

Appendix D Peterson Elementary School Field Lighting Project Traffic Impact Study

Appendix

This page intentionally left blank.



PETERSON ELEMENTARY SCHOOL FIELD LIGHTING PROJECT

TRAFFIC IMPACT STUDY

Prepared for:
PlaceWorks

Prepared by:
DJ&A, P.C.



October 22, 2025

Table of Contents

1. Project Description	1
2. Methodology	2
2.1 Intersection Analysis	2
2.2 Determination of Significant Impacts.....	2
2.3 Average Daily Traffic Analysis.....	2
3. Study Area Intersections and Roadway Segments	3
3.1 Study Intersections.....	3
3.2 Roadway Segments.....	3
4. Traffic Study Periods and Scenarios.....	4
5. Existing Conditions.....	5
5.1 Existing Roadway Network.....	5
5.1.1 Beach Boulevard.....	5
5.1.2 Indianapolis Avenue	5
5.1.3 Newland Street.....	5
5.1.4 Farnsworth Lane	5
5.2 Existing Site Circulation and Queuing.....	5
5.3 Average Daily Traffic.....	8
5.4 Intersection Levels of Service.....	8
6. Opening Year (2026) No Project.....	11
6.1 Average Daily Traffic.....	11
6.2 Intersection Levels of Service.....	11
7. Project Conditions	13
7.1 Trip Generation and Distribution	13
7.2 Average Daily Traffic.....	13
7.3 VMT Screening	15
7.4 On-Site Circulation and Queuing	15
7.5 Parking Demand Analysis	15
7.6 Intersection Analysis – 2025 With Project Conditions.....	15
7.7 Intersection Analysis – Opening Year With Project.....	17
8. Conclusion.....	19
References.....	20

List of Tables

Table 1 Level of Service Rating	2
Table 2 Parking Availability	6
Table 3 Roadway Average Daily Traffic (ADT).....	8
Table 4 Existing Intersection Levels of Service	8
Table 5 Estimated ADT Opening Year with No Project	11
Table 6 Opening Year (2026) No Project Intersection LOS	11
Table 7 Forecast Trip Generation	13
Table 8 Forecast ADT Volumes.....	13
Table 9 Existing Year (2025) With Project Intersection LOS.....	15
Table 10 Opening Year (2026) With Project Intersection LOS.....	17
Table 11 Farnsworth Ln and Indianapolis Ave Level of Service Summary.....	19
Table 12 Beach Ave and Indianapolis Ave Level of Service Summary.....	19
Table 13 Newland St and Indianapolis Ave Level of Service Summary.....	19

List of Figures

Figure 1 Existing Access & Circulation	7
Figure 2 Intersection Geometry	9
Figure 3 Existing Year (2025) No Project Volumes	10
Figure 4 Opening Year (2026) No Project Volumes	12
Figure 5 Estimated Trip Distribution.....	14
Figure 6 Existing Year (2025) With Project Volumes.....	16
Figure 7 Opening Year (2026) With Project Volumes	18

Appendices

Appendix A—Turning Movement & Roadway Segment Counts
Appendix B—Synchro Reports [2025 Existing]
Appendix C—Synchro Reports [2026 No Project]
Appendix D—Synchro Reports [2025 Project]
Appendix E—Synchro Reports [2026 Project]

1. Project Description

Huntington Beach City School District is proposing improvements to Peterson Elementary School in Huntington Beach, California. The District is proposing field improvements at the school to allow for extracurricular sports activities to occur in the late afternoon and evening time periods. The proposed project would remove two existing unlit soccer fields and install one new lit soccer field with three field lighting poles with field lights. No off-site improvements would be proposed. No changes are proposed to the existing parking supply on the campus. The proposed project would not result in an increase in campus capacity or enrollment.

The proposed new lighted soccer field would continue to be utilized by Peterson ES students, the Peterson ES PTA, YMCA program, and AYSO players, coaches, and spectators. Installation of the field lighting poles would allow for evening uses for various after school events from the Peterson ES PTA, YMCA program, and AYSO. The Peterson ES PTA and YMCA program events would utilize the proposed field lighting. The Peterson ES PTA Fall Festival event would occur from 4:30 pm to 7:30 pm and the Spring Fling event would occur from 4:30pm to 7:30 pm. The YMCA program would utilize the field from the end of the school day to 6:00 pm on Mondays through Friday.

Specific to AYSO events, practices would extend into the evening during the winter months from approximately 4:00 pm to 7:00 pm on the weekdays. During evening use, the number of spectators would be minimal, and the proposed soccer field and field lights would be predominantly used by players and coaches, which would total approximately 60 attendees. Saturday use for AYSO would not utilize the proposed field lighting but would continue to utilize the proposed soccer field for games and practices with attendance being similar to the existing condition.

The school activities and ASYO activities noted above are existing activities that occur at the school. The proposed project would allow these activities to occur later in the evenings, especially during the fall and winter months. The proposed project would not result in any new activities occurring at the school.

Peterson Elementary is located adjacent to Farnsworth Lane to the east, with a water canal to the west. Residential housing surrounds the school to the north and to the south. The main entrance to the school is currently through the parking lot, with access off Farnsworth Lane. The access for the athletic fields is assumed to use the same entrance and exit locations with bidirectional turning movements permitted onto Farnsworth Lane outside of peak school time traffic.

2. Methodology

2.1 Intersection Analysis

The performance criteria used for evaluating traffic volumes and capacities within the study area are based on peak hour intersection volumes. Using peak hour intersection turning movement volumes and the intersection lane geometry, intersection capacity utilization (ICU) values are calculated for the PM peak hour. The ICU values represent volume to capacity (V/C) ratios for the peak hour period. This provides a suitable measure of system performance. The traffic analysis examines the PM peak hour only since this is the time period where increased or new trips are anticipated to occur due to the proposed project. No changes to AM peak trip generation are anticipated.

To provide analysis of the unsignalized intersection of Farnsworth and Indianapolis, the 6th edition of the Highway Capacity Manual (HCM) was applied to all scenarios.

2.2 Determination of Significant Impacts

Traffic levels of service (LOS) are designated A through F, with LOS A representing free flow conditions and LOS F representing severe traffic congestion. Table 1 summarizes the criteria for the intersection LOS calculations and the relationship between ICU and LOS, as defined by the 2017 General Plan Circulation Update from the City of Huntington Beach, CA (Stantec, 2017).

Table 1 describes traffic flow quality for different V/C ranges. The City of Huntington Beach has adopted a tiered LOS standard: LOS D is the performance standard for Principal intersections and LOS C is the performance standard for Secondary intersections. The two signalized intersections analyzed in this study are both designated as Secondary Intersections.

Table 1 Level of Service Rating

Level of Service (LOS)	ICU
A	0.00-0.60
B	0.61-0.70
C	0.71-0.80
D	0.81-0.90
E	0.91-1.00
F	Above 1.00

Each intersection's LOS was determined by the calculated ICU. For any intersection that would have an ICU at or above 0.91, the LOS would not be acceptable. All project intersections with an ICU better than 0.91 have an acceptable LOS for that given scenario.

2.3 Average Daily Traffic Analysis

Average daily traffic (ADT) data was collected as a part of this study in three locations. Roadway segment volumes have been included for noise and air quality analysis purposes. Existing roadway segment volumes are summarized from 24-hour counts which can be found in Appendix A. The growth rate was assumed to be 1 percent per year, and project ADT volumes were calculated from the ITE Trip Gen. Manual for the land use of soccer fields.

3. Study Area Intersections and Roadway Segments

The three arterial roads adjacent to Peterson Elementary were selected for analysis. The following intersections and roadway segments were analyzed:

3.1 Study Intersections

1. Beach Blvd and Indianapolis Ave.
2. Farnsworth Lane and Indianapolis Ave.
3. Newland St. and Indianapolis Ave.

3.2 Roadway Segments

1. Indianapolis Ave. from Beach Blvd. to Farnsworth Lane
2. Indianapolis Ave. from Kilkenny Ln to Newland St.
3. Farnsworth Lane, South of Indianapolis Ave.

Traffic data for each study intersection was collected on Thursday, January 23rd, 2025, during the PM peak period (4:00 pm– 6:00pm). Average Daily Traffic (ADT) data for each study roadway segment was also collected on Thursday, January 23rd, 2025.

4. Traffic Study Periods and Scenarios

This study analyzes typical weekday daily and PM peak hour conditions. Daily traffic conditions were analyzed for a 24-hour period for each study area roadway segment. For intersections, the PM peak hour is defined as the highest one hour of traffic occurring during the PM peak period. Traffic operations for the study area intersections and roadway segment were evaluated for each of the following scenarios:

- Existing Conditions (2025) without Project
- Opening Year (2026) without Project
- Existing Conditions (2025) with Project
- Opening Year (2026) with Project

For the purpose of this analysis, the project opening year for background traffic conditions is 2026. An ambient growth rate of 1% per year was used to forecast the future volumes. Based on the typical after school use of athletic fields from 4:00pm to 6:00 pm, analysis at the study area intersections focuses on the PM peak hour trips.

5. Existing Conditions

This section summarizes the analysis of Existing Conditions (2025) in the project study area. This scenario serves as the basis for which all subsequent scenarios are assessed. Descriptions of the existing roadway network and intersection level of service analysis results for the Existing Year (2025) No Project scenario are included in this section.

5.1 Existing Roadway Network

Selected roadways that are in the vicinity of the project area are described in this section. Items of note include existing geometry, pedestrian and bicycle facilities, speed limit, parking facilities, and adjacent land uses. The selected roadways are as follows:

5.1.1 Beach Boulevard

Beach Boulevard is a 6 lane, divided roadway that runs north and south to the west of the project site. The posted speed limit is 50 miles per hour. Sidewalks are located on the west side of Beach, south of Indianapolis Ave, and on both sides of Beach, north of Indianapolis Ave. There are signs stating 'Share the Road', but no separated bicycle facilities. The shoulder of the road serves as parallel parking. The adjacent businesses have parking on their lots. Behind the commercial zone directly adjacent to Beach, the surrounding land use is primarily residential.

5.1.2 Indianapolis Avenue

Indianapolis Avenue is a 3 lane, undivided roadway that runs east and west to the north of the project site. The posted speed limit is 35 miles per hour. Sidewalks are located on the north and south sides of Indianapolis Ave. There are bike lanes on both sides of the road. The shoulder of the road serves as parallel parking, outside of the bike lane. The surrounding land use is primarily low density residential. There is a single commercial plot on the southwest corner of Indianapolis and Newland.

5.1.3 Newland Street

Newland Street is a 5 lane, undivided roadway that runs north and south to the east of the project site. The posted speed limit is 45 miles per hour. Sidewalks are located on the east and west sides of Newland St. There are bike lanes on both sides of the road. The shoulder of the road serves as parallel parking for south bound traffic, outside of the bike lane for approx. 1000' north of Indianapolis. The south bound traffic lane condenses from 2 travel lanes to 1 to accommodate the parking lane. The surrounding land use is primarily low density residential. There is a single commercial plot on the southwest corner of Indianapolis and Newland.

5.1.4 Farnsworth Lane

Farnsworth Lane is a 2-way, residential street that runs north and south directly adjacent to the east of the project site. As a residential street, there is no posted speed limit. Sidewalks are located on the east and west sides of Farnsworth Ln. There are no designated bike facilities. The shoulder of the road serves as both parallel parking and reserved for pickup and drop-off adjacent to the school. Peterson Elementary is on the west side of Farnsworth Ln. The land use is primarily low density residential.

5.2 Existing Site Circulation and Queuing

Peterson Elementary School has parking and queuing facilities designed for the school day. There are two parking lots that are connected by a one-way access road. This provides parking spaces for the faculty and staff of the school and ensures smooth circulation during peak drop-off and pick-up times. The total parking availability for Peterson Elementary is summarized in Table 2.

Table 2 Parking Availability

Parking Location	Parking Spaces	ADA Parking Spaces
School Campus Lot	60	4
Street Parking (West)	16	-
Street Parking (East)	10	-
TOTAL	86	4

Figure 1 presents the existing site map, with access and circulation details.



FIGURE 1: EXISTING ACCESS & CIRCULATION

5.3 Average Daily Traffic

The average daily traffic (ADT) volumes for the study area roadway segments under Existing Conditions are summarized in Table 3. Existing roadway segment volumes are summarized from 24-hour counts which can be found in Appendix A.

Table 3 Roadway Average Daily Traffic (ADT)

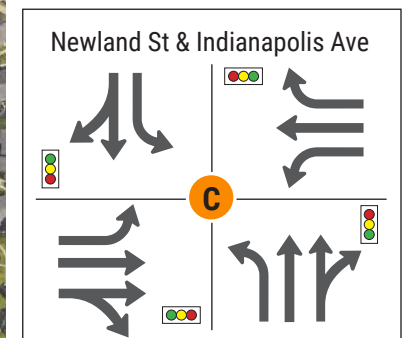
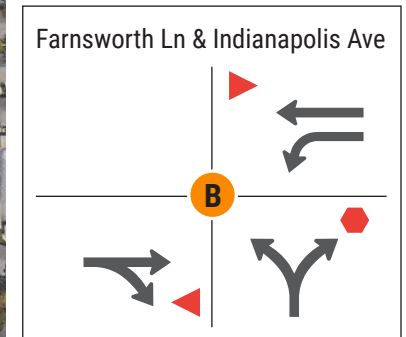
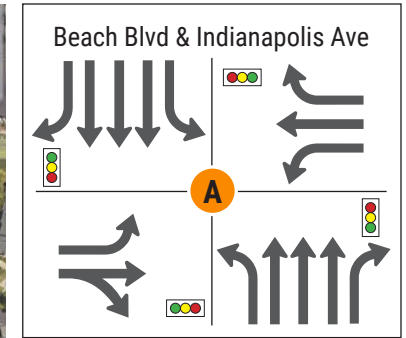
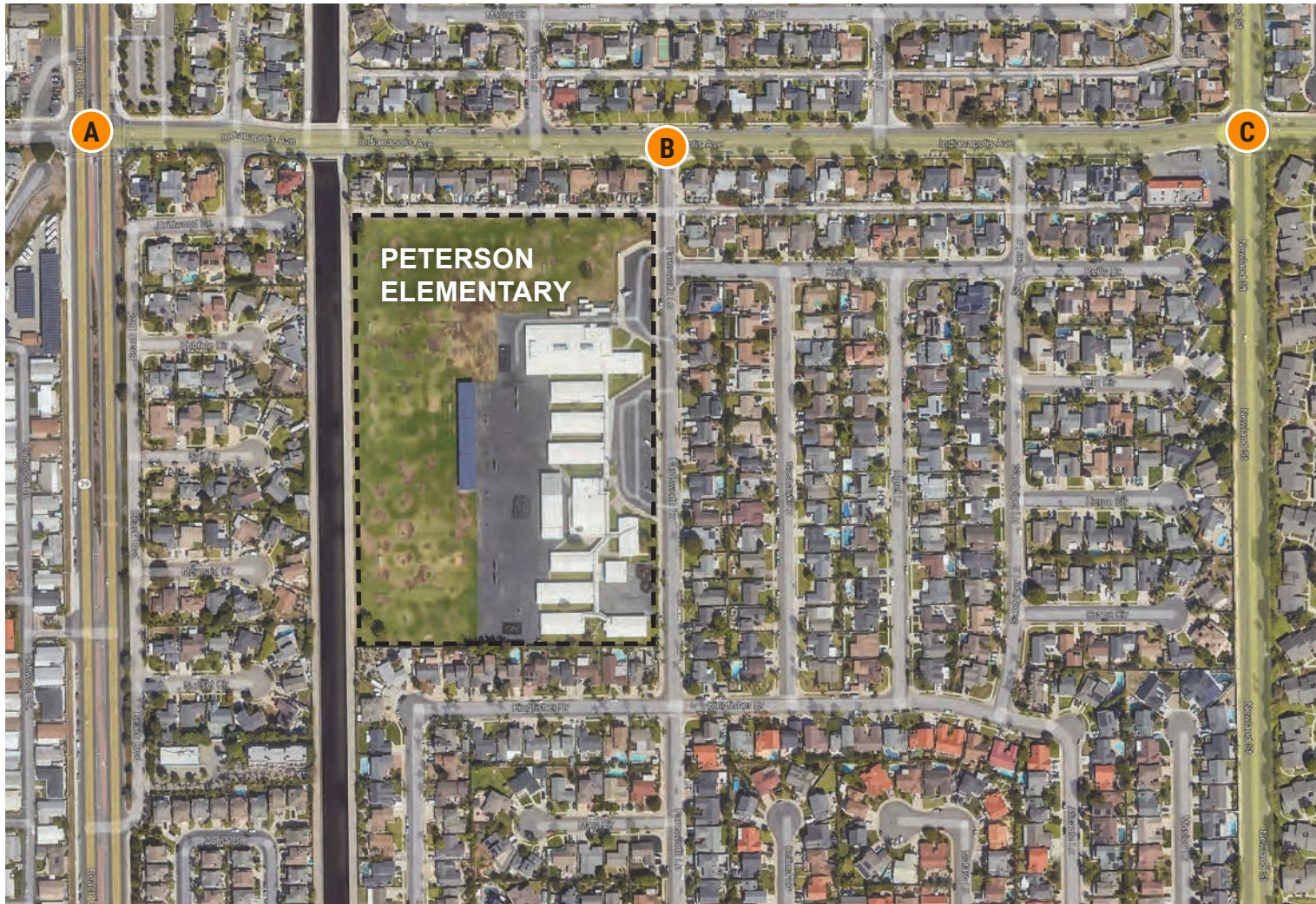
Roadway	Source	Date	EXISTING ADT
Indianapolis Ave between Beach and Farnsworth	AimTD LLC	1/23/2025	6,518
Indianapolis Ave between Kilkenny and Newland	AimTD LLC	1/23/2025	6,163
Farnsworth south of Indianapolis Ave	AimTD LLC	1/23/2025	1,685

5.4 Intersection Levels of Service

Intersection performance was determined using the methods outlined in Section 2. Table 4 summarizes the existing levels of service at the study intersections. Existing study intersection geometries are shown in Figure 2. Existing Year (2025) No Project PM peak hour turning movement volumes are shown in Figure 3. All three study intersections currently operate at an acceptable level of service during the PM peak hours.

Table 4 Existing Intersection Levels of Service

Intersection	Existing		Existing	
	V/C	LOS	HCM Delay (seconds)	LOS
Beach Ave and Indianapolis Ave	0.542	A		
Farnsworth Ln and Indianapolis Ave	0.304	A	12.2	B
Newland St and Indianapolis Ave	0.599	A		

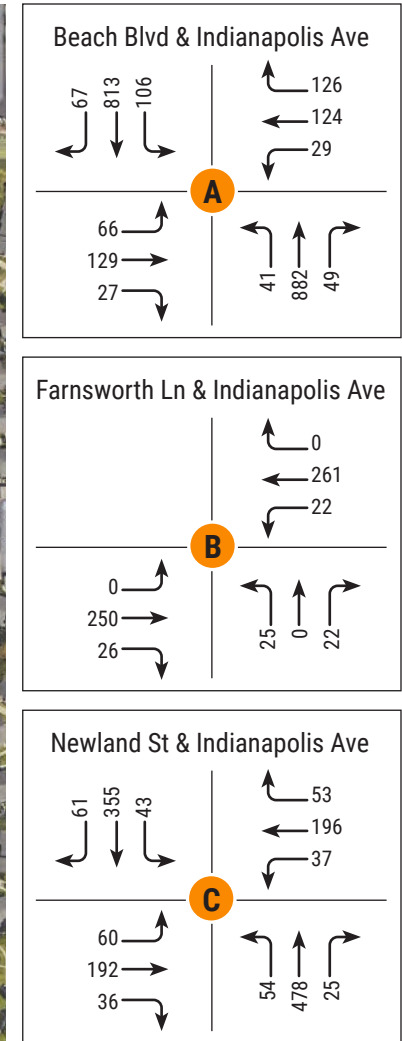
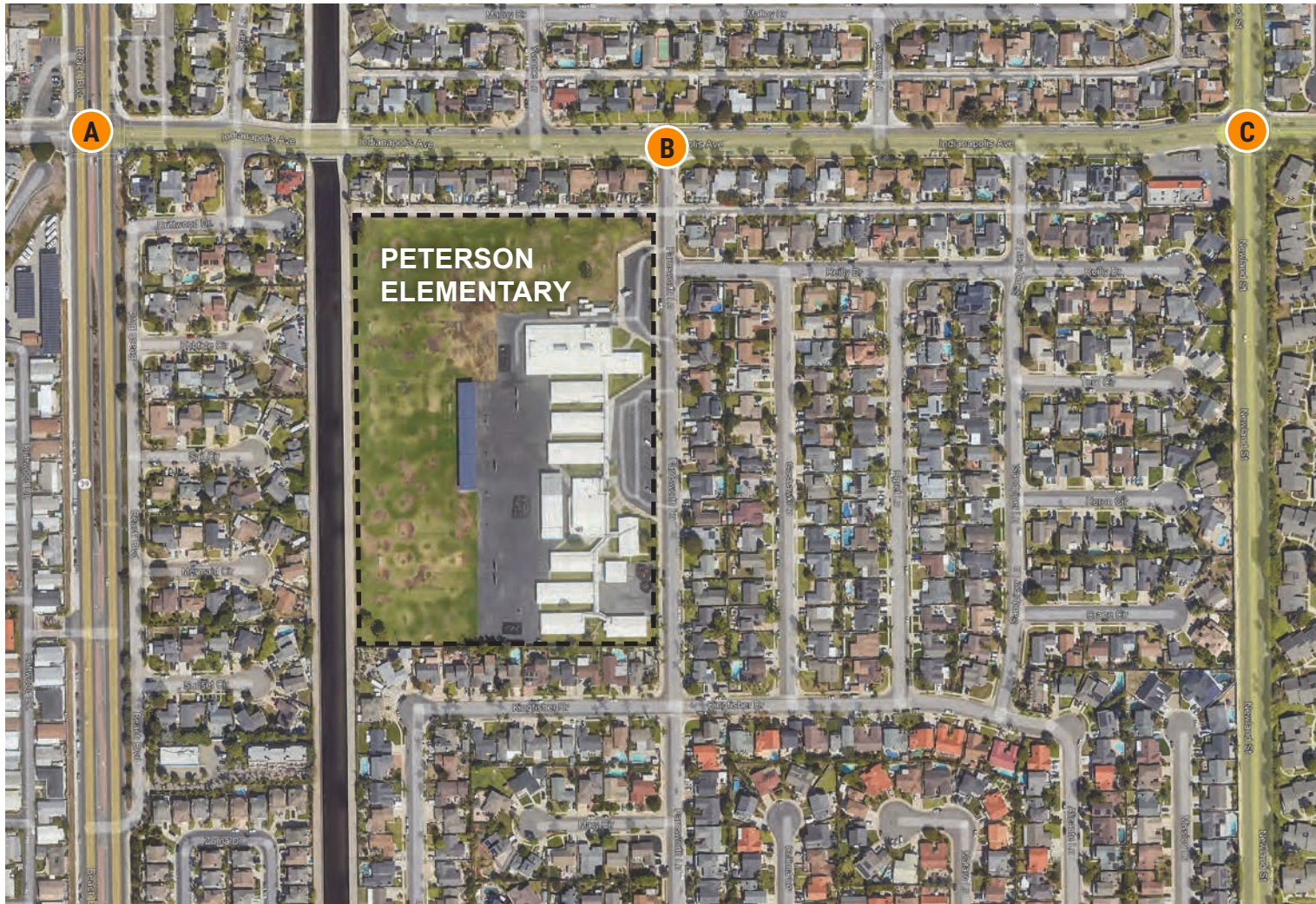


LEGEND

-  Study Intersection
-  Project Site
-  Stop Sign
-  Yield to Pedestrian Sign
-  Traffic Light



FIGURE 2: EXISTING YEAR (2025) NO PROJECT | INTERSECTION GEOMETRY



LEGEND

- X** Study Intersection
- ↘ PM Peak Hour Volume
- Project Site



FIGURE 3: EXISTING YEAR (2025) NO PROJECT | VOLUMES - PM PEAK HOUR

6. Opening Year (2026) No Project

This section presents the ADT and peak hour traffic operations for the Opening Year (2026) No Project scenario. No Project traffic volumes were developed by applying a 1 percent annual growth rate to Existing Year (2025) counts. Results for the average daily traffic and intersection level of service for the Opening Year (2026) No Project scenario are presented in this section.

6.1 Average Daily Traffic

The average daily traffic for the study area roadway segment in the Opening Year (2026) No Project scenario is presented in Table 5.

Table 5 Estimated ADT Opening Year with No Project

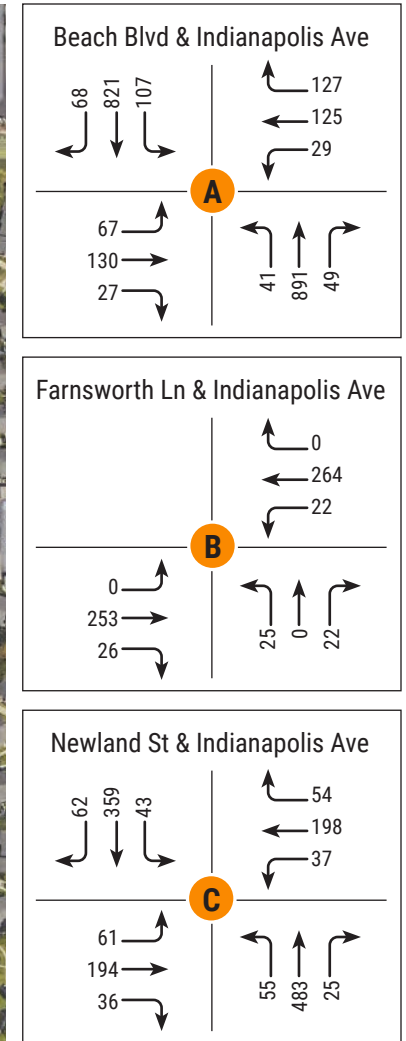
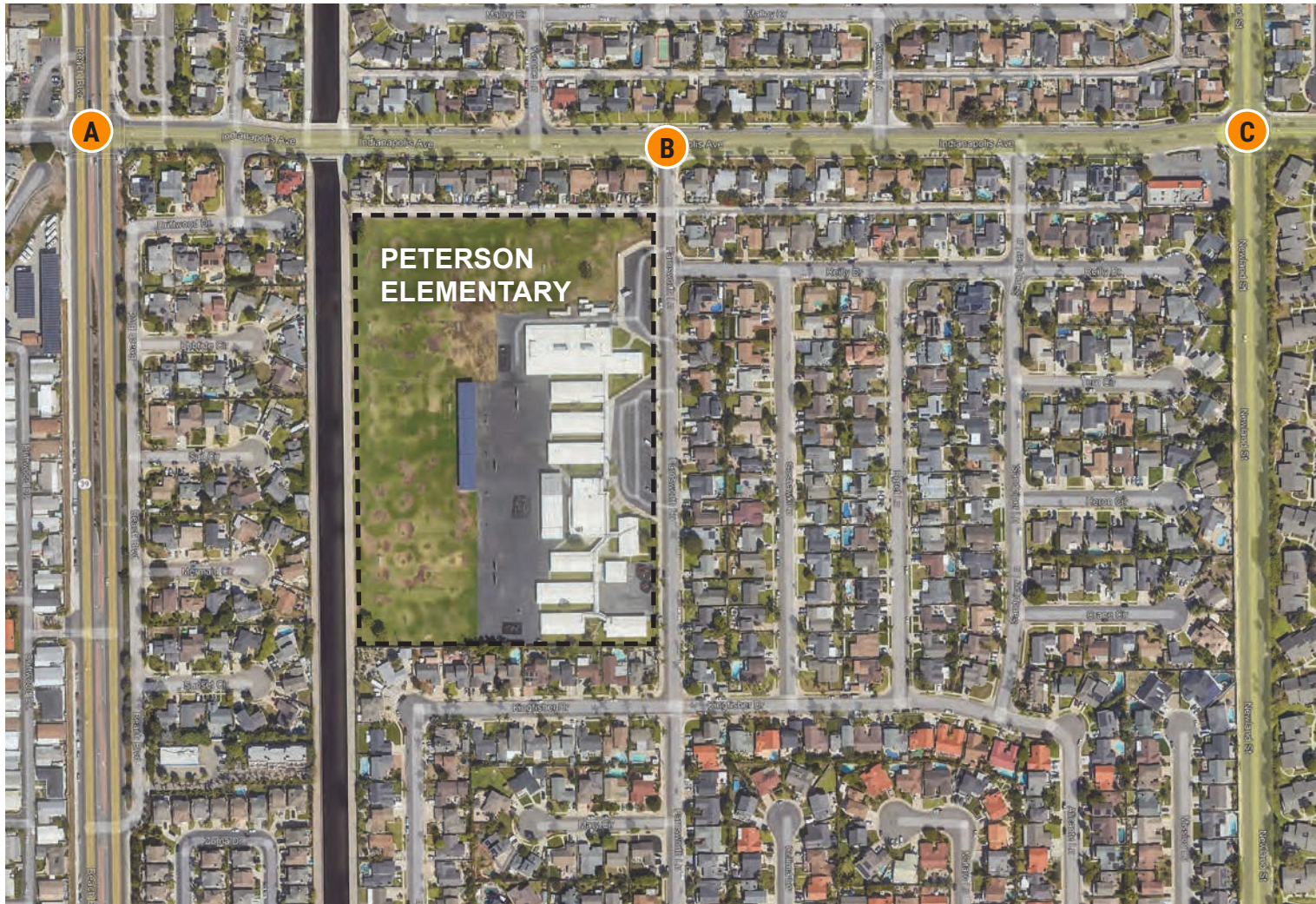
Roadway	EXISTING ADT	2026 No Project
Indianapolis Ave between Beach and Farnsworth	6,518	6,619
Indianapolis Ave between Kilkenny and Newland	6,163	6,261
Farnsworth south of Indianapolis Ave	1,685	1,774

6.2 Intersection Levels of Service

A summary of the PM peak hour intersection level of service analysis results for the Opening Year (2026) No Project scenario is presented in Table 6. Additionally, the HCM results for the intersection of Farnsworth and Indianapolis are included in Table 6. Opening Year (2026) No Project PM peak hour turning movement volumes are shown in Figure 4. All three intersections are forecasted to operate at acceptable levels of service during the Opening Year No Project conditions.

Table 6 Opening Year (2026) No Project Intersection LOS

Intersection	Existing		2026 NP		Existing		2026 NP	
	ICU	LOS	ICU	LOS	HCM Delay (s)	LOS	HCM Delay (s)	LOS
Beach Ave and Indianapolis Ave	0.542	A	0.545	A				
Farnsworth Ln and Indianapolis Ave	0.304	A	0.304	A	12.2	B	12.3	B
Newland St and Indianapolis Ave	0.599	A	0.603	A				



LEGEND

- Study Intersection
- PM Peak Hour Volume
- Project Site



FIGURE 4: OPENING YEAR (2026) NO PROJECT | VOLUMES - PM PEAK HOUR

7. Project Conditions

7.1 Trip Generation and Distribution

The trip generation for the Peterson Elementary School field improvements project was estimated using rates published in the ITE Trip Generation Manual 12th Edition. The proposed project would create additional after-school opportunities for students with a lighted soccer field. These activities would take place outside of regular school hours and would shift existing trip generation to the PM peak hour.

Table 7 shows the trip generation forecasts.

Table 7 Forecast Trip Generation

Land Use and Time Period	Trip Generation Rate	Distribution		Trips		Total
		Inbound	Outbound	Inbound	Outbound	
Soccer Field - PM Peak Hour	16.43 trips / field	66%	34%	11	5	16
Soccer Field - Weekday Daily	71.33 trips / field	50%	50%	36	35	71

The estimated trip distribution for project generated trips is shown on Figure 5.

7.2 Average Daily Traffic

The project is expected to generate 71 daily vehicle trips. Roadway segment volumes have been included for noise and air quality purposes. Existing roadway segment volumes are obtained from 24-hour counts presented in Appendix A.

Table 8 shows the ADT forecasts for the with project condition on each roadway segment.

Table 8 Forecast ADT Volumes

Roadway	EXISTING ADT	2025 With Project	2026 No Project	2026 With Project
Indianapolis Ave between Beach and Farnsworth	6,518	6,554	6,619	6,619
Indianapolis Ave between Kilkenny and Newland	6,163	6,199	6,261	6,261
Farnsworth south of Indianapolis Ave	1,685	1,756	1,774	1,774



LEGEND

Study Intersection

Project Site

Outbound Volumes

Inbound Volumes



FIGURE 5: ESTIMATED TRIP DISTRIBUTION

7.3 VMT Screening

Per the Technical Advisory on Evaluating Transportation Impacts in CEQA, the screening threshold for small projects is described on page 12. It states: “projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.” As this project is forecast to generate 71 daily trips, the project does not meet the VMT trip threshold under the CEQA Guidelines and the impact would be considered to be less than significant.

7.4 On-Site Circulation and Queuing

The current on-site circulation is designed to serve the typical school day pick up and drop off activity. This design maximizes on-site circulation and queuing capacity. The demand for on-site circulation and queuing regarding athletic field activities is anticipated to be negligible compared to the existing project site conditions during a typical school day. No impact is anticipated.

7.5 Parking Demand Analysis

The current parking availability for Peterson Elementary includes 56 stalls in the two parking lots, with more than 25 available street parking spaces. These parking spaces are currently designed and sized for the faculty and staff for the school, during school hours.

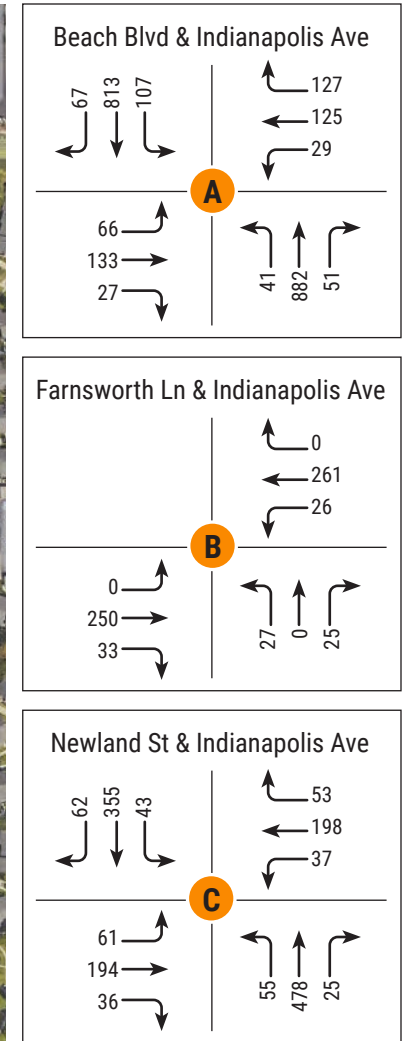
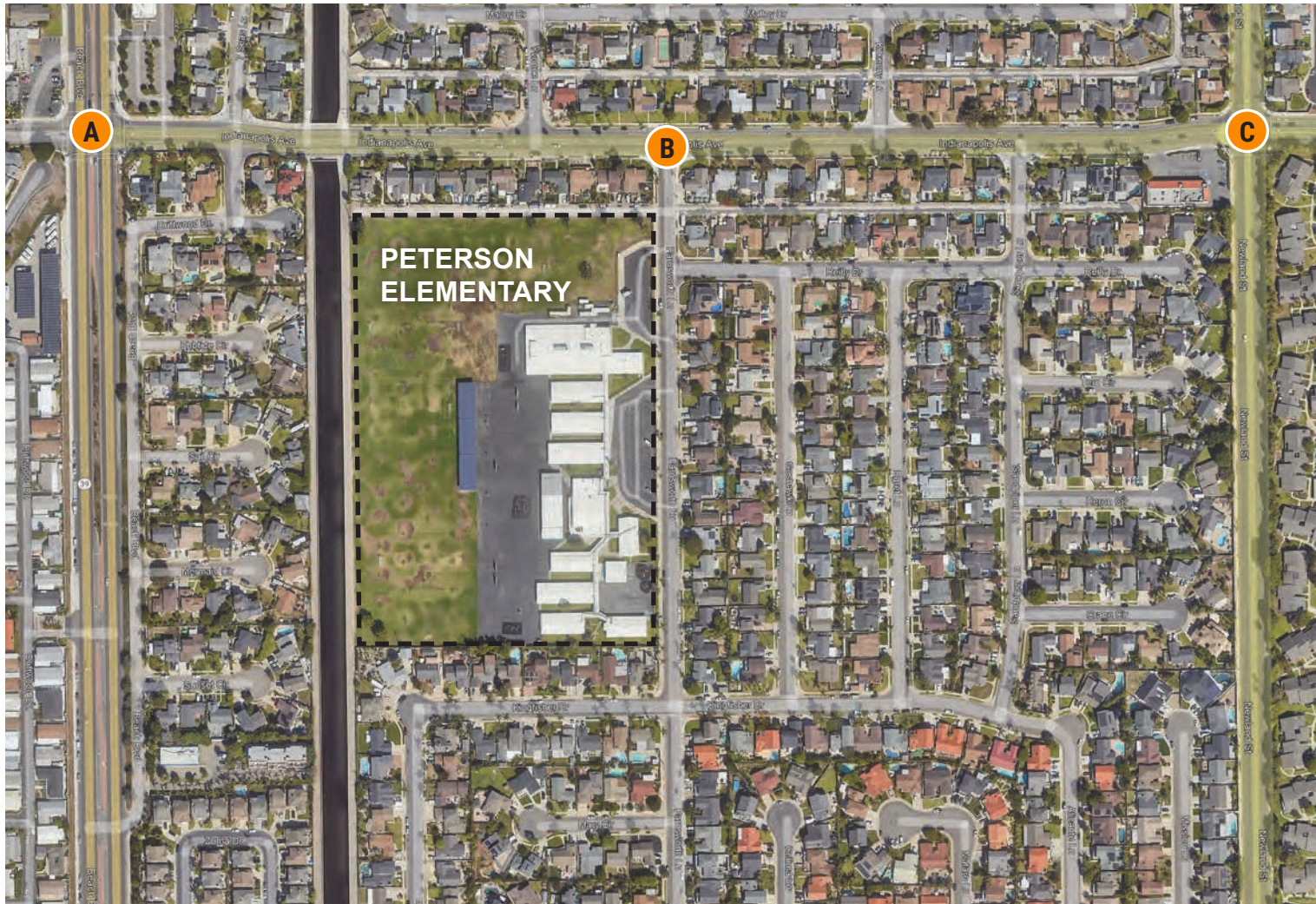
The additional parking demand for this project is negligible. As the anticipated trip generation is 16 trips, the amount of current parking lot and street parking spaces will suffice. No additional parking capacity is recommended for this project.

7.6 Intersection Analysis – 2025 With Project Conditions

A summary of the PM peak hour intersection level of service analysis results for the Existing Year (2025) with Project scenario is presented in Table 9. Existing Year (2025) with Project PM peak hour turning movement volumes are shown in Figure 6. All three intersections are forecasted to operate at acceptable levels of service during the Opening Year No Project conditions.

Table 9 Existing Year (2025) With Project Intersection LOS

Intersection	Existing No Project		Existing W/ Project		Existing No Project		Existing W/ Project	
	ICU	LOS	ICU	LOS	HCM Delay (s)	LOS	HCM Delay (s)	LOS
Beach Ave and Indianapolis Ave	0.542	A	0.545	A				
Farnsworth Ln and Indianapolis Ave					12.2	B	12.4	B
Newland St and Indianapolis Ave	0.599	A	0.601	A				



LEGEND

- X** Study Intersection
- ↘ PM Peak Hour Volume
- Project Site



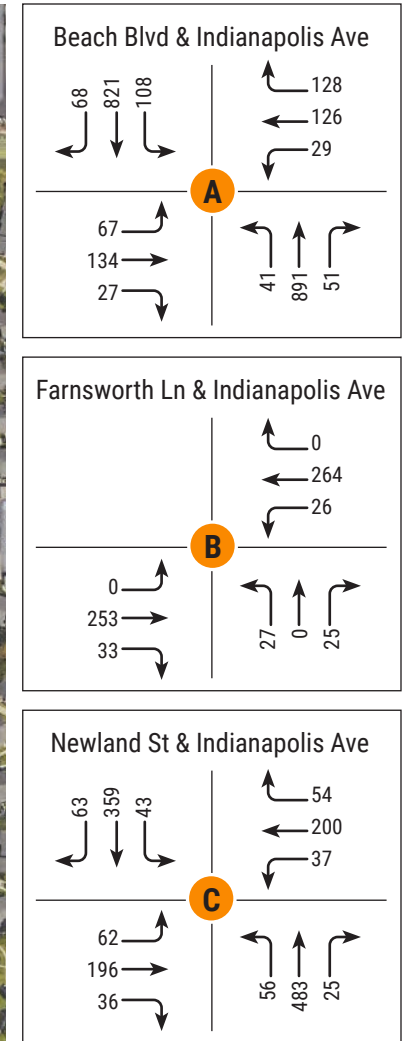
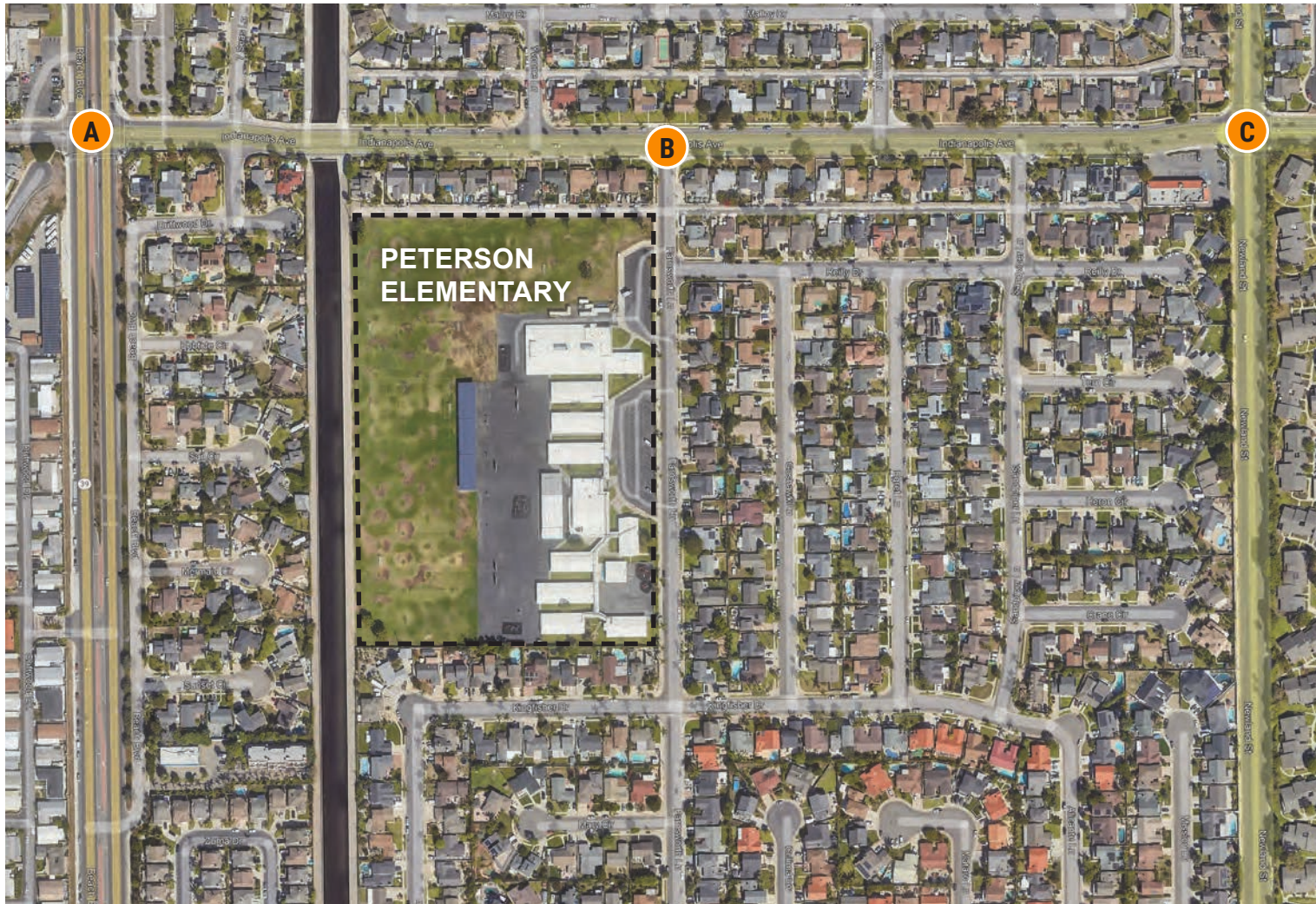
FIGURE 6: EXISTING YEAR (2025) WITH PROJECT | VOLUMES - PM PEAK HOUR

7.7 Intersection Analysis – Opening Year With Project

A summary of the PM peak hour intersection level of service analysis results for the Opening Year (2026) with Project scenario is presented in Table 10. Opening Year (2026) with Project PM peak hour turning movement volumes are shown in Figure 7. All three intersections are forecasted to operate at acceptable levels of service during the Opening Year with Project conditions.

Table 10 Opening Year (2026) With Project Intersection LOS

Intersection	2026 No Project		2026 With Project		2026 No Project		2026 With Project	
	ICU	LOS	ICU	LOS	HCM Delay (s)	LOS	HCM Delay (s)	LOS
Beach Ave and Indianapolis Ave	0.545	A	0.548	A				
Farnsworth Ln and Indianapolis Ave	0.304	A	0.358	A	12.3	B	12.4	B
Newland St and Indianapolis Ave	0.603	A	0.605	B				



LEGEND

- Study Intersection
- PM Peak Hour Volume
- Project Site



FIGURE 7: OPENING YEAR (2026) WITH PROJECT | VOLUMES - PM PEAK HOUR

8. Conclusion

Below are the summary tables for the intersection analysis, separated by intersection.

Table 11 Farnsworth Ln and Indianapolis Ave Level of Service Summary

Farnsworth Ln and Indianapolis Ave				
	2025 No Project	2025 With Project	2026 No Project	2026 With Project
HCM Control Delay (sec)	12.2	12.4	12.3	12.4
HCM 6th Ed. LOS	B	B	B	B

Table 12 Beach Ave and Indianapolis Ave Level of Service Summary

Beach Ave and Indianapolis Ave				
	2025 No Project	2025 With Project	2026 No Project	2026 With Project
ICU V/C ratio	0.542	0.545	0.545	0.548
LOS	A	A	A	A

Table 13 Newland St and Indianapolis Ave Level of Service Summary

Newland St and Indianapolis Ave				
	2025 No Project	2025 With Project	2026 No Project	2026 With Project
ICU V/C Ratio	0.599	0.601	0.603	0.605
LOS	A	A	A	B

Based on the results of the level of service analysis, the proposed athletic field lighting project at Peterson Elementary School would not significantly impact any of the study intersections or roadway segments. All three study intersections operate at an acceptable level of service under both Existing Year (2025) and Opening Year (2026) with Project scenarios. Mitigation measures are not necessary based on the analysis.

There is sufficient on-site and street parking to accommodate the parking needs the athletic field will generate. The existing parking for staff and faculty during regular school hours has more capacity than the anticipated after-school hour needs of the athletic field. Additionally, there are no anticipated circulation impacts associated with the proposed project.

References

- Stantec. (2017, January 13). *General Plan Circulation Update, City of Huntington Beach, CA*. Retrieved July 2023, from <https://www.huntingtonbeachca.gov/files/users/planning/Volume-III-Appendix-B-Circulation-Traffic-Study.pdf>
- State of California Governor's Office of Planning and Research. (2018, December). *Technical Advisory On Evaluating Transportation Impacts In CEQA*. Retrieved 2023, from opr.ca.gov: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf
- Stantec. (2017, January 13). *General Plan Circulation Update, City of Huntington Beach, CA*. Retrieved July 2023, from <https://www.huntingtonbeachca.gov/files/users/planning/Volume-III-Appendix-B-Circulation-Traffic-Study.pdf>
- State of California Governor's Office of Planning and Research. (2018, December). *Technical Advisory On Evaluating Transportation Impacts In CEQA*. Retrieved 2023, from opr.ca.gov: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf



Appendix A—Turning Movement & Roadway Segment Counts

INTERSECTION TURNING MOVEMENT COUNTS

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

T112224

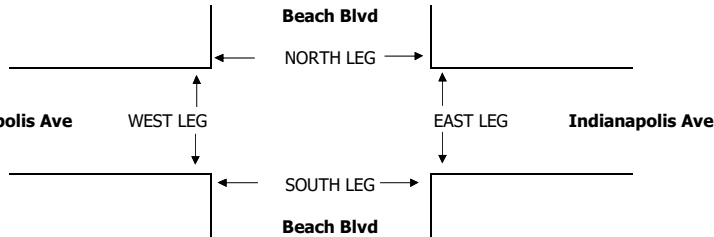
DATE: Thu, Jan 23, 25	LOCATION: NORTH & SOUTH: EAST & WEST:	Huntington Beach Beach Blvd Indianapolis Ave	PROJECT #: LOCATION #: CONTROL:	SC5146 1 SIGNAL
--------------------------	---	--	---------------------------------------	-----------------------

NOTES:	AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N S ▼
--------	----------------------------------	-----------------	---------------

	NORTHBOUND Beach Blvd			SOUTHBOUND Beach Blvd			EASTBOUND Indianapolis Ave			WESTBOUND Indianapolis Ave			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
4:00 PM	7	186	7	22	178	20	19	21	9	13	39	26	547
4:15 PM	7	213	8	27	187	19	12	17	3	13	21	33	560
4:30 PM	10	170	15	22	212	15	15	37	6	8	31	30	571
4:45 PM	10	229	9	34	189	18	14	33	10	9	30	30	615
5:00 PM	16	264	18	25	213	19	16	24	7	5	27	29	663
5:15 PM	5	219	7	25	199	15	21	35	4	7	36	37	610
5:30 PM	5	215	7	23	185	18	9	22	9	7	30	26	556
5:45 PM	9	190	10	23	182	16	11	21	6	6	23	30	527
VOLUMES	69	1,686	81	201	1,545	140	117	210	54	68	237	241	4,720
APPROACH %	4%	92%	4%	10%	79%	7%	31%	55%	14%	12%	43%	44%	
APP/DEPART	1,840	/	2,111	1,953	/	1,671	381	/	492	546	/	446	0
BEGIN PEAK HR	4:30 PM												
VOLUMES	41	882	49	106	813	67	66	129	27	29	124	126	2,499
APPROACH %	4%	91%	5%	10%	79%	7%	30%	58%	12%	10%	44%	45%	
PEAK HR FACTOR	0.814												
APP/DEPART	974	/	1,112	1,024	/	871	222	/	284	279	/	232	0

U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL
0	7	0	0	7
1	8	0	0	9
0	9	0	0	9
1	9	0	0	10
1	9	0	0	10
0	11	0	0	11
0	6	0	0	6
1	8	0	0	9
4	67	0	0	71

2	38	0	0
---	----	---	---



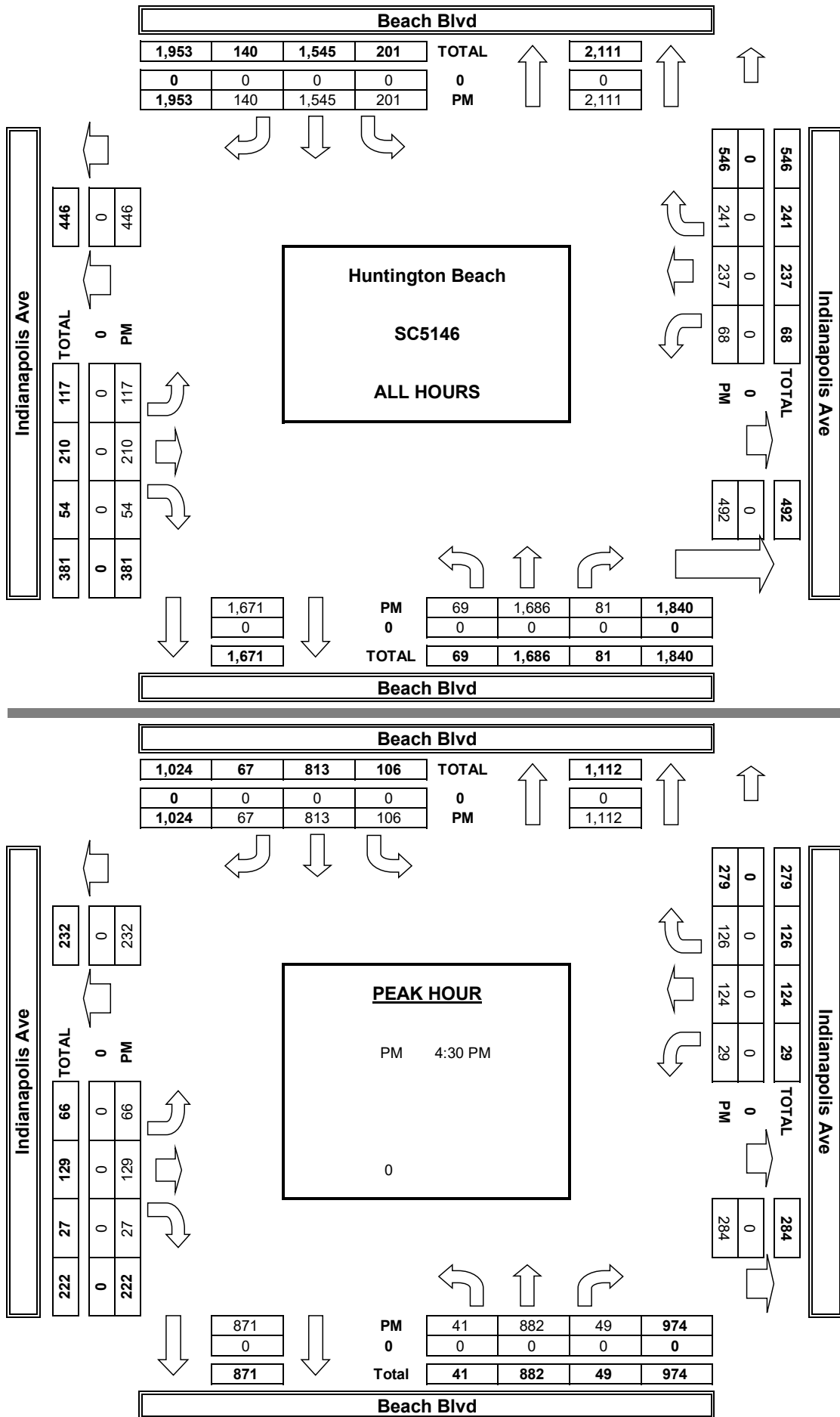
PM	
4:00 PM	
4:15 PM	
4:30 PM	
4:45 PM	
5:00 PM	
5:15 PM	
5:30 PM	
5:45 PM	
TOTAL	
BEGIN PEAK HR	

ALL PED + BIKE & SCOOTER				
N LEG	S LEG	E LEG	W LEG	TOTAL
5	0	0	0	5
2	2	0	2	6
0	2	2	2	6
6	2	0	8	16
1	1	0	0	2
4	0	0	3	7
2	2	1	3	8
3	4	1	0	8
23	13	4	18	58
4:30 PM				

PEDESTRIAN CROSSINGS				
N LEG	S LEG	E LEG	W LEG	TOTAL
2	0	0	0	2
0	0	0	1	1
0	0	1	2	3
1	0	0	4	5
0	1	0	0	1
1	0	0	3	4
1	1	0	2	4
2	0	0	0	2
7	2	1	12	22
2	1	1	9	13

BICYCLE & SCOOTER CROSSINGS				
NL	SL	EL	WL	TOTAL
3	0	0	0	3
2	2	0	1	5
0	2	1	0	3
5	2	0	4	11
1	0	0	0	1
3	0	0	0	3
1	1	1	1	4
1	4	1	0	6
16	11	3	6	36

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

T112224

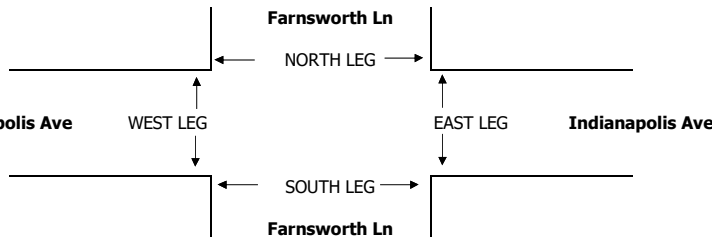
DATE: Thu, Jan 23, 25	LOCATION: NORTH & SOUTH: EAST & WEST:	Huntington Beach Farnsworth Ln Indianapolis Ave	PROJECT #: LOCATION #: CONTROL:	SC5146 2 STOP N
--------------------------	---	---	---------------------------------------	-----------------------

NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
--------	----------------------------------	--------------------------------

	NORTHBOUND Farnsworth Ln			SOUTHBOUND Farnsworth Ln			EASTBOUND Indianapolis Ave			WESTBOUND Indianapolis Ave			TOTAL
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	X	0	X	X	X	X	1	0	1	1	X	
4:00 PM	9	0	10	0	0	0	0	47	6	7	57	0	136
4:15 PM	6	0	5	0	0	0	0	44	9	9	66	0	139
4:30 PM	9	0	4	0	0	0	0	60	6	4	58	0	141
4:45 PM	5	0	4	0	0	0	0	63	7	5	63	0	147
5:00 PM	3	0	6	0	0	0	0	63	9	6	64	0	151
5:15 PM	8	0	8	0	0	0	0	64	4	7	76	0	167
5:30 PM	3	0	4	0	0	0	0	41	8	7	63	0	126
5:45 PM	7	0	6	0	0	0	0	48	6	4	58	0	129
VOLUMES	50	0	47	0	0	0	0	430	55	49	505	0	1,138
APPROACH %	52%	0%	48%	0%	0%	0%	0%	89%	11%	9%	91%	0%	
APP/DEPART	97	/	0	0	/	104	485	/	479	556	/	555	0
BEGIN PEAK HR	4:30 PM												
VOLUMES	25	0	22	0	0	0	0	250	26	22	261	0	607
APPROACH %	53%	0%	47%	0%	0%	0%	0%	91%	9%	8%	92%	0%	
PEAK HR FACTOR	0.734			0.000			0.958			0.845			0.903
APP/DEPART	47	/	0	0	/	48	276	/	273	284	/	286	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2

0	0	0	1
---	---	---	---



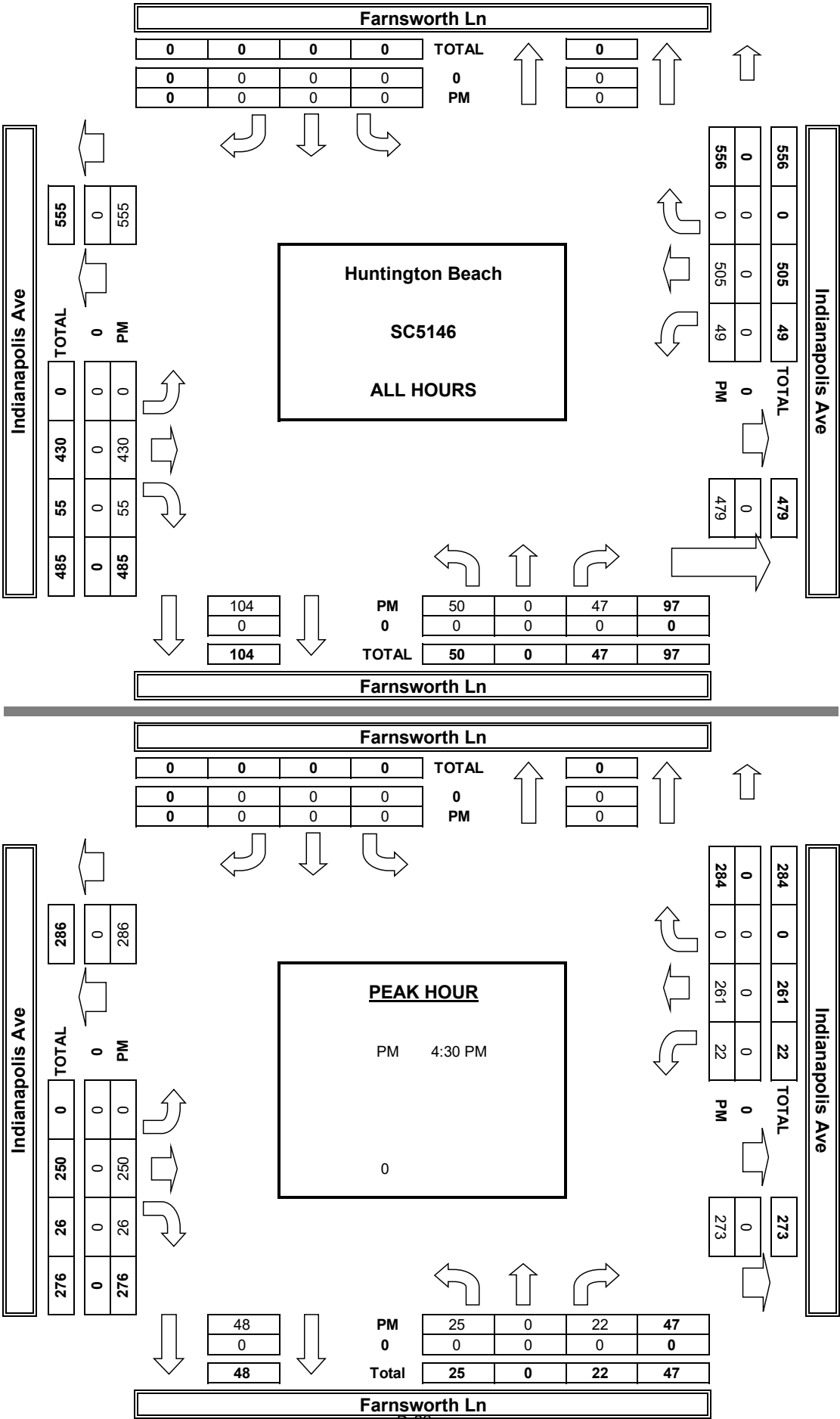
PM	
4:00 PM	
4:15 PM	
4:30 PM	
4:45 PM	
5:00 PM	
5:15 PM	
5:30 PM	
5:45 PM	
TOTAL	
BEGIN PEAK HR	

ALL PED + BIKE & SCOOTER				
N LEG	S LEG	E LEG	W LEG	TOTAL
1	1	0	0	2
1	3	0	0	4
2	2	0	2	6
1	2	0	4	7
0	2	0	0	2
0	1	0	1	2
1	3	0	1	5
1	2	0	1	4
7	16	0	9	32
4:30 PM				

PEDESTRIAN CROSSINGS				
N LEG	S LEG	E LEG	W LEG	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	0	2	2
0	1	0	0	1
0	0	0	1	1
0	1	0	1	2
0	0	0	1	1
0	2	0	7	9
0	1	0	5	6

BICYCLE & SCOOTER CROSSINGS				
NL	SL	EL	WL	TOTAL
1	1	0	0	2
1	3	0	0	4
2	2	0	0	4
1	2	0	2	5
0	1	0	0	1
0	1	0	0	1
1	2	0	0	3
1	2	0	0	3
7	14	0	2	23

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

T112224

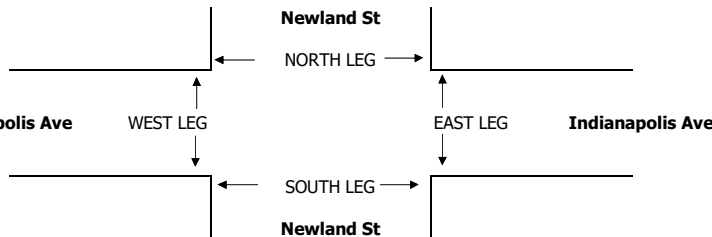
DATE: Thu, Jan 23, 25	LOCATION: NORTH & SOUTH: EAST & WEST:	Huntington Beach Newland St Indianapolis Ave	PROJECT #: LOCATION #: CONTROL:	SC5146 3 SIGNAL
--------------------------	---	--	---------------------------------------	-----------------------

NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
--------	----------------------------------	--------------------------------

	NORTHBOUND Newland St			SOUTHBOUND Newland St			EASTBOUND Indianapolis Ave			WESTBOUND Indianapolis Ave			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL
4:00 PM	9	128	7	9	73	12	20	44	8	6	51	25	392
4:15 PM	13	126	8	12	92	17	12	37	7	8	48	16	396
4:30 PM	15	136	4	14	84	19	14	45	7	8	38	15	399
4:45 PM	13	104	4	9	79	15	16	43	14	10	51	13	371
5:00 PM	5	106	9	7	94	12	12	58	6	7	56	10	382
5:15 PM	21	132	8	13	98	15	18	46	9	12	51	15	438
5:30 PM	6	127	4	13	77	15	12	36	5	9	57	10	371
5:45 PM	17	116	4	7	75	10	8	36	5	11	40	10	339
VOLUMES	99	975	48	84	672	115	112	345	61	71	392	114	3,088
APPROACH %	9%	87%	4%	10%	77%	13%	22%	67%	12%	12%	68%	20%	
APP/DEPART	1,122	/	1,201	871	/	804	518	/	477	577	/	606	0
BEGIN PEAK HR	4:30 PM												
VOLUMES	54	478	25	43	355	61	60	192	36	37	196	53	1,590
APPROACH %	10%	86%	4%	9%	77%	13%	21%	67%	13%	13%	69%	19%	
PEAK HR FACTOR	0.865			0.911			0.947			0.917			0.908
APP/DEPART	557	/	591	459	/	428	288	/	260	286	/	311	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
---	---	---	---



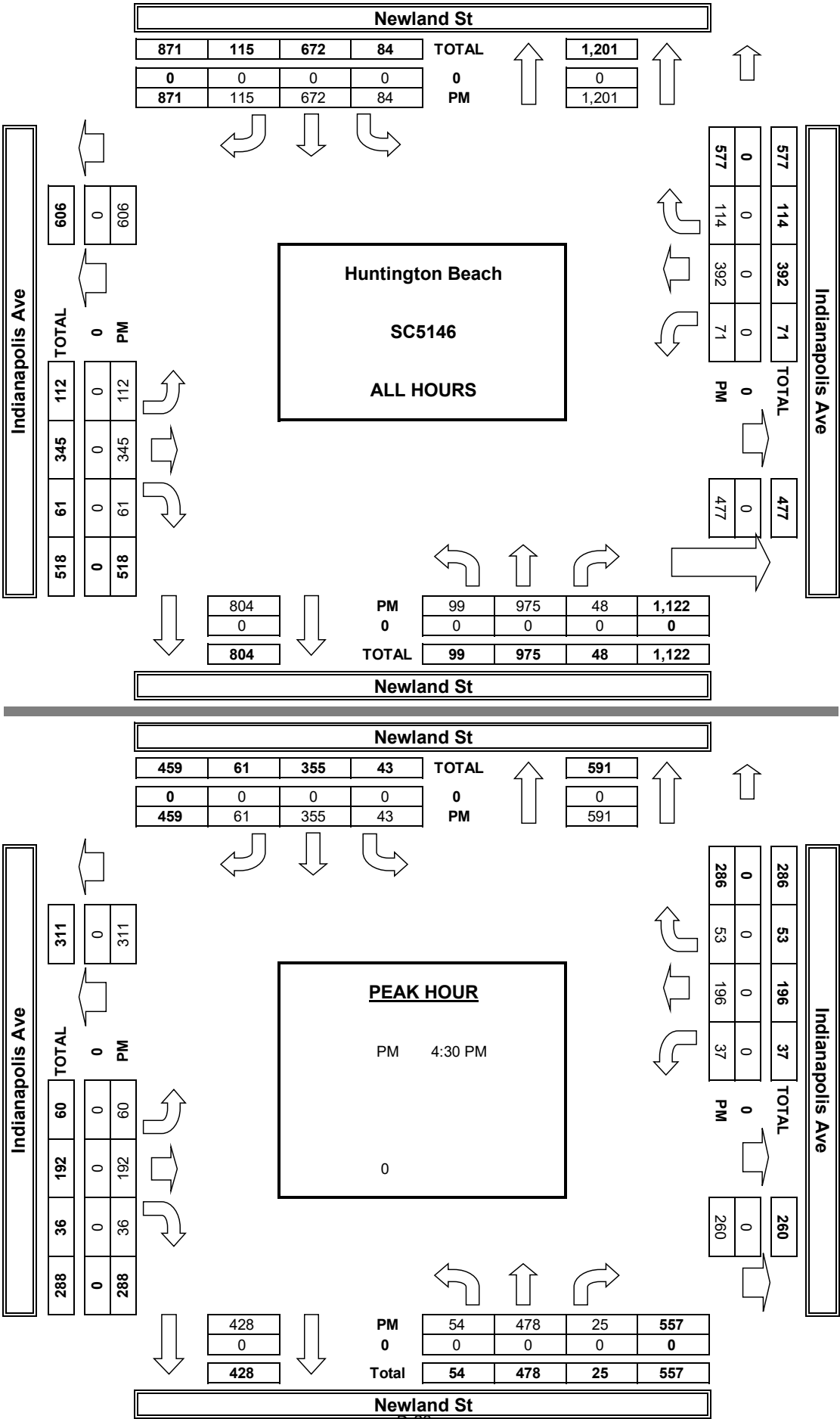
PM	
4:00 PM	
4:15 PM	
4:30 PM	
4:45 PM	
5:00 PM	
5:15 PM	
5:30 PM	
5:45 PM	
TOTAL	
BEGIN PEAK HR	

ALL PED + BIKE & SCOOTER				
N LEG	S LEG	E LEG	W LEG	TOTAL
1	2	2	2	7
0	3	2	2	7
2	1	2	3	8
2	2	1	5	10
2	1	2	3	8
3	1	0	2	6
1	0	0	1	2
0	2	3	0	5
11	12	12	18	53
4:30 PM				

PEDESTRIAN CROSSINGS				
N LEG	S LEG	E LEG	W LEG	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
1	1	1	1	4
1	0	0	1	2
1	0	0	1	2
0	0	0	0	0
3	1	1	4	9
2	1	1	3	7

BICYCLE & SCOOTER CROSSINGS				
NL	SL	EL	WL	TOTAL
1	2	2	2	7
0	3	2	2	7
2	1	2	3	8
2	2	1	4	9
1	0	1	2	4
2	1	0	1	4
0	0	0	0	0
0	2	3	0	5
8	11	11	14	44

AimTD LLC
TURNING MOVEMENT COUNTS



ADT1 Indianapolis Ave between Beach Blvd and Farnsworth Ln.**Prepared by AimTD LLC tel. 714 253 7888**

AM Period	EB		WB		PM Period		EB		WB		
0:00	2		2		12:00		53		29		
0:15	3		0		12:15		85		51		
0:30	2		3		12:30		65		62		
0:45	2	9	2	7	16	12:45	59	262	43	185	447
1:00	2		3		13:00		56		58		
1:15	2		3		13:15		78		53		
1:30	2		1		13:30		92		59		
1:45	2	8	1	8	16	13:45	71	297	77	247	544
2:00	2		1		14:00		64		84		
2:15	1		1		14:15		66		50		
2:30	2		0		14:30		65		63		
2:45	0	5	1	3	8	14:45	68	263	72	269	532
3:00	0		0		15:00		51		78		
3:15	1		2		15:15		55		76		
3:30	0		1		15:30		67		72		
3:45	1	2	1	4	6	15:45	49	222	59	285	507
4:00	3		2		16:00		53		66		
4:15	2		3		16:15		53		72		
4:30	1		3		16:30		66		67		
4:45	4	10	3	11	21	16:45	70	242	68	273	515
5:00	4		3		17:00		72		67		
5:15	11		6		17:15		68		84		
5:30	13		8		17:30		49		66		
5:45	10	38	12	29	67	17:45	54	243	65	282	525
6:00	7		9		18:00		48		62		
6:15	14		17		18:15		37		45		
6:30	15		20		18:30		37		40		
6:45	29	65	21	67	132	18:45	34	156	35	182	338
7:00	37		19		19:00		39		34		
7:15	50		27		19:15		21		45		
7:30	63		46		19:30		36		31		
7:45	82	232	51	143	375	19:45	20	116	17	127	243
8:00	68		68		20:00		22		29		
8:15	132		55		20:15		21		25		
8:30	141		113		20:30		22		31		
8:45	55	396	97	333	729	20:45	18	83	16	101	184
9:00	52		46		21:00		14		18		
9:15	39		39		21:15		14		15		
9:30	52		33		21:30		15		18		
9:45	35	178	40	158	336	21:45	13	56	18	69	125
10:00	42		42		22:00		13		11		
10:15	36		57		22:15		8		12		
10:30	41		42		22:30		10		13		
10:45	38	157	50	191	348	22:45	4	35	3	39	74
11:00	49		43		23:00		7		4		
11:15	50		43		23:15		4		3		
11:30	53		54		23:30		3		0		
11:45	58	210	51	191	401	23:45	4	18	4	11	29
Total Vol.	1310		1145		2455	1993		2070		4063	
						Daily Totals					
						EB		WB		Combined	
						3303		3215		6518	
AM						PM					
Split %	53.4%		46.6%		37.7%	49.1%		50.9%		62.3%	
Peak Hour	7:45		8:00		8:00	13:15		14:45		13:15	
Volume	423		333		729	305		298		578	
P.H.F.	0.75		0.74		0.72	0.83		0.96		0.96	

ADT2 Indianapolis Ave between Kilkenny Ln and Newland St.**Prepared by AimTD LLC tel. 714 253 7888**

AM Period	EB		WB		PM Period	EB		WB	
0:00	2		3		12:00	47		31	
0:15	3		0		12:15	68		40	
0:30	2		3		12:30	57		52	
0:45	2	9	2	8	12:45	55	227	44	167
1:00	2		3		13:00	51		55	
1:15	2		2		13:15	61		64	
1:30	1		1		13:30	51		68	
1:45	2	7	1	7	13:45	55	218	60	247
2:00	2		1		14:00	72		63	
2:15	2		1		14:15	68		44	
2:30	2		1		14:30	59		59	
2:45	1	7	1	4	14:45	71	270	68	234
3:00	1		0		15:00	47		69	
3:15	1		2		15:15	62		71	
3:30	0		2		15:30	59		67	
3:45	1	3	1	5	15:45	48	216	59	266
4:00	5		2		16:00	57		64	
4:15	2		3		16:15	50		76	
4:30	2		3		16:30	64		62	
4:45	4	13	3	11	16:45	67	238	68	270
5:00	6		3		17:00	69		70	
5:15	12		6		17:15	73		84	
5:30	13		7		17:30	45		70	
5:45	13	44	12	28	17:45	54	241	62	286
6:00	11		11		18:00	48		60	
6:15	14		13		18:15	40		47	
6:30	17		16		18:30	39		45	
6:45	29	71	19	59	18:45	31	158	35	187
7:00	39		24		19:00	37		34	
7:15	51		25		19:15	21		48	
7:30	66		50		19:30	32		31	
7:45	81	237	50	149	19:45	20	110	18	131
8:00	57		68		20:00	26		27	
8:15	90		73		20:15	16		22	
8:30	72		115		20:30	19		35	
8:45	56	275	69	325	20:45	16	77	16	100
9:00	50		44		21:00	13		17	
9:15	36		29		21:15	14		16	
9:30	49		32		21:30	15		15	
9:45	39	174	37	142	21:45	12	54	18	66
10:00	36		39		22:00	12		9	
10:15	34		53		22:15	8		10	
10:30	44		41		22:30	8		13	
10:45	41	155	48	181	22:45	4	32	3	35
11:00	50		43		23:00	7		5	
11:15	49		42		23:15	3		2	
11:30	56		50		23:30	3		0	
11:45	56	211	46	181	23:45	3	16	4	11
Total Vol.		1206		1100	2306		1857		2000

3857**Daily Totals**

EB

WB

Combined

3063

3100

6163**AM****PM**

Split %	52.3%	47.7%	37.4%		48.1%	51.9%	62.6%
Peak Hour	7:45	8:00	7:45		16:30	16:45	16:30
Volume	300	325	606		273	292	557
P.H.F.	0.83	0.71	0.81		0.93	0.87	0.89

ADT3 Farnsworth Ln south of Indianapolis Ave.**Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB		PM Period	NB		SB	
0:00	0		1		12:00	8		16	
0:15	0		0		12:15	22		28	
0:30	0		0		12:30	21		19	
0:45	0	0	0	1	12:45	9	60	14	77
1:00	0		0		13:00	13		15	
1:15	1		0		13:15	9		37	
1:30	0		1		13:30	11		61	
1:45	1	2	1	2	13:45	33	66	32	145
2:00	0		0		14:00	40		11	
2:15	2		1		14:15	14		6	
2:30	0		1		14:30	9		11	
2:45	2	4	1	3	14:45	24	87	17	45
3:00	1		0		15:00	19		14	
3:15	1		1		15:15	21		9	
3:30	0		1		15:30	13		16	
3:45	0	2	0	2	15:45	12	65	13	52
4:00	2		0		16:00	19		13	
4:15	0		0		16:15	11		18	
4:30	1		0		16:30	13		10	
4:45	0	3	0	0	16:45	9	52	12	53
5:00	2		0		17:00	9		15	
5:15	1		0		17:15	16		11	
5:30	1		0		17:30	7		15	
5:45	4	8	1	1	17:45	13	45	10	51
6:00	4		2		18:00	11		9	
6:15	5		1		18:15	8		7	
6:30	7		1		18:30	6		9	
6:45	7	23	5	9	18:45	7	32	10	35
7:00	3		6		19:00	2		4	
7:15	12		9		19:15	4		7	
7:30	14		15		19:30	3		7	
7:45	12	41	12	42	19:45	4	13	5	23
8:00	15		26		20:00	12		6	
8:15	14		74		20:15	4		6	
8:30	50		121		20:30	3		10	
8:45	42	121	13	234	20:45	4	23	6	28
9:00	8		8		21:00	0		0	
9:15	14		7		21:15	4		5	
9:30	4		6		21:30	6		3	
9:45	9	35	2	23	21:45	2	12	3	11
10:00	8		11		22:00	2		1	
10:15	10		8		22:15	2		0	
10:30	9		5		22:30	1		3	
10:45	11	38	6	30	22:45	0	5	0	4
11:00	10		9		23:00	0		1	
11:15	8		8		23:15	1		1	
11:30	12		5		23:30	1		1	
11:45	11	41	8	30	23:45	0	2	1	4
Total Vol.	318		377		695	462		528	990
					Daily Totals				Combined
					NB	SB			
					780	905			
					1685				
AM					PM				
Split %	45.8%	54.2%	41.2%		46.7%	53.3%	58.8%		
Peak Hour	8:00	8:00	8:00		13:30	13:00	13:15		
Volume	121	234	355		98	145	234		
P.H.F.	0.61	0.48	0.52		0.61	0.59	0.81		



Appendix B—Synchro Reports [2025 Existing]

Lanes, Volumes, Timings

Indianapolis Ave & Beach Blvd

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	129	27	29	124	126	41	882	49	106	813	67
Future Volume (vph)	66	129	27	29	124	126	41	882	49	106	813	67
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.974				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1623	0	1583	1667	1417	1583	4550	1417	1583	4550	1417
Flt Permitted	0.671			0.650			0.285			0.254		
Satd. Flow (perm)	1118	1623	0	1083	1667	1417	475	4550	1417	423	4550	1417
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28				43			53			73
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		172			195			308			252	
Travel Time (s)		3.9			4.4			7.0			5.7	
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
Adj. Flow (vph)	72	140	29	32	135	137	45	959	53	115	884	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	169	0	32	135	137	45	959	53	115	884	73
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0	0	0	0
Act Effect Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.16	0.25		0.07	0.20	0.23	0.24	0.53	0.09	0.68	0.49	0.12
Control Delay	9.9	8.8		9.0	9.9	7.8	13.0	11.6	3.7	37.9	11.2	3.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	8.8		9.0	9.9	7.8	13.0	11.6	3.7	37.9	11.2	3.4

2025 Existing - No Project

Synchro 11 Report
Page 1

Lanes, Volumes, Timings

Indianapolis Ave & Beach Blvd

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A	A	B	B	A	D	B	A
Approach Delay		9.1			8.8			11.2			13.5	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 11.7

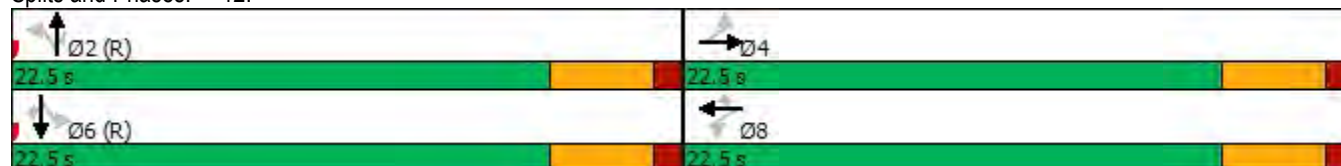
Intersection LOS: B

Intersection Capacity Utilization 54.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12:



Lanes, Volumes, Timings
Indianapolis Ave & Farnsworth Ln

02/12/2025

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰		↱	↰	↱	
Traffic Volume (vph)	250	26	22	261	25	22
Future Volume (vph)	250	26	22	261	25	22
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987				0.936	
Flt Protected			0.950		0.974	
Satd. Flow (prot)	1645	0	1583	1667	1519	0
Flt Permitted			0.950		0.974	
Satd. Flow (perm)	1645	0	1583	1667	1519	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	161			210	203	
Travel Time (s)	3.7			4.8	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	272	28	24	284	27	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	300	0	24	284	51	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	30.4%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	26	22	261	25	22
Future Vol, veh/h	250	26	22	261	25	22
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, %	2	2	2	2	2	2
Mvmt Flow	272	28	24	284	27	24

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	300
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1261
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1261
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	550	-	-	1261	-
HCM Lane V/C Ratio	0.093	-	-	0.019	-
HCM Control Delay (s)	12.2	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lanes, Volumes, Timings

Indianapolis Ave & Newland St

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	192	36	37	196	53	54	478	25	43	355	61
Future Volume (vph)	60	192	36	37	196	53	54	478	25	43	355	61
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Fr't		0.976				0.850		0.993			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3091	0	1583	1667	1417	1583	3144	0	1583	1630	0
Flt Permitted	0.625			0.598			0.375			0.432		
Satd. Flow (perm)	1042	3091	0	997	1667	1417	625	3144	0	720	1630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				58		14			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		162			196			104			136	
Travel Time (s)		3.7			4.5			2.4			3.1	
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
Adj. Flow (vph)	65	209	39	40	213	58	59	520	27	47	386	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	248	0	40	213	58	59	547	0	47	452	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effect Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0		18.0	18.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.40	0.40		0.40	0.40	
v/c Ratio	0.16	0.20		0.10	0.32	0.10	0.24	0.43		0.16	0.68	
Control Delay	9.9	7.9		9.4	11.0	3.6	12.0	10.9		10.5	17.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.9	7.9		9.4	11.0	3.6	12.0	10.9		10.5	17.3	

2025 Existing - No Project

Synchro 11 Report
Page 1

Lanes, Volumes, Timings

Indianapolis Ave & Newland St

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	B	A	B	B		B	B	
Approach Delay		8.3			9.4			11.0			16.7	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 11.9

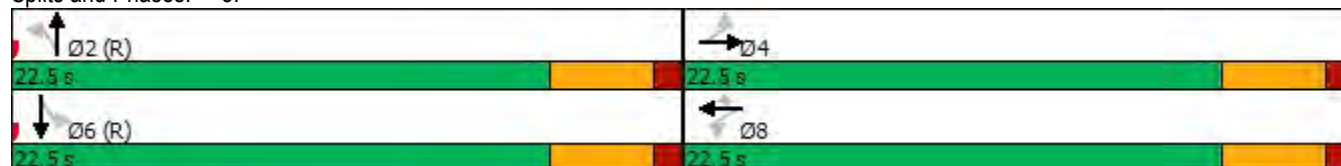
Intersection LOS: B

Intersection Capacity Utilization 59.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3:





Appendix C—Synchro Reports [2026 No Project]

Lanes, Volumes, Timings

Indianapolis Ave & Beach Blvd

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	130	27	29	125	127	41	891	49	107	821	68
Future Volume (vph)	67	130	27	29	125	127	41	891	49	107	821	68
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.974				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1623	0	1583	1667	1417	1583	4550	1417	1583	4550	1417
Flt Permitted	0.670			0.650			0.281			0.250		
Satd. Flow (perm)	1117	1623	0	1083	1667	1417	468	4550	1417	417	4550	1417
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27				42			53			74
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		172			195			308			252	
Travel Time (s)		3.9			4.4			7.0			5.7	
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
Adj. Flow (vph)	73	141	29	32	136	138	45	968	53	116	892	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	170	0	32	136	138	45	968	53	116	892	74
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0	0	0	0
Act Effect Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.16	0.26		0.07	0.20	0.23	0.24	0.53	0.09	0.70	0.49	0.12
Control Delay	9.9	8.9		9.0	9.9	7.9	13.1	11.6	3.7	40.1	11.2	3.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	8.9		9.0	9.9	7.9	13.1	11.6	3.7	40.1	11.2	3.4

2026 - No Project

Synchro 11 Report
Page 1

Lanes, Volumes, Timings

Indianapolis Ave & Beach Blvd

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A	A	B	B	A	D	B	A
Approach Delay		9.2			8.9			11.3			13.8	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 11.8

Intersection LOS: B

Intersection Capacity Utilization 54.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12:



Lanes, Volumes, Timings
Indianapolis Ave & Farnsworth Ln

02/12/2025

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰		↱	↰	↱	
Traffic Volume (vph)	253	26	22	264	25	22
Future Volume (vph)	253	26	22	264	25	22
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988				0.936	
Flt Protected			0.950		0.974	
Satd. Flow (prot)	1647	0	1583	1667	1519	0
Flt Permitted			0.950		0.974	
Satd. Flow (perm)	1647	0	1583	1667	1519	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	161			210	203	
Travel Time (s)	3.7			4.8	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	275	28	24	287	27	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	303	0	24	287	51	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	30.4%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	253	26	22	264	25	22
Future Vol, veh/h	253	26	22	264	25	22
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, %	2	2	2	2	2	2
Mvmt Flow	275	28	24	287	27	24
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	303	0	624	289
Stage 1	-	-	-	-	289	-
Stage 2	-	-	-	-	335	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1258	-	449	750
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	725	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1258	-	440	750
Mov Cap-2 Maneuver	-	-	-	-	440	-
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	711	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		12.3	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	546	-	-	1258	-	
HCM Lane V/C Ratio	0.094	-	-	0.019	-	
HCM Control Delay (s)	12.3	-	-	7.9	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Lanes, Volumes, Timings

Indianapolis Ave & Newland St

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	194	36	37	198	53	55	483	25	43	359	62
Future Volume (vph)	61	194	36	37	198	53	55	483	25	43	359	62
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.977				0.850		0.993			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3094	0	1583	1667	1417	1583	3144	0	1583	1630	0
Flt Permitted	0.624			0.597			0.369			0.428		
Satd. Flow (perm)	1040	3094	0	995	1667	1417	615	3144	0	713	1630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				58		14			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		162			196			104			136	
Travel Time (s)		3.7			4.5			2.4			3.1	
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
Adj. Flow (vph)	66	211	39	40	215	58	60	525	27	47	390	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	250	0	40	215	58	60	552	0	47	457	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effect Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0		18.0	18.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.40	0.40		0.40	0.40	
v/c Ratio	0.16	0.20		0.10	0.32	0.10	0.24	0.44		0.16	0.69	
Control Delay	9.9	7.9		9.4	11.0	3.6	12.2	10.9		10.6	17.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.9	7.9		9.4	11.0	3.6	12.2	10.9		10.6	17.7	

2026 - No Project

Synchro 11 Report
Page 1

Lanes, Volumes, Timings

Indianapolis Ave & Newland St

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	B	A	B	B		B	B	
Approach Delay		8.3			9.4			11.0			17.0	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 12.0

Intersection LOS: B

Intersection Capacity Utilization 60.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3:





Appendix D—Synchro Reports [2025 Project]

Lanes, Volumes, Timings

Indianapolis Ave & Beach Blvd

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	133	27	29	125	127	41	882	49	107	813	67
Future Volume (vph)	66	133	27	29	125	127	41	882	49	107	813	67
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.975				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1625	0	1583	1667	1417	1583	4550	1417	1583	4550	1417
Flt Permitted	0.670			0.647			0.285			0.254		
Satd. Flow (perm)	1117	1625	0	1078	1667	1417	475	4550	1417	423	4550	1417
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27				43			53			73
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		172			195			308			252	
Travel Time (s)		3.9			4.4			7.0			5.7	
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
Adj. Flow (vph)	72	145	29	32	136	138	45	959	53	116	884	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	174	0	32	136	138	45	959	53	116	884	73
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0	0	0	0
Act Effect Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.16	0.26		0.07	0.20	0.23	0.24	0.53	0.09	0.69	0.49	0.12
Control Delay	9.9	8.9		9.0	9.9	7.8	13.0	11.6	3.7	38.5	11.2	3.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	8.9		9.0	9.9	7.8	13.0	11.6	3.7	38.5	11.2	3.4

2025 Existing - With Project

Synchro 11 Report
Page 1

Lanes, Volumes, Timings

Indianapolis Ave & Beach Blvd

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A	A	B	B	A	D	B	A
Approach Delay		9.2			8.9			11.2			13.6	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 11.7

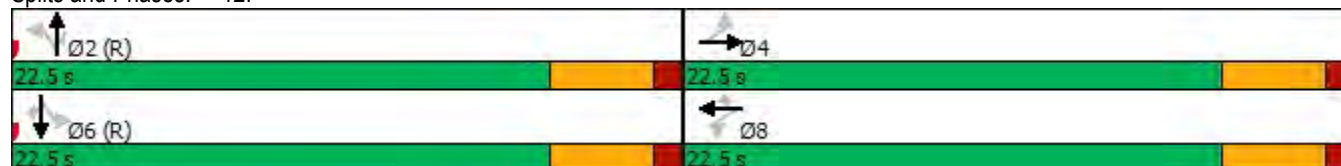
Intersection LOS: B

Intersection Capacity Utilization 54.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12:



Lanes, Volumes, Timings
Indianapolis Ave & Farnsworth Ln

02/12/2025

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↙	↗	↘	
Traffic Volume (vph)	250	33	26	261	27	25
Future Volume (vph)	250	33	26	261	27	25
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984				0.935	
Flt Protected			0.950		0.975	
Satd. Flow (prot)	1640	0	1583	1667	1519	0
Flt Permitted			0.950		0.975	
Satd. Flow (perm)	1640	0	1583	1667	1519	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	161			210	203	
Travel Time (s)	3.7			4.8	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	272	36	28	284	29	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	308	0	28	284	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	33.7%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	33	26	261	27	25
Future Vol, veh/h	250	33	26	261	27	25
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, %	2	2	2	2	2	2
Mvmt Flow	272	36	28	284	29	27

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	308
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1253
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1253
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	546	-	-	1253	-
HCM Lane V/C Ratio	0.104	-	-	0.023	-
HCM Control Delay (s)	12.4	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lanes, Volumes, Timings
Indianapolis Ave & Newland St

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	194	36	37	198	53	55	478	25	43	355	62
Future Volume (vph)	61	194	36	37	198	53	55	478	25	43	355	62
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Fr't		0.977				0.850		0.993			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3094	0	1583	1667	1417	1583	3144	0	1583	1630	0
Flt Permitted	0.624			0.597			0.374			0.432		
Satd. Flow (perm)	1040	3094	0	995	1667	1417	623	3144	0	720	1630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				58		14			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		162			196			104			136	
Travel Time (s)		3.7			4.5			2.4			3.1	
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
Adj. Flow (vph)	66	211	39	40	215	58	60	520	27	47	386	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	250	0	40	215	58	60	547	0	47	453	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effect Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0		18.0	18.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.40	0.40		0.40	0.40	
v/c Ratio	0.16	0.20		0.10	0.32	0.10	0.24	0.43		0.16	0.68	
Control Delay	9.9	7.9		9.4	11.0	3.6	12.1	10.9		10.5	17.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.9	7.9		9.4	11.0	3.6	12.1	10.9		10.5	17.4	

2025 Existing - Project

Synchro 11 Report
Page 1

Lanes, Volumes, Timings

Indianapolis Ave & Newland St

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	B	A	B	B		B	B	
Approach Delay		8.3			9.4			11.0			16.7	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 11.9

Intersection LOS: B

Intersection Capacity Utilization 60.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3:





Appendix E—Synchro Reports [2026 Project]

Lanes, Volumes, Timings

Indianapolis Ave & Beach Blvd

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	134	27	29	126	128	41	891	51	108	821	68
Future Volume (vph)	67	134	27	29	126	128	41	891	51	108	821	68
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.975				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1625	0	1583	1667	1417	1583	4550	1417	1583	4550	1417
Flt Permitted	0.669			0.647			0.281			0.250		
Satd. Flow (perm)	1115	1625	0	1078	1667	1417	468	4550	1417	417	4550	1417
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				42			55			74
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		172			195			308			252	
Travel Time (s)		3.9			4.4			7.0			5.7	
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
Adj. Flow (vph)	73	146	29	32	137	139	45	968	55	117	892	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	175	0	32	137	139	45	968	55	117	892	74
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0	0	0	0
Act Effect Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.16	0.26		0.07	0.21	0.23	0.24	0.53	0.09	0.70	0.49	0.12
Control Delay	9.9	9.0		9.0	9.9	7.9	13.1	11.6	3.7	40.8	11.2	3.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	9.0		9.0	9.9	7.9	13.1	11.6	3.7	40.8	11.2	3.4

Lanes, Volumes, Timings

Indianapolis Ave & Beach Blvd

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A	A	B	B	A	D	B	A
Approach Delay		9.3			8.9			11.3			13.9	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 11.9

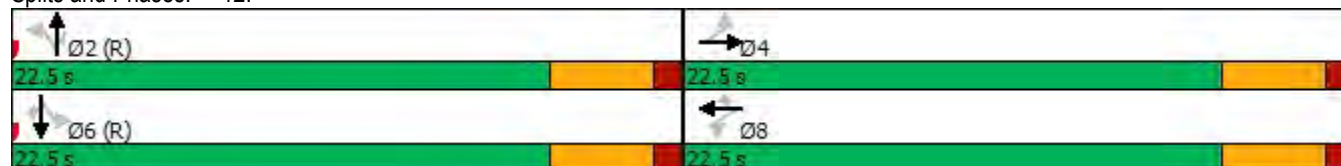
Intersection LOS: B

Intersection Capacity Utilization 54.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12:



Lanes, Volumes, Timings
Indianapolis Ave & Farnsworth Ln

02/12/2025

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	253	33	26	264	27	25
Future Volume (vph)	253	33	26	264	27	25
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984				0.935	
Flt Protected			0.950		0.975	
Satd. Flow (prot)	1640	0	1583	1667	1519	0
Flt Permitted			0.950		0.975	
Satd. Flow (perm)	1640	0	1583	1667	1519	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	161			210	203	
Travel Time (s)	3.7			4.8	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	275	36	28	287	29	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	0	28	287	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	33.8%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	253	33	26	264	27	25
Future Vol, veh/h	253	33	26	264	27	25
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, %	2	2	2	2	2	2
Mvmt Flow	275	36	28	287	29	27
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	311	0	636	293
Stage 1	-	-	-	-	293	-
Stage 2	-	-	-	-	343	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1249	-	442	746
Stage 1	-	-	-	-	757	-
Stage 2	-	-	-	-	719	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1249	-	432	746
Mov Cap-2 Maneuver	-	-	-	-	432	-
Stage 1	-	-	-	-	757	-
Stage 2	-	-	-	-	703	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		12.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	542	-	-	1249	-	
HCM Lane V/C Ratio	0.104	-	-	0.023	-	
HCM Control Delay (s)	12.4	-	-	7.9	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Lanes, Volumes, Timings

Indianapolis Ave & Newland St

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	196	36	37	200	54	56	483	25	43	359	63
Future Volume (vph)	62	196	36	37	200	54	56	483	25	43	359	63
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Fr't		0.977				0.850		0.993			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	3094	0	1583	1667	1417	1583	3144	0	1583	1630	0
Flt Permitted	0.622			0.596			0.368			0.428		
Satd. Flow (perm)	1037	3094	0	993	1667	1417	613	3144	0	713	1630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				59		14			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		162			196			104			136	
Travel Time (s)		3.7			4.5			2.4			3.1	
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
Adj. Flow (vph)	67	213	39	40	217	59	61	525	27	47	390	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	252	0	40	217	59	61	552	0	47	458	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effect Green (s)	18.0	18.0		18.0	18.0	18.0	18.0	18.0		18.0	18.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.40	0.40		0.40	0.40	
v/c Ratio	0.16	0.20		0.10	0.33	0.10	0.25	0.44		0.16	0.69	
Control Delay	10.0	7.9		9.4	11.1	3.6	12.3	10.9		10.6	17.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	10.0	7.9		9.4	11.1	3.6	12.3	10.9		10.6	17.7	

Lanes, Volumes, Timings

Indianapolis Ave & Newland St

02/13/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	B	A	B	B		B	B	
Approach Delay		8.3			9.4			11.0			17.1	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 12.0

Intersection LOS: B

Intersection Capacity Utilization 60.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3:

