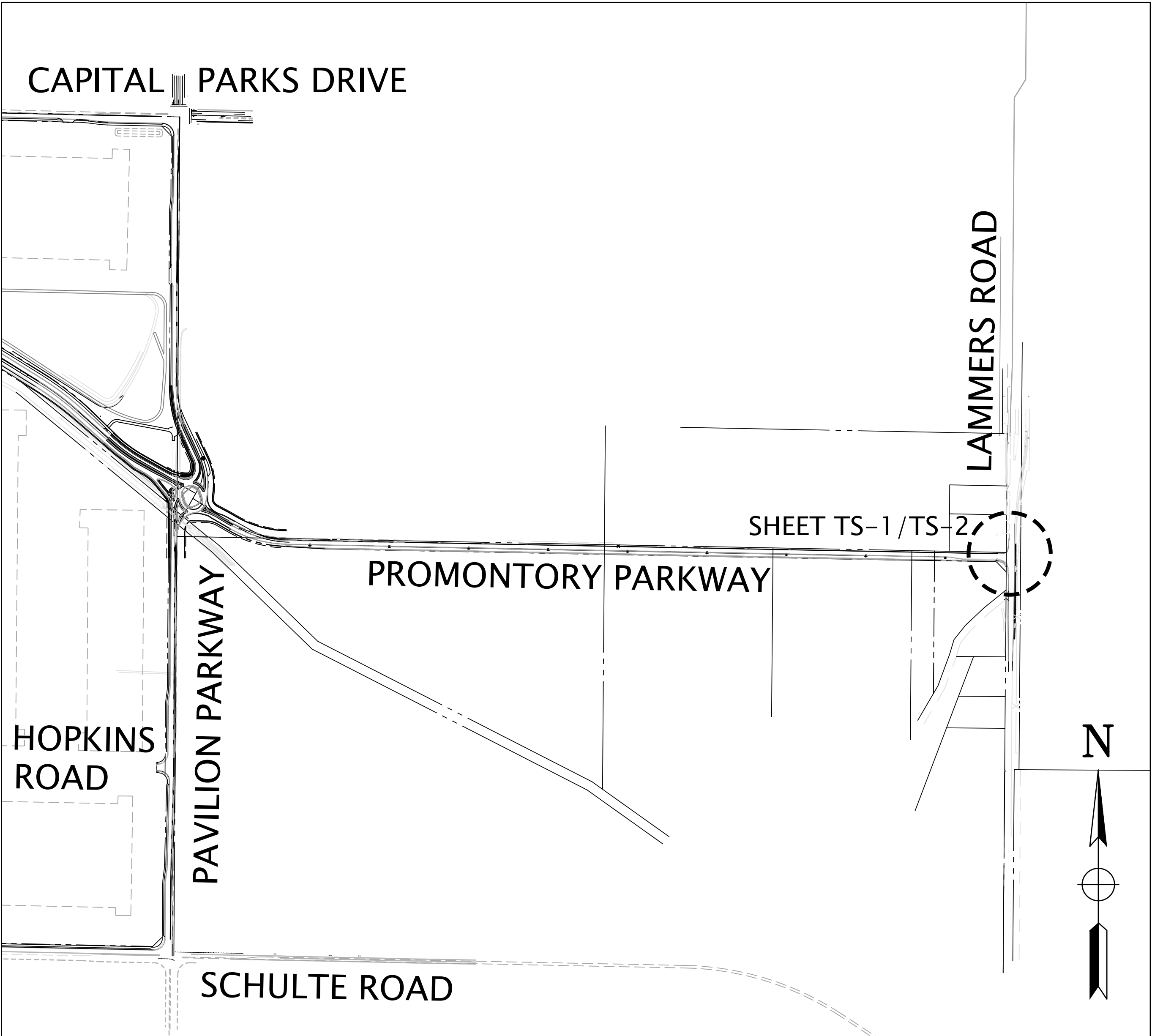
ROBERT ARMIJO, P.E. CITY ENGINEER

INTERNATIONAL PARK OF COMMERCE PROMONTORY EXTENSION INTERIM

TRAFFIC SIGNAL PLANS FOR THE INTERSECTION OF PROMONTORY PARKWAY & LAMMERS ROAD

SHEET INDEX

No.	DRAWING	DESCRIPTION
1	TS-T	TITLE SHEET, LEGEND, NOTES, AND DETAILS
PROMONTORY PARKWAY AND LAMMERS ROAD		
2	TS-1	TRAFFIC SIGNAL PLANS
3	TS-2	CONDUCTOR AND EQUIPMENT SCHEDULES



VICINITY MAP
NO SCALE

GENERAL NOTES: (FOR ALL TRAFFIC SIGNAL SHEETS)

- ALL WORK SHALL CONFORM TO THE LATEST REVISIONS OF THE 2018 STATE STANDARD PLANS AND STANDARD SPECIFICATIONS AND THE LATEST REVISIONS OF THE 2014 CAMUTCD, CITY OF TRACY STANDARDS AND SPECIFICATIONS, AND THE SPECIAL PROVISIONS.
- SIGNAL AND LIGHTING EQUIPMENT, INCLUDING STANDARDS, PULL BOXES, CABINETS, CONDUIT, VIDEO DETECTION CAMERA UNITS, AND DETECTORS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. FINAL LOCATIONS ARE TO BE VERIFIED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL GIVE TWO FULL WORKING DAYS NOTICE TO THE ENGINEER FOR VERIFICATION.
- LOOP DETECTORS SHALL BE CENTERED IN THEIR EFFECTIVE LANE WIDTHS OR LOCATED THREE FEET FROM ADJACENT LANE. ALL LOOPS SHALL BE INSTALLED PRIOR TO FINAL LIFT.
- ALL VEHICLE HEADS SHALL HAVE 12" LENSES AND LOUVERED METAL BACKPLATES. ALL SIGNAL INDICATIONS AND PEDESTRIAN HEADS SHALL UTILIZE LIGHT EMITTING DIODE (LED) SIGNAL MODULES.
- ALL PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED 42", NO MORE THAN 48" (SEE MUTCD 4E.08, 04, F) FROM GROUND LEVEL, HAVE 2-INCH DIAMETER ACTUATORS, BE AUDIBLE AND BE ADA APPROVED.
- ALL PEDESTRIAN PUSH BUTTONS SHALL BE NO FURTHER THAN 10" FROM THE FACE OF RETAINING CURB PER ADA STANDARDS.
- ALL PEDESTRIAN SIGNAL HEADS SHALL BE COUNT-DOWN TYPE, PER CITY STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UTILITIES WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CONTACT USA, (800) 642-2444, AT LEAST TWO FULL WORKING DAYS BEFORE BEGINNING WORK. WHERE MARKINGS ARE NEAR PROPOSED FOUNDATIONS, THE CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES BY POTHOLING PRIOR TO EXCAVATING.
- ALL PULL BOXES SHALL BE NO. 6, UNLESS OTHERWISE NOTED ON THE PLANS. PULL BOXES SHALL NOT BE INSTALLED IN CURB RAMPS. PULL BOXES SHALL BE INSTALLED IN CONDUIT RUNS AT A MAXIMUM 200' SPACING. ALL PULL BOXES INSTALLED IN DIRT AREAS SHALL HAVE CONCRETE COLLAR INSTALLED AROUND THEM.
- THE CONTRACTOR SHALL PROVIDE ALL SIGNAL HEADS, CABLES/CONDUCTORS, DETECTORS AND OTHER EQUIPMENT NECESSARY FOR THE SIGNAL TO OPERATE AS SHOWN ON THE PHASE DIAGRAM.
- ALL STREET NAME SIGNS INSTALLED ON THE SIGNALS SHALL BE PER THE CITY STANDARD PLANS.
- CONTRACTOR SHALL CONFIRM OVERHEAD UTILITY CLEARANCE PRIOR TO ORDERING POLES.

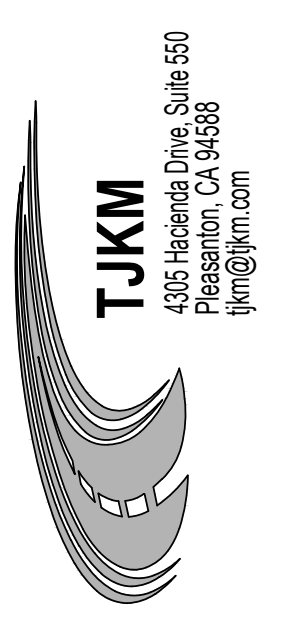
LEGEND: (FOR ALL TRAFFIC SIGNAL SHEETS)

- CT TYPE E LOOP TO BE INSTALLED FOR TRAFFIC COUNT PURPOSES
- TYPE E LOOP DETECTOR CONFIGURATION PER STATE STANDARD PLAN RSP ES-5B. LOOP SEALANT SHALL BE STATE APPROVED ELASTOMERIC SEALANT OR HOT MELT RUBBERIZED
- ⊗ TYPE F LOOP DETECTOR CONFIGURATION SEE CALTRANS RSP ES-5B. LOOP SEALANT SHALL BE STATE APPROVED ELASTOMERIC SEALANT OR HOT MELT RUBBERIZED.
- EXISTING DETECTOR HANDHOLE
- NEW DETECTOR HANDHOLE
- ➡ EMERGENCY VEHICLE UNIT DETECTION (EVUD) UNIT EVUDA DENOTES CHANNEL "A"
- CCTV CAMERA
- (T) TRAFFIC RATED PULL BOX

CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELEASE THE DEVELOPER OF THE RESPONSIBILITY FOR CORRECTION OF MISTAKES, ERRORS, OR OMISSIONS CONTAINED HEREIN. IT IS THE RESPONSIBILITY OF THE DEVELOPER TO OBTAIN NECESSARY PERMITS AND TO OBTAIN NECESSARY APPROVALS FROM THE CITY OF TRACY. THE CITY OF TRACY IS NOT RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OR MAINTENANCE OF THE PROJECT. THE CITY OF TRACY IS NOT RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OR MAINTENANCE OF THE PROJECT. THE CITY OF TRACY IS NOT RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OR MAINTENANCE OF THE PROJECT.

ROBERT ARMUJO, P.E. CITY ENGINEER DATE:



TJKM PROJECT NUMBER: 163-177 PROMONTORY EXTENSION

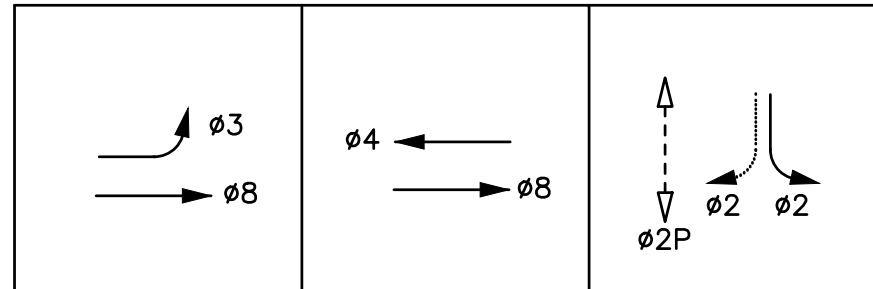
SYMBOL	DATE	REVISIONS	DESCRIPTION	APPROVED

DESIGNED BY: ESB	DRAWN BY: AM	CHECKED BY: ESB	SCALE: AS SHOWN
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TRAFFIC SIGNAL TITLE SHEET,
LEGEND, NOTES AND DETAILS
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS
PROMONTORY EXTENSION

SHEET
TS-T
OF 4 SHEETS

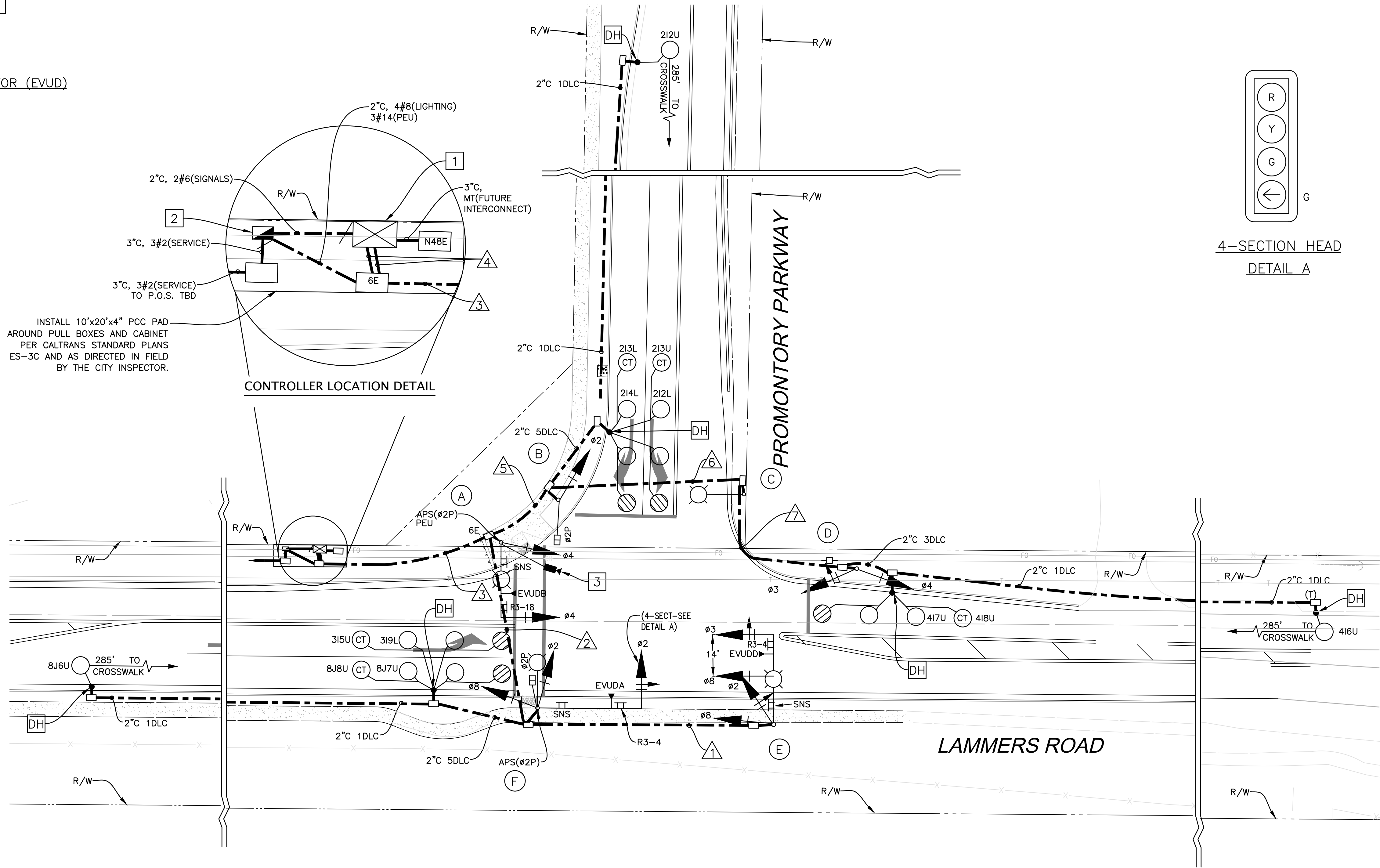
STEADY DEMAND SEQUENCE



PROPOSED PHASE DIAGRAM

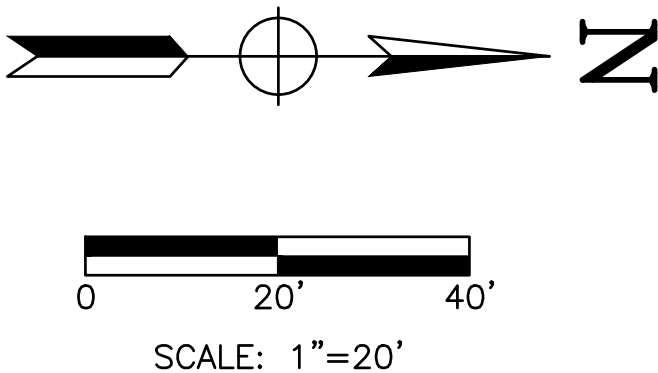
EMERGENCY VEHICLE UNIT DETECTOR (EVUD)

CHANNEL A = 2
CHANNEL B = 4
CHANNEL D = 8 + 3



PROJECT NOTES (THIS SHEET ONLY):

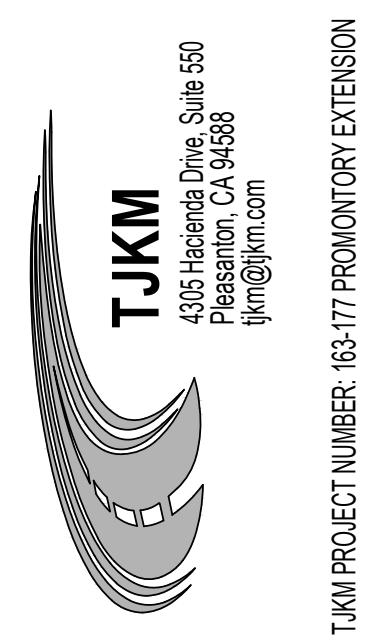
- FURNISH AND INSTALL TYPE 2070 CONTROLLER IN PROPOSED TYPE 332 CABINET. FRONT DOOR OF CABINET SHALL FACE SOUTH. CABINET SHALL BE 10' MINIMUM FROM SERVICE ENCLOSURE. FURNISH AND INSTALL FIBER DISTRIBUTION UNIT AND FIBER/ETHERNET SWITCH FOR SIGNAL INTERCONNECT. LOCATE CABINETS AS DIRECTED BY THE ENGINEER.
- FURNISH AND INSTALL TYPE III-AF SERVICE EQUIPMENT ENCLOSURE PER DETAILS ON STATE STANDARD PLANS ES-2C AND ES-2D. FURNISH AND INSTALL BACK-UP BATTERY SYSTEM (BBS). ATTACH BBS TO THE BACK OF THE SERVICE ENCLOSURE. DOOR SHALL FACE EAST.
- FURNISH AND INSTALL CCTV CAMERA (MODEL AXIS Q6034-E), SEE MOUNTING DETAIL ON SHEET TS-2.



CITY OF TRACY

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ROBERT ARMJO, P.E. CITY ENGINEER



REVISIONS	DATE	DESCRIPTION	APPROVED

DESIGNED BY: ESB	DRAWN BY: AM	CHECKED BY: ESB	SCALE: AS SHOWN
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TRAFFIC SIGNAL PLANS
PROMONTORY PARKWAY AND
LAMMERS ROAD
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS
PROMONTORY EXTENSION

SHEET
TS-1
OF 4 SHEETS

INTERNATIONAL PARK OF COMMERCE PROMONTORY EXTENSION INTERIM

SIGNING AND STRIPING PLANS

SHEET INDEX

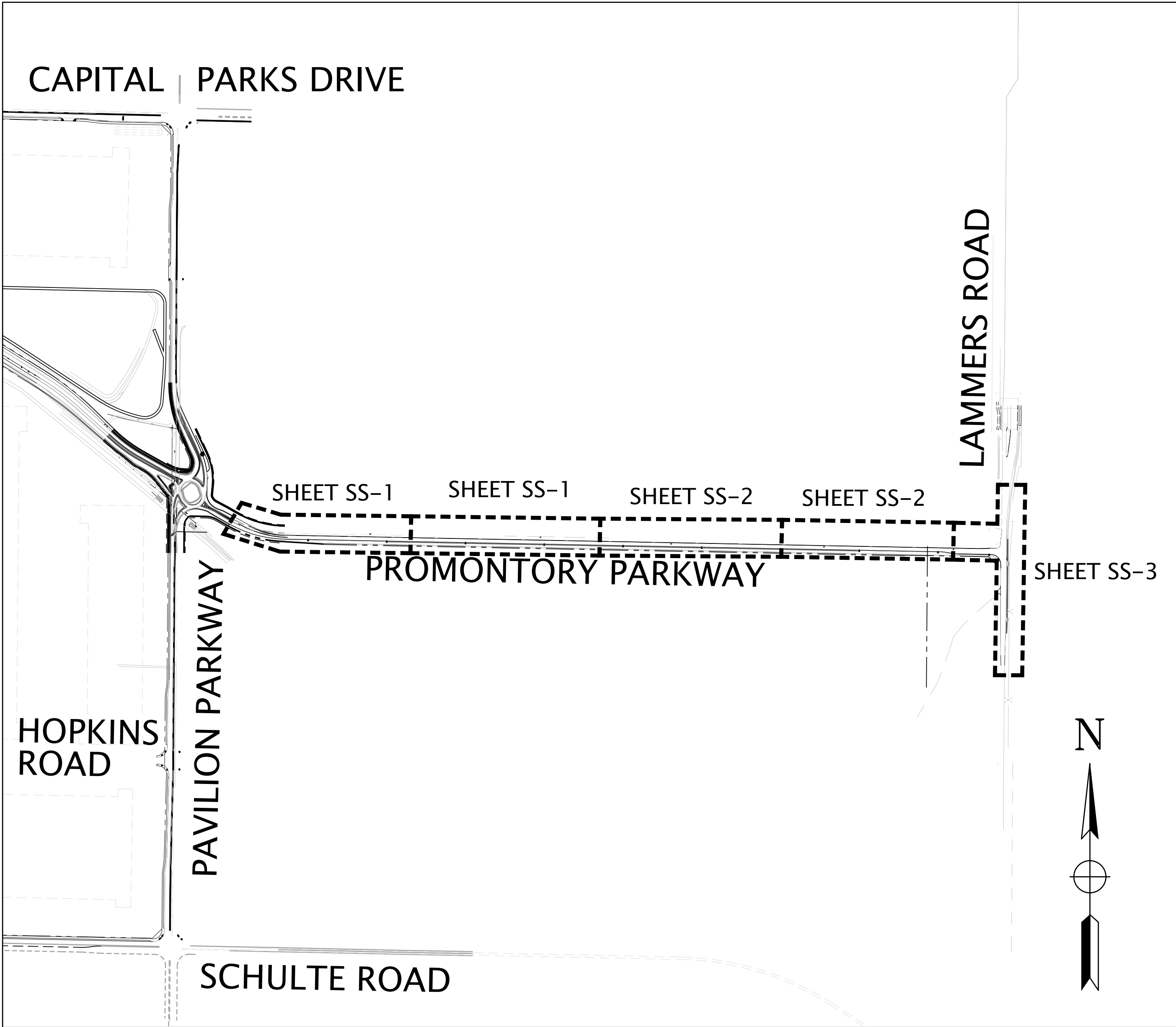
No.	DRAWING	DESCRIPTION
1	SS-T	TITLE SHEET, LEGEND, NOTES, AND DETAILS

PROMONTORY PARKWAY

2	SS-1	SIGNING AND STRIPING PLANS
3	SS-2	SIGNING AND STRIPING PLANS

PROMONTORY PARKWAY AND LAMMERS ROAD

4	SS-3	SIGNING AND STRIPING PLANS
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VICINITY MAP

NO SCALE

STRIPING NOTES (ALL STRIPING SHEETS)

- SIGNING AND STRIPING SHALL CONFORM TO THE APPLICABLE DETAILS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) 2018 STANDARD PLANS, STANDARD SPECIFICATIONS, LATEST CALIFORNIA MUTCD, SIGN SPECIFICATIONS SHEETS, AND THE SPECIAL PROVISIONS.
- EXISTING STRIPING TO BE REMOVED SHALL BE DONE BY GRINDING. AFTER GRINDING, SLURRY SEAL SHALL BE APPLIED TO THE AREA.
- ALL STRIPING SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED. ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS SHALL BE APPLIED AT A THICKNESS OF 0.150 INCH.
- ANY EXISTING STRIPING THAT CONFLICTS WITH THE PROPOSED STRIPING SHALL BE REMOVED AT THE APPROVAL OF THE CITY ENGINEER.
- ALL CROSSWALKS SHALL BE INSTALLED WITH AN INSIDE WIDTH OF 10 FEET.
- ALL SIGNS AND POSTS SHALL BE INSTALLED PER CITY STANDARD 151 AND MUST MEET MUTCD STANDARDS.
- REMOVE SIGN POST IF ALL SIGNS ON THE POST ARE TO BE REMOVED.
- INSTALL NEW POST WITH ALL RELOCATED SIGNS.
- INSTALL REFLECTIVE BLUE MARKERS AT EVERY FIRE HYDRANT.
- ALL SIGNS INSTALLED ON PROMONTORY PARKWAY SHALL BE EXPRESSWAY SIZED SIGNS
- ALL STAA SIGNS INSTALLED SHALL BE EXPRESSWAY SIZED SIGNS (BIGGER SIZE)
- ALL SIGN LOCATIONS SHALL BE VERIFIED BY FIELD INSPECTOR BEFORE INSTALLATION

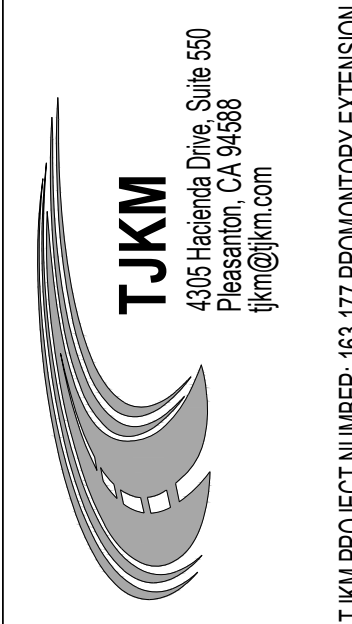
LEGEND (ALL STRIPING SHEETS)

- INSTALL NEW SIGN
- EXISTING SIGN TO REMAIN UNLESS OTHERWISE NOTED
- INSTALL NEW TYPE III PAVEMENT MARKING (THERMOPLASTIC)
- INSTALL NEW STRIPING PER DETAIL NUMBER
- CHANGE OF DETAIL NUMBERS
- EXISTING STRIPING TO REMAIN
- EXISTING STRIPING TO BE REMOVED

CITY OF TRACY

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ROBERT ARMJAO, P.E. CITY ENGINEER DATE:



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SIGNING AND STRIPING TITLE SHEET,
LEGEND, NOTES, AND DETAILS
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS
PROMONTORY EXTENSION

SHEET
SS-T

OF 4 SHEETS

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SEE SHEET SS-3 FOR ADDITIONAL SIGNS REQUIRED
SEE ROUNDABOUT DESIGN AND STRIPING PLANS BY
OTHERS FOR ALL OTHER INFO

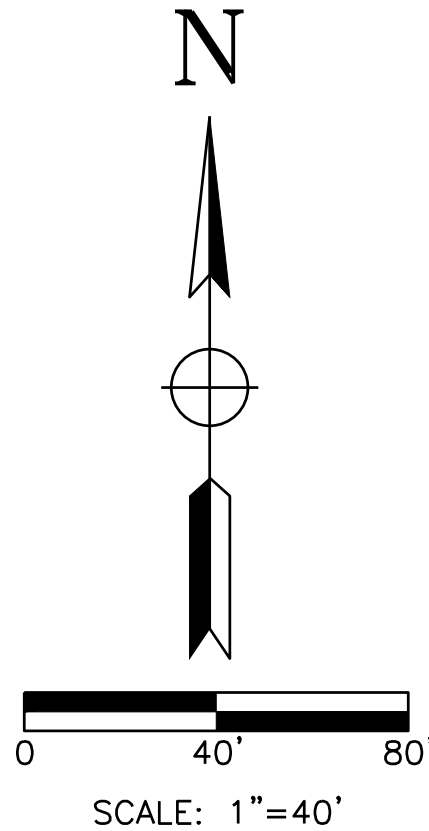
CONFORM TO ROUNDABOUT
STRIPING ONCE RAB IS APPROVED.
ADJUST STRIPING AS REQUIRED

MATCH LINE STA. 172+00 - SEE ABOVE

MATCH LINE STA. 184+00 - SEE SHEET SS-2

PROMONTORY PARKWAY

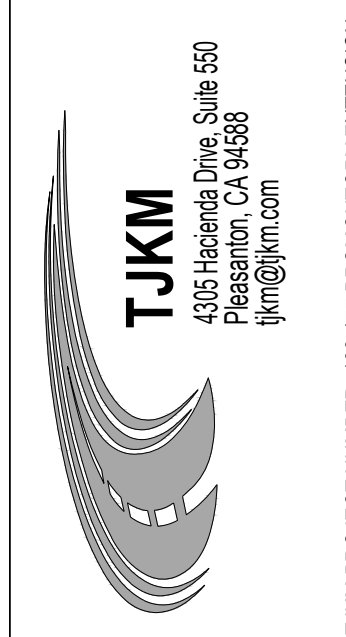
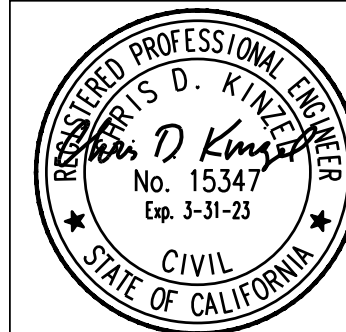
PROMONTORY PARKWAY



CITY OF TRACY

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CORRECTION OF MATERIALS, ERRORS, OR OMISSIONS CONTAINED HEREIN. IF DURING THE COURSE
OF CONSTRUCTION, THE CITY OF TRACY, OR THE CITY ENGINEER, FINDS THAT THE PLANS
DEVIATE FROM THE SPECIFICATIONS AND DETAILS OF THE CITY OF TRACY, OR THE CITY ENGINEER,
THE CITY ENGINEER SHALL HAVE THE RIGHT TO REQUIRE THE DEVELOPER TO MAKE A NO COST
REVISION TO THE PLANS TO CORRECT THE VIOLATION. THE CITY ENGINEER SHALL NOT BE
RESPONSIBLE FOR ANY COSTS INCURRED BY THE DEVELOPER IN THE EVENT OF A NO COST
REVISION TO THE PLANS. THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY COSTS
INCURRED BY THE CITY OF TRACY IN THE EVENT OF A NO COST REVISION TO THE PLANS.

ROBERT ARMijo, P.E. CITY ENGINEER DATE:



TJKM PROJECT NUMBER: 163-177 PROMONTORY EXTENSION

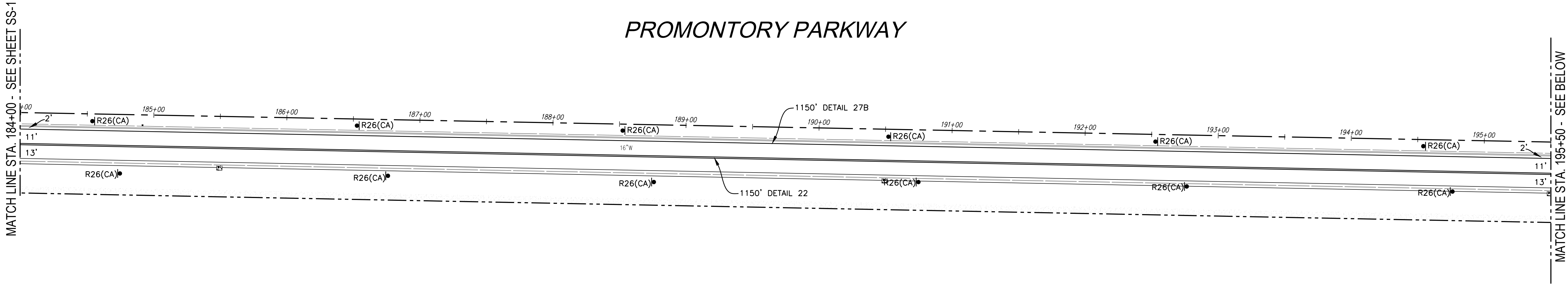
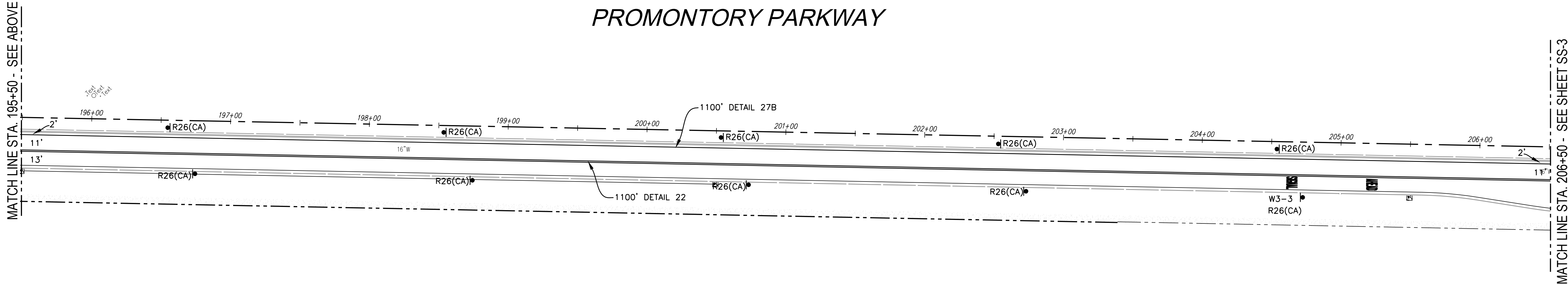
SYMBOL	DATE	REVISIONS DESCRIPTION	APPROVED

DESIGNED BY: ESB	DRAWN BY: AM	CHECKED BY: ESB	SCALE: 1" = 40'
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SIGNING AND STRIPING PLANS
PROMONTORY PARKWAY
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS
PROMONTORY EXTENSION

SHEET
SS-1
OF 4 SHEETS

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SIGNING AND STRIPING PLANS
PROMONTORY PARKWAY
INTERNATIONAL PARK OF COMMERCE
STREET IMPROVEMENT PLANS
PROMONTORY EXTENSION

SHEET
SS-2
OF 4 SHEETS

DESIGNED BY:	ESB
DRAWN BY:	AM
CHECKED BY:	ESB
SCALE:	1" = 40'

SYMBOL	DATE	REVISIONS DESCRIPTION	APPROVED

TJKM
4305 Hacienda Drive, Suite 550
Pleasanton, CA 94588
tjkm@tjkm.com

TJKM PROJECT NUMBER: 163-177 PROMONTORY EXTENSION



CITY OF TRACY

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ROBERT ARMUJO, P.E. CITY ENGINEER DATE:

