



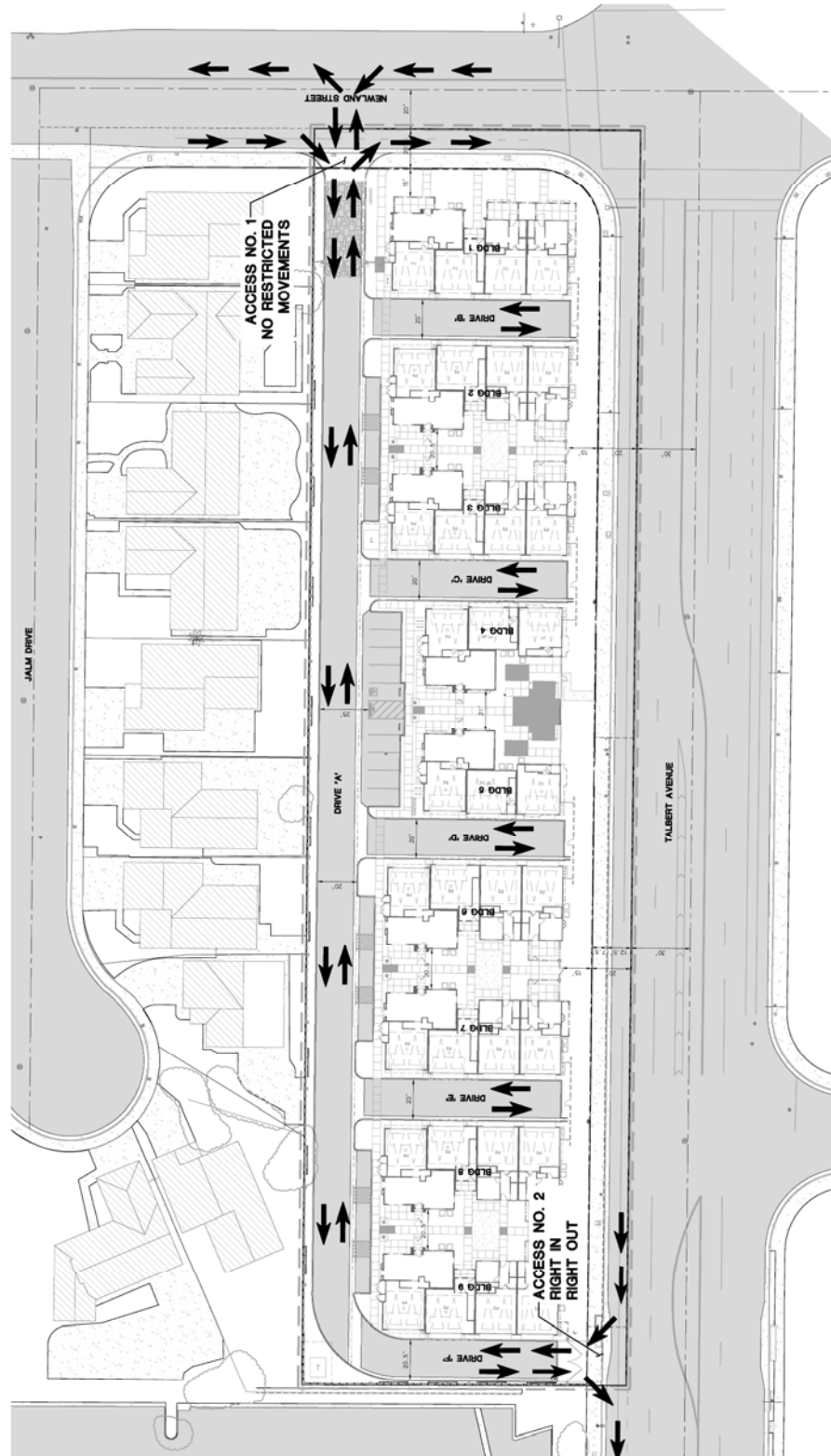
SAGECREST
PLANNING + ENVIRONMENTAL

Olson Townhomes - Planning Application No. 2021-0084

Appendix I

Traffic Impact Study, January 2022

NEWLAND AND TALBERT RESIDENTIAL PROJECT TRAFFIC IMPACT STUDY City of Huntington Beach, California



**NEWLAND & TALBERT RESIDENTIAL PROJECT
TRAFFIC STUDY
City of Huntington Beach, California**

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January 6, 2022

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1.0 Introduction

1.1 Purpose of Report & Study Objectives

The purpose of this analysis and report is to evaluate and assess the proposed Newland Street and Talbert Avenue Residential Project from a traffic and circulation standpoint.

This traffic study has been prepared in accordance with the traffic study guidelines, requirements and thresholds of significance for the City of Huntington Beach and evaluates the potential traffic impacts associated with the proposed project in accordance with the City's established thresholds.

This study is prepared in accordance with the scope of work approved by the City of Huntington Beach staff.

1.2 Site Location & Project Description

The project site is located on the northwest corner of the Newland Street and Talbert Avenue intersection in the City of Huntington Beach.

The proposed project consists of 34 residential dwelling units on approximately 2.1 acres. The project site is currently occupied by approximately three (3) single family homes that will be demolished as part of the project construction.

Access for the project is planned via the following:

- One unsignalized access driveway along Newland Street, and
- One unsignalized right-in/right-out access driveway along Talbert Avenue.

The project is planned to open in 2024 and is evaluated in a single phase.

The location of the project site is presented on Exhibit 1-1. The site plan is shown on Exhibit 1-2.

1.3 Traffic Study Area & Analysis Scenarios

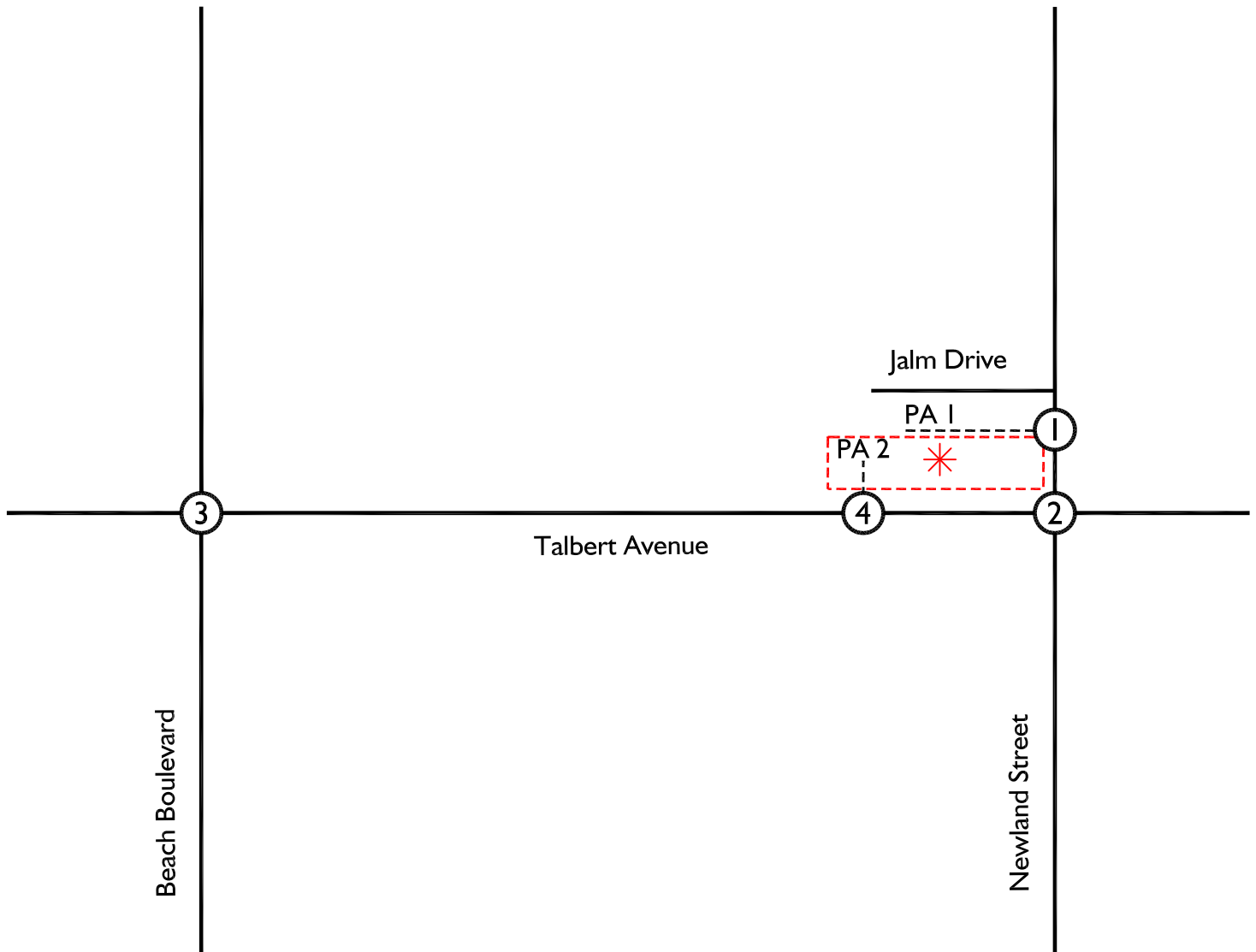
Exhibit 1-1 illustrates the site location map and traffic analysis study area.

Based on review of the project's trip generation, geographical area, and circulation system, the traffic study evaluates the following study intersections:

- Newland Street / Project Access 1;
- Newland Street / Talbert Avenue;
- Beach Boulevard / Talbert Avenue; and
- Talbert Avenue / Project Access 2

The analysis evaluates traffic conditions for the following scenarios:

- Existing Conditions;
- Existing Plus Project Conditions;
- Opening Year (2024) Without Project Conditions
- Opening Year (2024) With Project Conditions

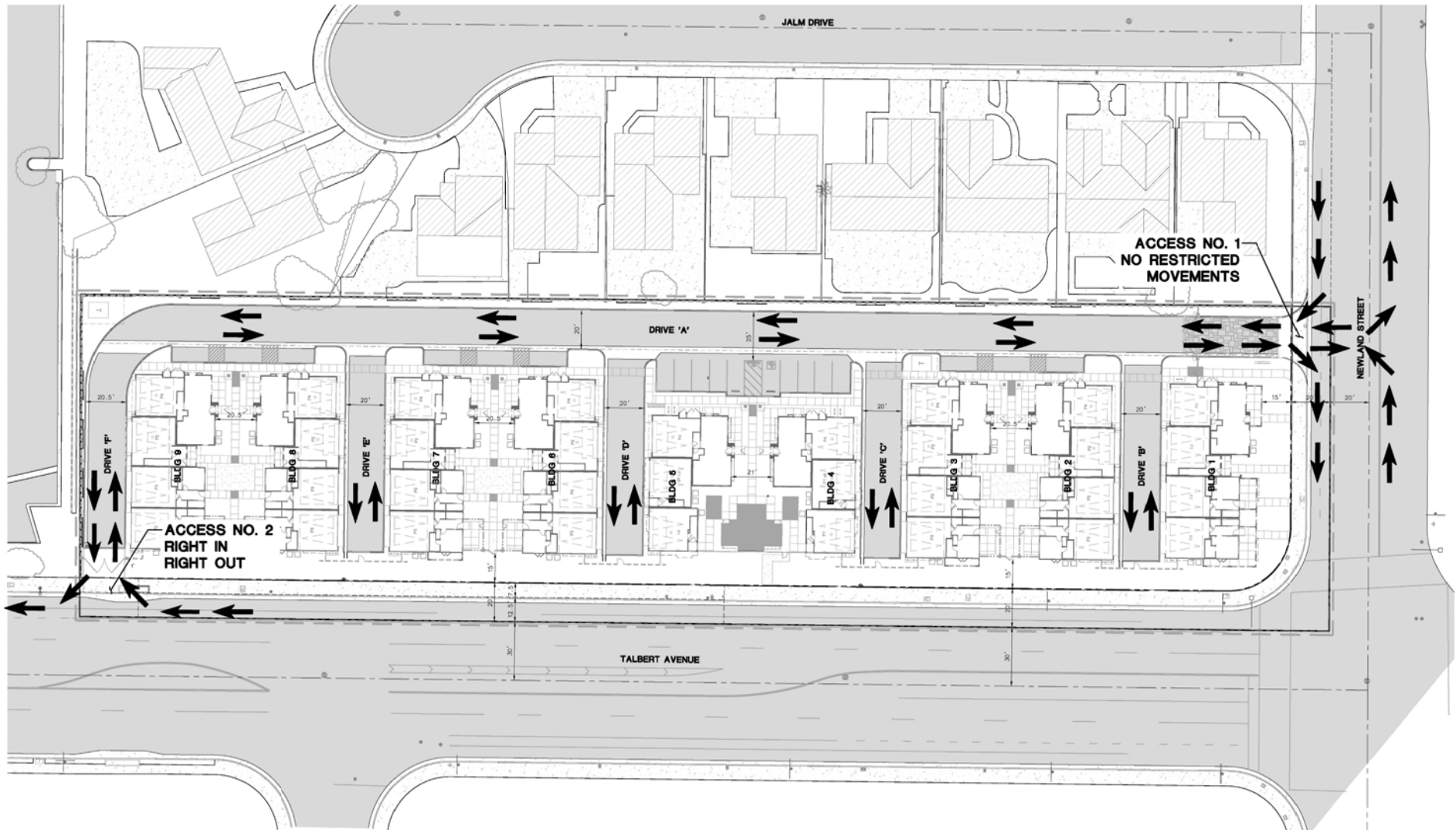


Legend:

- ① = Study Area Intersection
- * = Project Site
- - - = Project Access Driveway
- - - = Project Site Boundary



Exhibit I-2 Site Plan



2.0 Analysis Methodologies, Performance Criteria, & Thresholds of Significance

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report in accordance with the City of Huntington Beach requirements.

This section also discusses the agency-established performance criteria and thresholds of significance for the study facilities.

2.1 Signalized Intersection Peak Hour Level of Service Analysis Methodology

The methodology used to assess the operation of the signalized study area intersection is the Intersection Capacity Utilization (ICU) methodology. To calculate the ICU, the volume of traffic using the intersection is compared with the capacity of the intersection. ICU is usually expressed as a ratio. This ratio represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

Level of Service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection.

The definitions of level of service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS B is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
- LOS C is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
- LOS D represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.

- LOS E represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
- LOS F is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

The ICU analysis has been prepared utilizing the following parameters:

- Saturation Flow Rate: Saturation flow value of 1,700 vehicles per lane per hour; no adjustments are used for protected movements with dedicated lanes (including both right and left turns).
- Clearance Interval: A clearance interval factor of 5% (0.05) is applied to the ICU calculations.
- Level of Service Ranges: Table 2-1 below illustrates the thresholds used in assigning a letter value to the resulting LOS:

**Table 2-1
Intersection ICU Level of Service**

LOS	Critical Volume to Capacity Ratio
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	>1.00

- Peak-Periods: Weekday peak-hour analysis periods are defined as follows:
 - 7:00 to 9:00 AM
 - 4:00 to 6:00 PM

- Peak-Hour: The highest one-hour period in both the AM and PM peak periods, as determined by four consecutive 15-minute count periods are used in the ICU calculations. Both AM and PM peak hours are studied.
- Right Turn Movements: If the distance from the edge of the outside through lane is at least 19 feet and parking is prohibited during the peak period, right turning vehicles may be assumed to utilize this "unofficial" right turn lane. Otherwise, all right turn traffic is assigned to the through lane. If a right turn lane exists, right turn activity is checked for conflicts with other critical movements. It is assumed that right turn movements are accommodated during non-conflicting left turn phases (e.g., northbound right turns during westbound left turn phase), as well as non-conflicting through flows (e.g., northbound right turn movements and north/south through flows). Right turn movements become critical when conflicting movements (e.g., northbound right turns, southbound left turns, and eastbound through flows) represent a sum of V/C ratios, which are greater than the normal through/left turn critical movements.

2.2 Unsignalized Intersection Peak Hour Level of Service Analysis Methodology

The Highway Capacity Manual (HCM) 2010 methodology is used to calculate level of service at unsignalized study area intersections. For intersections with stop control on the minor street only, the calculation of level of service is dependent on the occurrence of gaps occurring in the traffic flow of the main street, and the level of service is determined based on the vehicle delay of the worst individual movement or movements sharing a single lane.

Table 2-2 shows the level of service criteria based on the HCM methodology.

Table 2-2
HCM Level of Service - Vehicle Delay

Level of Service (LOS)	Vehicle Delay (Seconds)
A	0.00 - 10.00
B	10.01 - 15.00
C	15.01 - 25.00
D	25.01 - 35.00
E	35.01 - 50.00
F	>50.01

2.3 Study Intersection Level of Service (LOS) Performance Criteria & Thresholds for Requiring Improvements

Acceptable performance criteria for local transportation facilities are established in the *General Plan Circulation Update, City of Huntington Beach, CA, (January 13, 2017)*.

For signalized intersections, the intersection capacity utilization (ICU) methodology is implemented for the evaluation of level of service. Additionally, "Principal" and "Secondary" intersections are distinguished within the General Plan and have the following LOS standards:

Intersection Type	LOS Criteria
Principal	LOS "D" (ICU less than .91)
Secondary	LOS "C" (ICU less than .81)

Source:

General Plan Circulation Update, City of Huntington Beach (Stantec Consulting Services, Inc., January 13, 2017).

Based on the LOS standards aforementioned, the study intersections performance criteria will adhere to the following table:

Study Intersection Performance Criteria

#	Study Intersection	Intersection Designation	Acceptable LOS
1	Newland Street (NS) / Project Access 1 (EW) *	---	D or better
2	Newland Street (NS) / Talbert Avenue (EW)	Secondary	C or better
3	Beach Boulevard (NS) / Talbert Avenue (EW)	Principal	D or better
4	Project Access 2 (NS) / Talbert Avenue (EW) *	---	D or better

Source:

General Plan Circulation Update, City of Huntington Beach (Stantec Consulting Services, Inc., January 13, 2017).

* Intersection is not classified as a principal or secondary.

For unsignalized driveway access intersections evaluated by the HCM 2010 methodology, a performance criteria of LOS D or better will be standardized.

If an intersection is operating deficiently and a significant impact is anticipated, improvements will be identified to improve intersection operations back to overall level of service prior to the addition of project-related traffic. If an impact drops from an acceptable LOS to an unacceptable LOS level, then improvements may be necessary to return intersection operations back to an acceptable level.

2.4 CEQA Evaluation & Vehicle Miles Traveled (VMT) Analysis

Effective July 1st, 2020, the longstanding metric of roadway level of service (LOS), which is typically measured in terms of vehicle delay, roadway capacity and congestion, will no longer be considered a significant impact under the California Environmental Quality Act (CEQA). Pursuant to CEQA Guidelines, Section 15064.3, VMT is now the most appropriate measure of transportation impacts.

The City of Huntington Beach follows the guidance and recommendations provided by the Office of Planning and Research (OPR) in regards to determining the thresholds of significance and methodology for identifying VMT related impacts.

3.0 Existing Traffic Volumes & Circulation System

This section provides a discussion of existing study area conditions and traffic volumes.

3.1 Existing Traffic Controls & Intersection Geometrics

Exhibit 3-1 identifies the existing roadway conditions within the study area. The number of through traffic lanes for existing roadways and existing intersection controls are identified. The type of traffic control and number of lanes at an intersection are key inputs for the calculation of level of service.

3.2 Existing Conditions Traffic Volumes

Existing conditions intersection level of service calculations are based upon manual AM and PM peak hour turning movement counts taken in September 2021 during typical weekday conditions. The AM peak hour traffic volumes were determined by counting the two-hour peak period between 7:00 AM and 9:00 AM and using the highest hour within that two-hour peak period. Similarly, the PM peak hour traffic volumes were identified by counting the two-hour peak period between 4:00 PM and 6:00 PM and using the highest hour within that two-hour peak period. The traffic count worksheets are included in Appendix A.

Existing traffic volumes for the study area intersections and driveways are shown on Exhibit 3-2.

Existing Lane Geometry & Traffic Controls

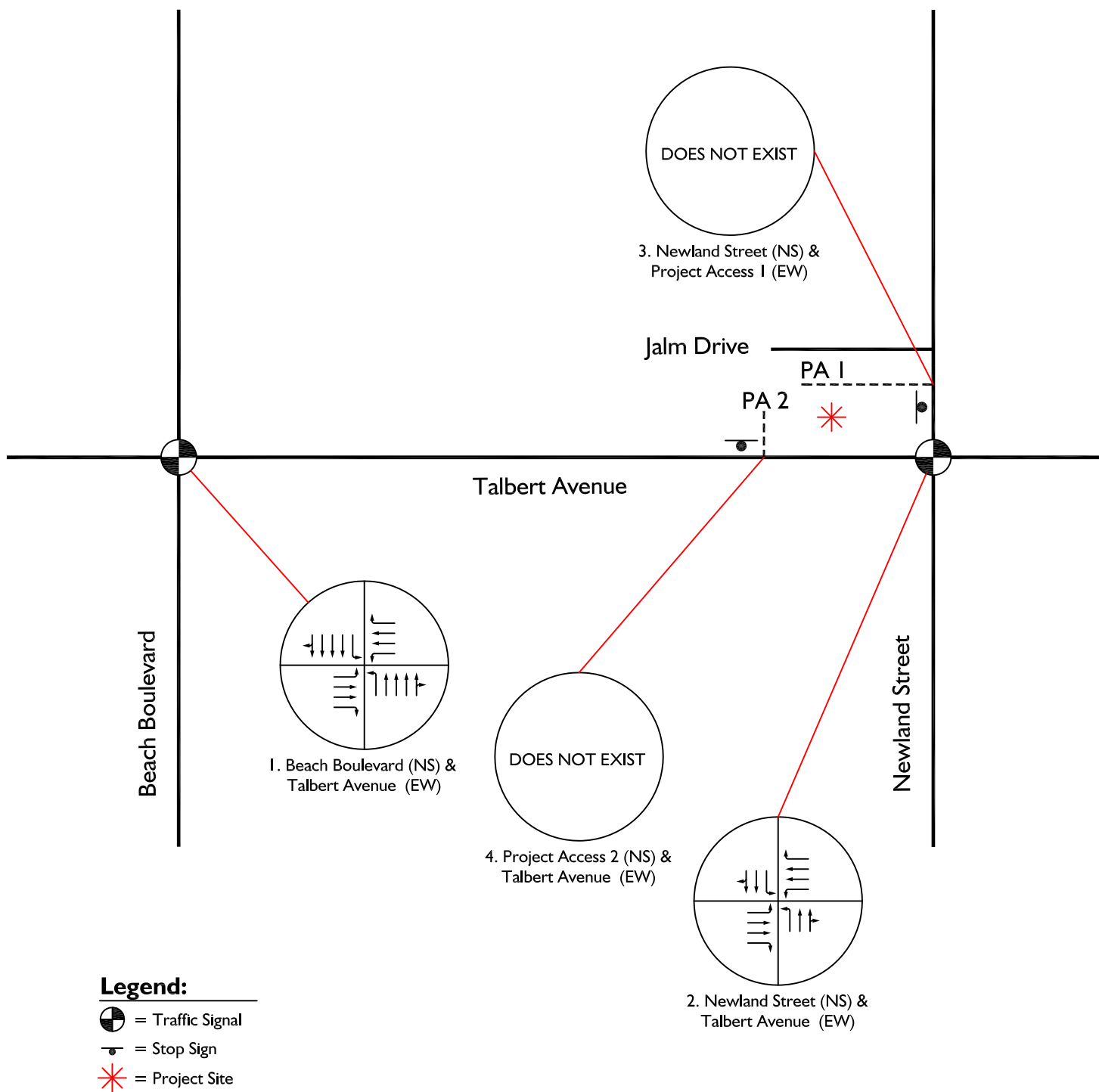
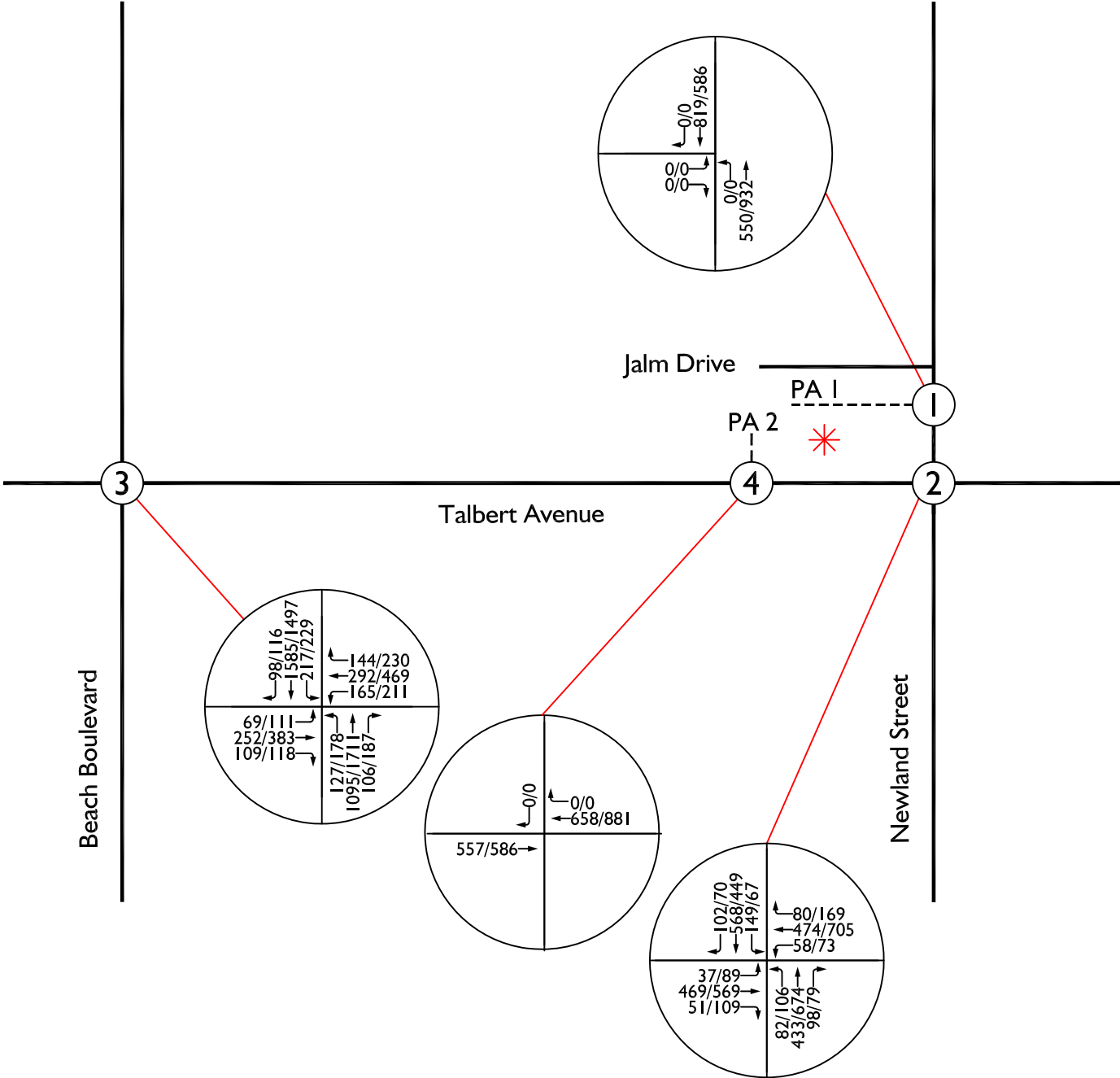


Exhibit 3-2 Existing Traffic Volumes



Legend:

10/20 = AM/PM Peak Hour Volumes



4.0 Projected & Future Traffic Volumes

This section provides a discussion on methodologies utilized to derive future traffic volumes for the study area.

4.1. Project Traffic Conditions

4.1.1 Project Trip Generation

Trip generation represents the amount of trips that is attracted and produced by land use.

Trip generation for the existing uses, and the proposed project is determined based on ITE 10th Edition trip generation rates for the proposed land uses as shown in Table 4-1.

Table 4-1
ITE Trip Generation Rates

Land Use	Units	ITE Code	AM			PM			Daily
			In	Out	Total	In	Out	Total	
Multi-Family Residential - Low Rise	DU	220	0.11	0.35	0.46	0.35	0.21	0.56	7.32

¹ Sources: 2017 ITE Trip Generation Manual (10th Edition).

As shown in Table 4-2, based on the ITE trip generation rates, the proposed project is forecast to generate approximately 249 daily trips which include approximately 16 AM peak hour trips and approximately 19 PM peak hour trips.

Table 4-2
Proposed Project Trip Generation

Land Use (ITE Code)	Quantity	Units	AM			PM			Daily
			In	Out	Total	In	Out	Total	
Multi-Family Residential - Low Rise (220)	34	DU	4	12	16	12	7	19	249

4.1.2 Project Trip Distribution

Trip distribution represents the directional orientation of trips to and from the project. Trip distribution is heavily influenced by the geographical location of the site, the location of residential, retail, employment, recreational opportunities, and the proximity to the regional freeway system. The directional orientation of project-generated trips was

determined by evaluating existing and proposed land uses and highways within the community.

Forecast trip distribution for the proposed project has been developed through discussions with the City during the scoping process.

Exhibit 4-1 shows the forecast *inbound* trip distribution for the proposed project. Exhibit 4-2 shows the forecast *outbound* trip distribution for the proposed project.

4.1.3 Modal Split

Modal split denotes the proportion of traffic generated by a project that would use any of the transportation modes, namely buses, cars, bicycles, motorcycles, trains, carpools, etc. The traffic reducing potential of public transit and other modes can be notable. However, the traffic projections in this study are conservative because no modal split reduction is applied to the projections.

4.1.4 Project Peak Hour Traffic Volumes/Assignment

The assignment of project-generated trips to and from the project site on the adjoining roadway system is based upon the project's trip generation, trip distribution, and proposed arterial highway and local street systems this traffic study assumes would be in place by the time of occupancy of the site.

Project traffic volumes are shown on Exhibit 4-3.

4.2 Existing Plus Project Traffic Volumes

Existing Plus Project Conditions traffic volumes are derived by adding the project traffic volumes shown in Exhibit 4-4 to the existing traffic volumes shown in Exhibit 4-2.

Existing Plus Project Conditions traffic volumes are shown in Exhibit 4-4.

4.3 Background Traffic

4.3.1 Method of Projection

To assess future conditions, project traffic is combined with existing traffic, area-wide growth, and cumulative projects' traffic.

Consistent with the City of Huntington Beach traffic study guidelines and requirements, Opening Year (2024) Conditions traffic volumes were derived by applying an annual growth rate of one (1) percent per year over a three-year period to existing traffic volumes to account for background growth in 2024. It should be noted this is a conservative assumption since the growth rate is applied to all movements at the study intersections and driveways.

4.3.2 Cumulative Projects Traffic

Information on cumulative projects in the vicinity of study area has been identified by the City of Huntington Beach staff for inclusion in this analysis. The following cumulative projects were considered in this report:

- Cameron Lane Townhomes
- Jamboree Senior Housing

Table 4-3 shows the total cumulative trip generation for the above listed cumulative projects. The cumulative projects are expected to generate an additional 329 total daily trips, which include 22 total AM peak hour trips and 29 total PM peak hour trips.

**Table 4-3
Cumulative Projects Trip Generation**

ID No.	Jurisdiction	Project Name / Case Number	Land Use	ITE Trip Code	Quantity	Units ²	Peak Hour						Daily
							AM			PM			
							In	Out	Total	In	Out	Total	
1	Huntington Beach	Cameron Lane Townhomes	Single Family Homes	210	18	DU	3	10	13	11	7	18	170
2	Huntington Beach	Jamboree Senior Housing	Senior Adult Housing-Attached	252	43	DU	3	6	9	6	5	11	159
Total Cumulative Projects Trip Generation							6	16	22	17	12	29	329

¹ Cumulative Projects provided by the City of Huntington Beach

² DU = Dwelling Units

Exhibit 4-5 shows the cumulative traffic volumes that affect the project area intersections.

Some of the cumulative projects may be downsized or may not be developed by project opening year (2024). In addition, many of the cumulative projects have been or will be

subject to a variety of mitigation measures to reduce potential traffic impacts associated with those projects. However, those mitigation measures have not been taken into account in projecting the potential traffic impact of the cumulative projects. Therefore, the cumulative analysis in this study is conservative.

4.4 Opening Year (2024) Without Project Conditions Traffic Volumes

Opening Year (2024) Without Project Conditions traffic volumes consist of existing traffic volumes, traffic associated with the cumulative projects, and a one (1) percent per year annual growth rate over a three-year period.

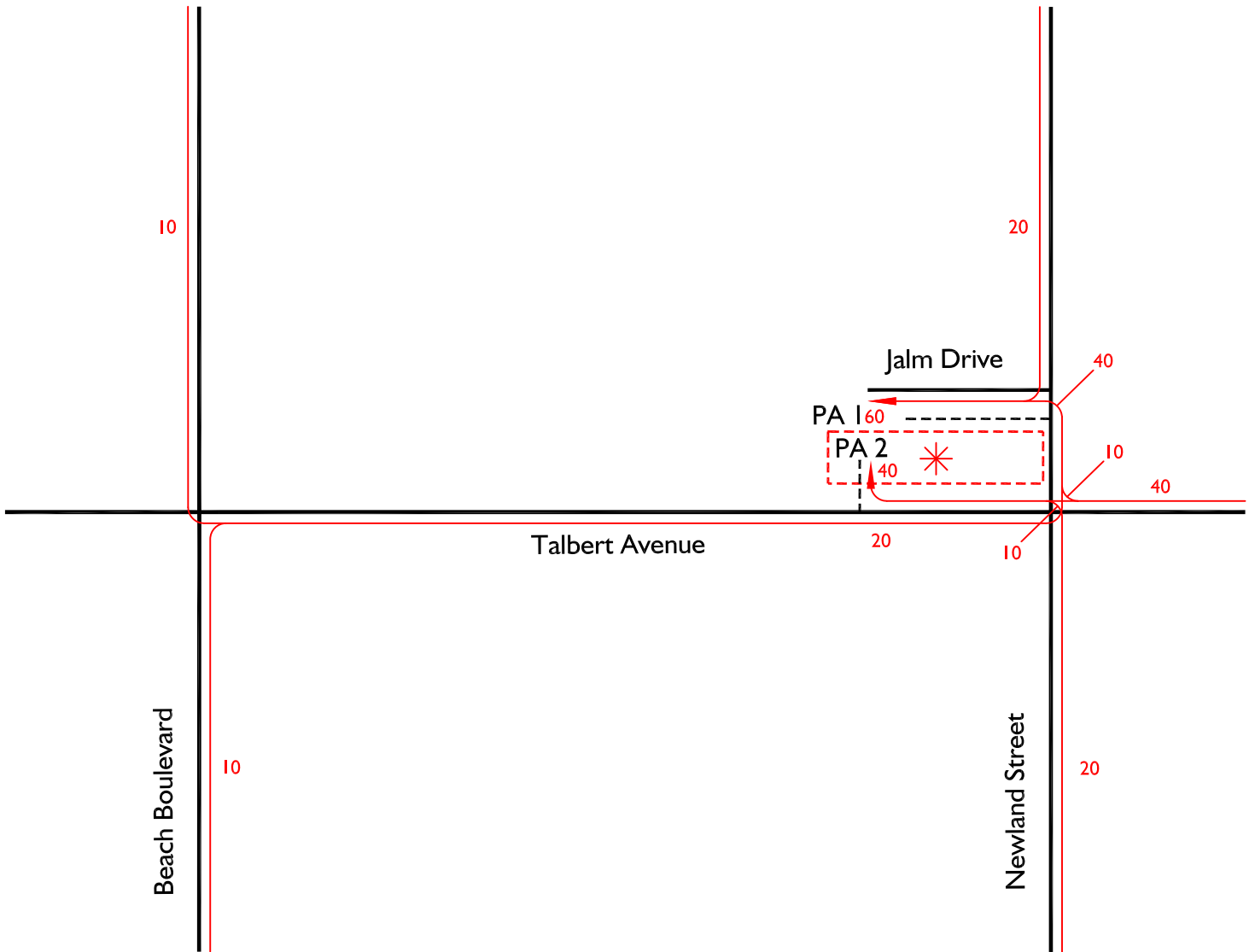
Opening Year (2024) Without Project Conditions traffic volumes are shown on Exhibit 4-6

4.5 Opening Year (2024) With Project Conditions Traffic Volumes





Opening Year (2024) With Project Conditions traffic volumes consist of existing traffic volumes, traffic associated with the cumulative projects, a one (1) percent per year annual growth rate, and project-generated traffic.

Opening Year (2024) With Project Conditions traffic volumes are shown on Exhibit 4-7.

Exhibit 4-1 Inbound Project Trip Distribution

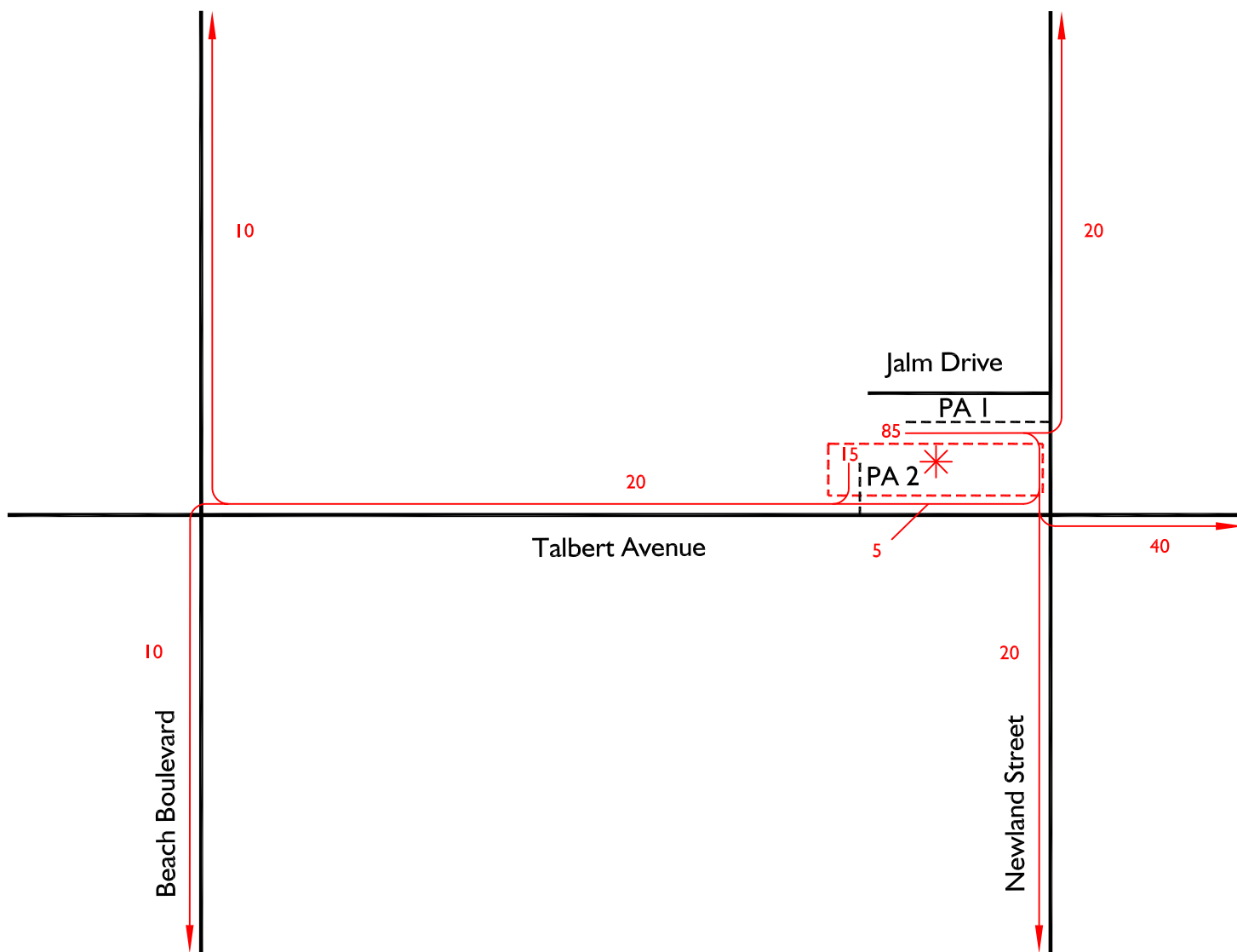


Legend:





-  = Project Site
-  = Project Access Driveway
-  = Project Site Boundary
-  = Project Trip Distribution



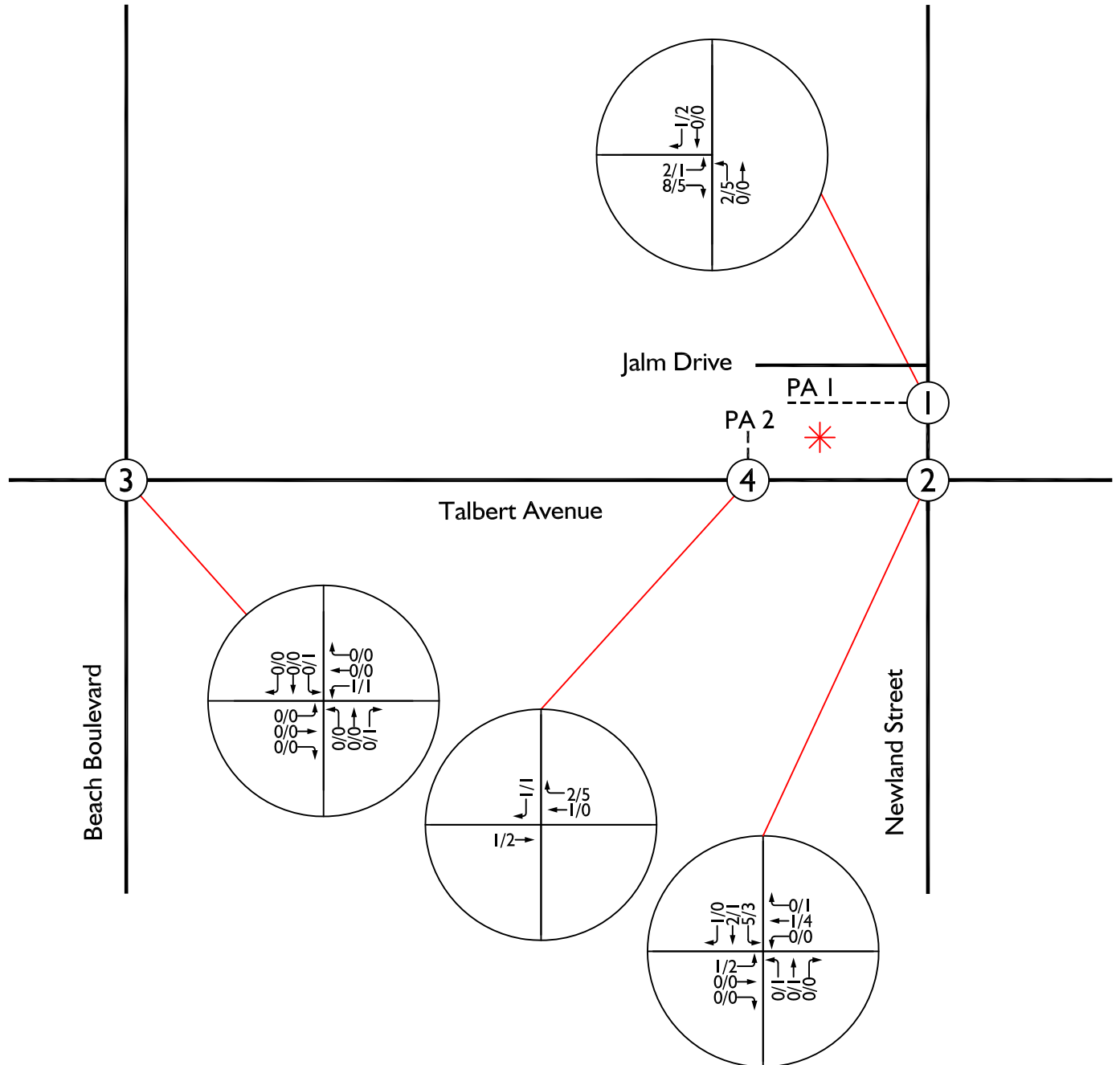
Outbound Project Trip Distribution



Legend:

-  = Project Site
-  = Project Access Driveway
-  = Project Site Boundary
-  = Project Trip Distribution



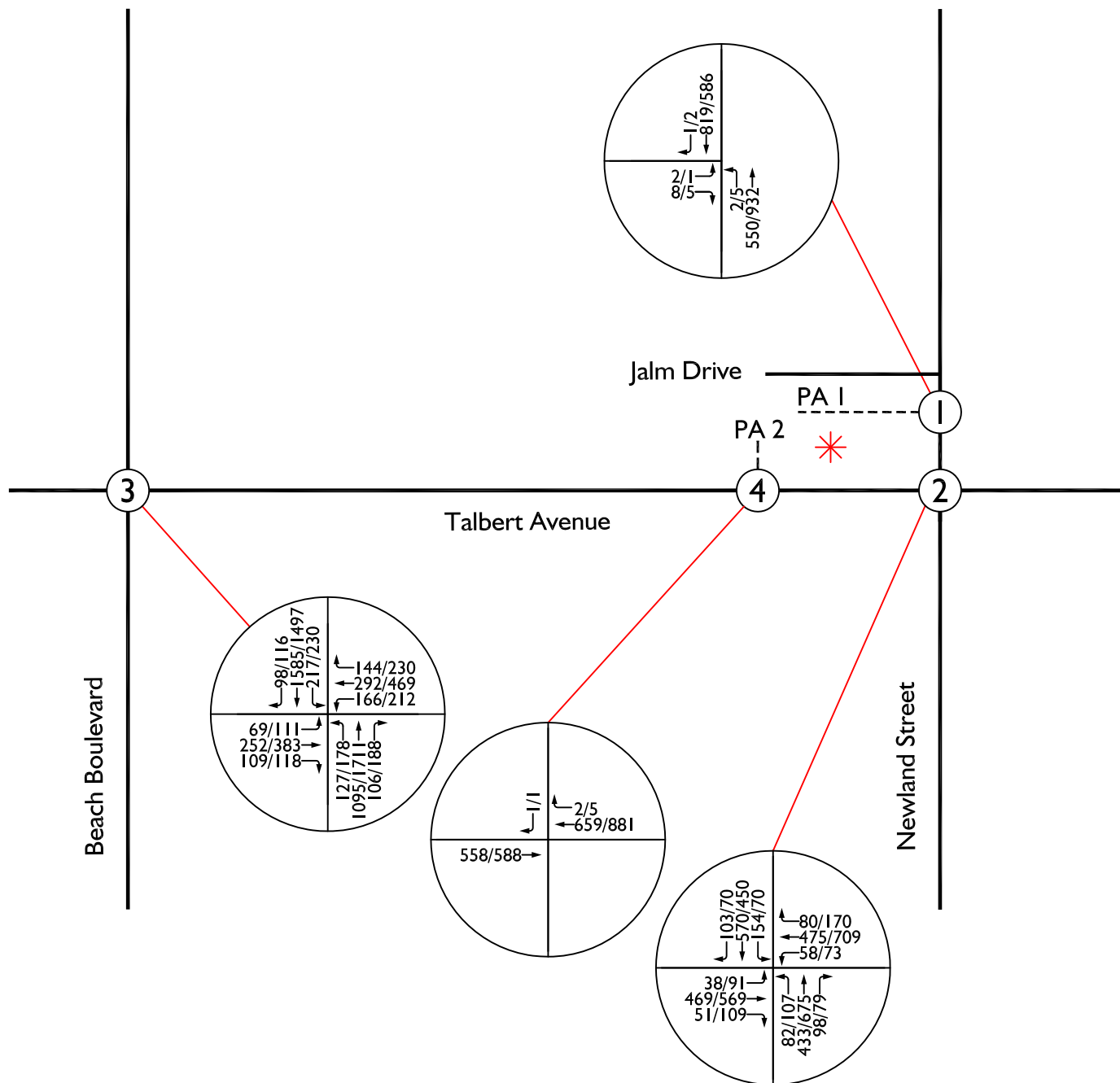


Legend:

10/20 = AM/PM Peak Hour Volumes



Existing Plus Project Traffic Volumes

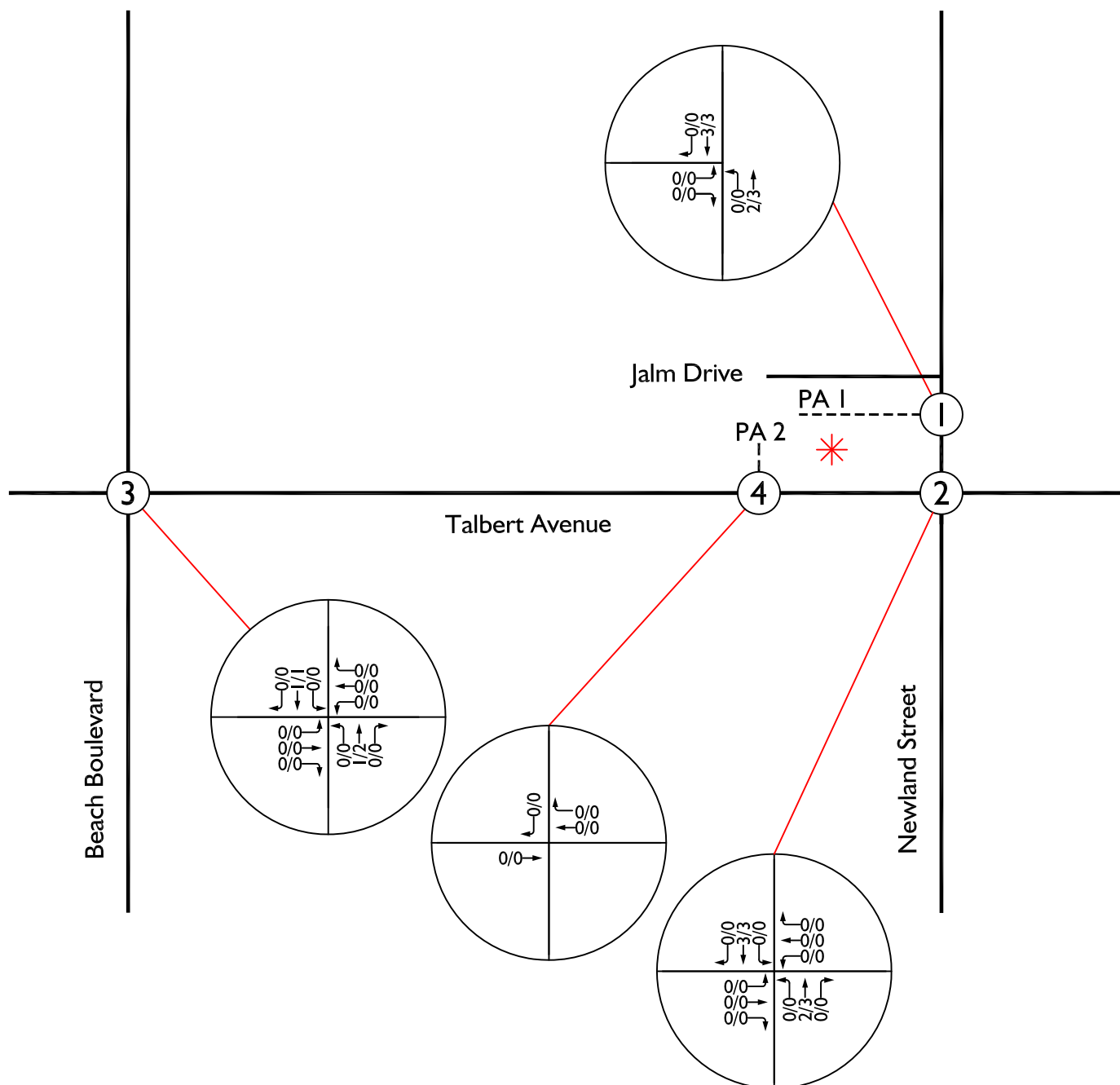


Legend:

10/20 = AM/PM Peak Hour Volumes



Cumulative Projects Traffic Volumes

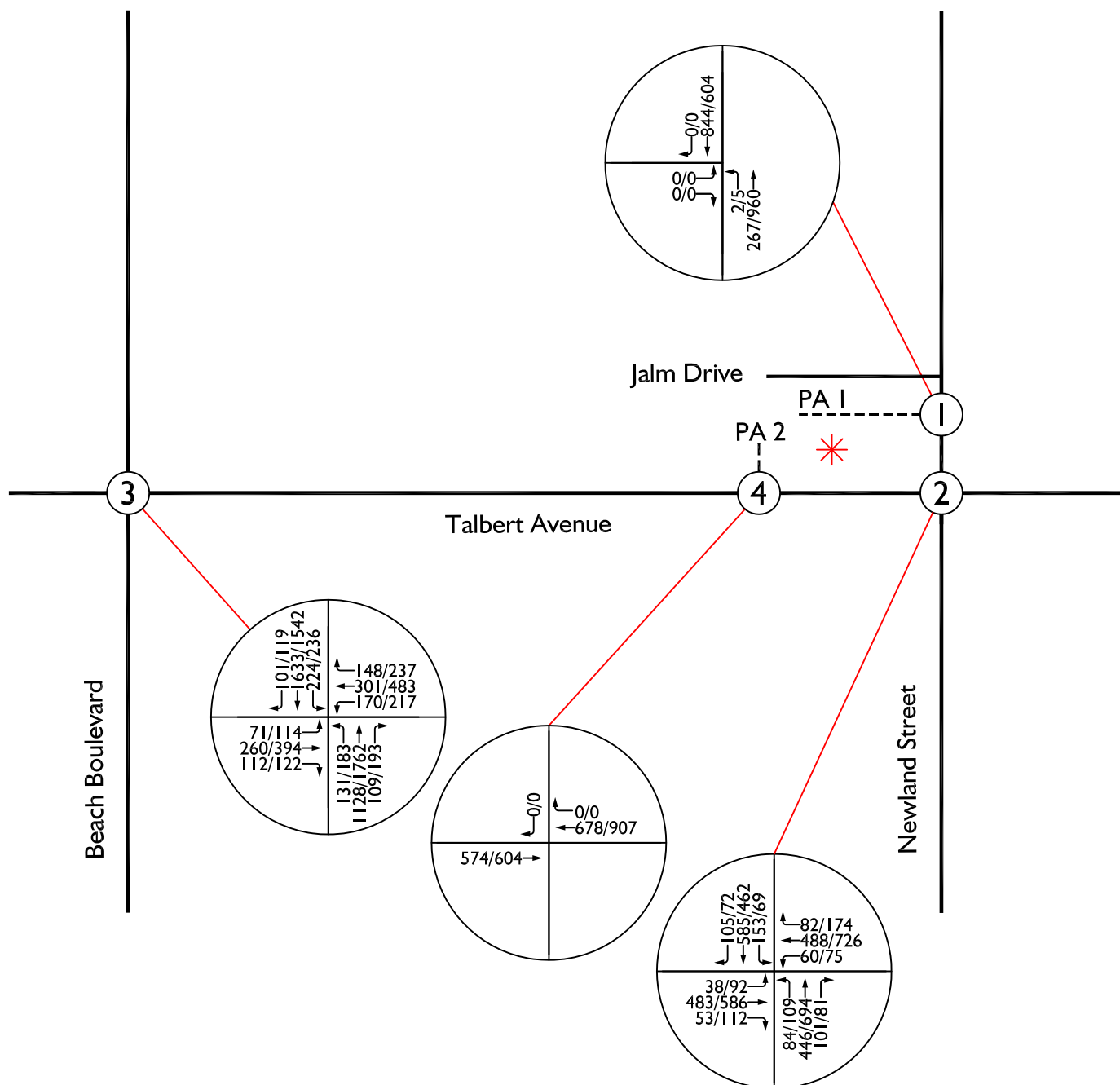


Legend:

10/20 = AM/PM Peak Hour Volumes



Opening Year Without Project Conditions Traffic Volumes

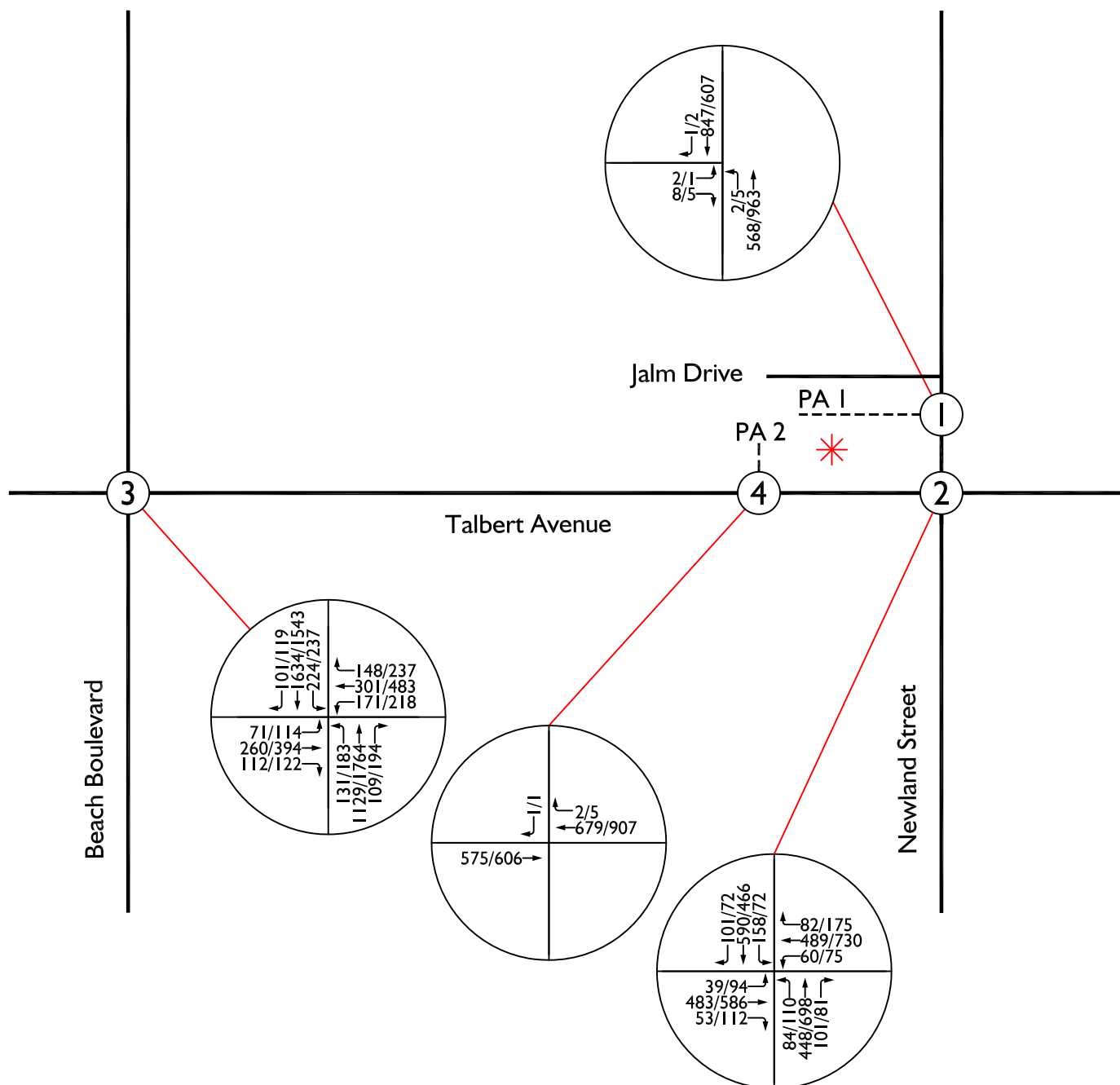


Legend:

10/20 = AM/PM Peak Hour Volumes



Opening Year With Project Conditions Traffic Volumes



Legend:

10/20 = AM/PM Peak Hour Volumes



5.0 Study Intersection LOS Analysis

This section provides a discussion and summary of the level of service (LOS) analysis for the study intersections.

5.1 Existing Conditions Level of Service

Table 5-1 summarizes the results of the LOS analysis for the study intersections for Existing Conditions.

As shown in Table 5-1, the study intersections are currently operating at an acceptable level of service (LOS D or better) during the peak hours for Existing Conditions.

Detailed LOS analysis sheets for Existing Conditions are contained in Appendix B.

5.2 Existing Plus Project Conditions Level of Service

Table 5-2 summarizes the results of the LOS analysis for the study intersections for Existing Plus Project Conditions.

As shown in Table 5-2, the study intersections are forecast to operate at an acceptable level of service during the peak hours for Existing Plus Project Conditions.

As also shown in Table 5-2, based on established thresholds, the proposed project is forecast to not require to contribute to the level of service improvements at the study intersections for Existing Plus Project Conditions.

Detailed LOS analysis sheets for Existing Plus Project Conditions are contained in Appendix C.

5.3 Opening Year (2024) Without Project Conditions Level of Service

Table 5-3 summarizes the results of the LOS analysis for the study intersections for Opening Year (2024) Without Project Conditions.

As shown in Table 5-3, the study intersections are forecast to continue to operate at an acceptable level of service during the peak hours for Opening Year (2024) Without Project Conditions.

Detailed LOS analysis sheets for Opening Year (2024) Without Project Conditions are contained in Appendix D.

5.4 Opening Year (2024) With Project Conditions Level of Service

Table 5-4 summarizes the results of the LOS analysis for the study intersections for Opening Year (2024) With Project Conditions.

As shown in Table 5-4, the study intersections are forecast to operate at an acceptable level of service during the peak hours for Opening Year (2024)

As also shown in Table 5-4, based on established thresholds, the proposed project is forecast to not require to contribute to the level of service improvements at the study intersections for Opening Year (2024) With Project Conditions.

Detailed LOS analysis sheets for Opening Year (2024) With Project Conditions are contained in Appendix E.

**Table 5-1
Study Intersection LOS Analysis Summary
Existing (2021) Conditions**

Intersection		Traffic Control ³	Methodology ²	V/C Ratio ¹		Delay (Secs) ¹		Level of Service	
				AM	PM	AM	PM	AM	PM
1.	Newland Street (NS) / Project Access 1 (EW)	CSS	HCM	--	--	N/A	N/A	N/A	N/A
2.	Newland Street (NS) / Talbert Avenue (EW)	TS	ICU	0.466	0.571	--	--	A	A
3.	Beach Boulevard (NS) / Talbert Avenue (EW)	TS	ICU	0.543	0.735	--	--	A	C
4.	Project Access 2 (NS) / Talbert Avenue (EW)	CSS	HCM	--	--	N/A	N/A	N/A	N/A

¹ Deficient operation shown in **Bold**.

² ICU Analysis Software: Traffix, Version 8.0. Volume to Capacity Ratio (V/C) is calculated utilizing the Intersection Capacity Utilization methodology
HCM Analysis Software: Synchro, Version 10.0. Per the 2010 Highway Capacity Manual Edition, intersections with cross-street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

³ TS = Traffic Signal
CSS = Cross-Street Stop

**Table 5-2
Study Intersection LOS Analysis Summary
Existing (2021) Plus Project Conditions**

Intersection	Traffic Control ³	Methodology ²	Existing (2021) Conditions						Forecast Existing (2021) Plus Project Conditions							
			V/C Ratio ¹		Delay (Secs) ^{1,2}		Level of Service		V/C Ratio ¹		Delay (Secs) ^{1,2}		Level of Service		Requires Improvement?	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1. Newland Street (NS) / Project Access 1 (EW)	CSS	HCM	--	--	N/A	N/A	N/A	N/A	--	--	14.4	12.7	B	B	No	No
2. Newland Street (NS) / Talbert Avenue (EW)	TS	ICU	0.466	0.571	--	--	A	A	0.469	0.575	--	--	A	A	No	No
3. Beach Boulevard (NS) / Talbert Avenue (EW)	TS	ICU	0.543	0.735	--	--	A	C	0.544	0.735	--	--	A	C	No	No
4. Project Access 2 (NS) / Talbert Avenue (EW)	CSS	HCM	--	--	N/A	N/A	N/A	N/A	--	--	10.7	11.8	B	B	No	No

¹ Deficient operation shown in **Bold**.

² ICU Analysis Software: Traffix, Version 8.0. Volume to Capacity Ratio (V/C) is calculated utilizing the Intersection Capacity Utilization methodology for signalized intersections.

HCM Analysis Software: Synchro, Version 10.0. Per the 2010 Highway Capacity Manual Edition, intersections with cross-street stop control, the delay and level of service for the worst individual movement

³ TS = Traffic Signal

CSS = Cross-Street Stop

**Table 5-3
Study Intersection LOS Analysis Summary
Opening Year (2024) Without Project Conditions**

Intersection		Traffic Control ³	Methodolgy ²	V/C Ratio ¹		Delay (Secs) ¹		Level of Service	
				AM	PM	AM	PM	AM	PM
1.	Newland Street (NS) / Project Access 1 (EW)	CSS	HCM	--	--	N/A	N/A	N/A	N/A
2.	Newland Street (NS) / Talbert Avenue (EW)	TS	ICU	0.479	0.587	--	--	A	A
3.	Beach Boulevard (NS) / Talbert Avenue (EW)	TS	ICU	0.558	0.756	--	--	A	C
4.	Project Access 2 (NS) / Talbert Avenue (EW)	CSS	HCM	--	--	N/A	N/A	N/A	N/A

¹ Deficient operation shown in **Bold**.

² ICU Analysis Software: Traffix, Version 8.0. Volume to Capacity Ratio (V/C) is calculated utilizing the Intersection Capacity Utilization methodology
 HCM Analysis Software: Synchro, Version 10.0. Per the 2010 Highway Capacity Manual Edition, intersections with cross-street stop control, the

³ TS = Traffic Signal

CSS = Cross-Street Stop

**Table 5-4
Study Intersection LOS Analysis Summary
Opening Year (2024) With Project Conditions**

Intersection	Traffic Control ³	Methodology ²	Opening Year (2024) Without Project Conditions						Opening Year (2024) With Project Conditions							
			V/C Ratio ¹		Delay (Secs) ^{1,2}		Level of Service		V/C Ratio ¹		Delay (Secs) ^{1,2}		Level of Service		Requires Improvement?	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1. Newland Street (NS) / Project Access 1 (EW)	CSS	HCM	--	--	N/A	N/A	N/A	N/A	--	--	14.8	13.0	B	B	No	No
2. Newland Street (NS) / Talbert Avenue (EW)	TS	ICU	0.479	0.587	--	--	A	A	0.482	0.591	--	--	A	A	No	No
3. Beach Boulevard (NS) / Talbert Avenue (EW)	TS	ICU	0.558	0.756	--	--	A	C	0.559	0.756	--	--	A	C	No	No
4. Project Access 2 (NS) / Talbert Avenue (EW)	CSS	HCM	--	--	N/A	N/A	N/A	N/A	--	--	10.8	12.0	B	B	No	No

¹ Deficient operation shown in **Bold**.

² ICU Analysis Software: Traffix, Version 8.0. Volume to Capacity Ratio (V/C) is calculated utilizing the Intersection Capacity Utilization methodology for signalized intersections.

HCM Analysis Software: Synchro, Version 10.0. Per the 2010 Highway Capacity Manual Edition, intersections with cross-street stop control, the delay and level of service for the worst individual movement

³ TS = Traffic Signal

CSS = Cross-Street Stop

6.0 Gap Analysis

A gap analysis was conducted for vehicles on Newland Street north of Talbert Avenue to determine the number of gaps in the existing stream of traffic to accommodate vehicles entering and exiting the project driveway on Newland Street.

The gap data was collected during one typical weekday on Wednesday, October 6th, 2021 over a 24-hour period. The gap analysis is conducted for the traffic peak periods during the AM peak period (7:00 AM and 9:00 AM) and PM peak period (4:00 PM and 6:00 PM).

Detailed gap count data is included in Appendix A.

Based on industry standards, the minimum time for one vehicle to safely complete a turning movement into or out of a driveway is 7 seconds plus 7 seconds for each subsequent vehicle following the first.

Hence, a gap of between 7 to 14 seconds can accommodate a right-turn out of a driveway while gaps of over 14 seconds can accommodate left-turns.

Table 6-1 shows a summary of the available gaps in traffic on Newland Street and Talbert Avenue along project frontage.

Table 6-1
Newland Street North of Talbert Avenue
Existing Conditions Gap Analysis Summary

Gap Time	Gaps Available	
	AM Peak Period (7:00 AM to 9:00 AM)	PM Peak Period (4:00 PM to 6:00 PM)
7 to 14 Seconds	200	239
Over 14 Seconds	271	245

Shows the combined gap for both northbound and southbound Newland Street.

As shown in Table 6, based on the existing conditions gap analysis:

- A total of 200 right turns and 271 left-turns can be accommodated at the Newland Street driveway during the AM peak period.

- A total of 239 right turns and 245 left-turns can be accommodated at the Newland Street driveway during the PM peak period.

Based on the gap analysis, adequate gap in the traffic flow on Newland Street north of Talbert is expected to be available to sufficiently accommodate the right and left-turns in and out of the project site driveways.

7.0 Vehicle Miles Traveled (VMT) Analysis

Effective July 1st, 2020, the longstanding metric of roadway level of service (LOS), which is typically measured in terms of vehicle delay, roadway capacity and congestion, will no longer be considered a significant impact under the California Environmental Quality Act (CEQA). Pursuant to CEQA Guidelines, Section 15064.3, Vehicle Miles Traveled (VMT) is now the most appropriate measure of transportation impacts.

The City of Huntington Beach follows the guidance and recommendations provided by the Office of Planning and Research (OPR) in regards to determining the thresholds of significance and methodology for identifying VMT related impacts.

Since the project generates less than 500 daily trips, it is considered a small project and it is screened out from requiring a full VMT analysis. Hence, the project is considered to have a less than significant VMT impact.

8.0 Conclusions

The purpose of this analysis and report is to evaluate and assess the proposed Newland Street and Talbert Avenue Residential Project from a traffic and circulation standpoint.

This traffic study has been prepared in accordance with the traffic study guidelines, requirements and thresholds of significance for the City of Huntington Beach and evaluates the potential traffic impacts associated with the proposed project in accordance with the City's established thresholds.

This study is prepared in accordance with the scope of work approved by the City of Huntington Beach staff.

The project site is located on the northwest corner of the Newland Street and Talbert Avenue intersection in the City of Huntington Beach.

The proposed project consists of 34 residential dwelling units on approximately 2.1 acres. The project site is currently occupied by approximately three (3) single family homes that will be demolished as part of the project construction.

Access for the project is planned via the following:

- One unsignalized access driveway along Newland Street, and
- One unsignalized right-in/right-out access driveway along Talbert Avenue.

The project is planned to open in 2024 and is evaluated in a single phase.

Based on review of the project's trip generation, geographical area, and circulation system, the traffic study evaluates the following study intersections:

- Newland Street / Project Access 1;
- Newland Street / Talbert Avenue;
- Beach Boulevard / Talbert Avenue; and
- Talbert Avenue / Project Access 2.

The analysis evaluates traffic conditions for the following scenarios:

- Existing Conditions;
- Existing Plus Project Conditions;
- Opening Year (2024) Without Project Conditions
- Opening Year (2024) With Project Conditions

Project Trip Generation:

Based on the ITE trip generation rates, the proposed project is forecast to generate approximately 249 daily trips which include approximately 16 AM peak hour trips and approximately 19 PM peak hour trips.

Level of Service Analysis Summary:

The study intersections are forecast to operate at an acceptable level of service for all of the analysis scenarios evaluated as part of this report.

Based on established thresholds, the proposed project is forecast to not require to contribute to the level of service improvements at the study intersections.

Gap Analysis Summary:

A gap analysis was conducted for vehicles on Newland Street north of Talbert Avenue to determine the number of gaps in the existing stream of traffic to accommodate vehicles entering and exiting the project driveway on Newland Street.

The gap data was collected during one typical weekday on Wednesday, October 6th, 2021 over a 24-hour period. The gap analysis is conducted for the traffic peak periods during the AM peak period (7:00 AM and 9:00 AM) and PM peak period (4:00 PM and 6:00 PM).

Based on the existing conditions gap analysis:

- A total of 200 right turns and 271 left-turns can be accommodated at the Newland Street driveway during the AM peak period.
- A total of 239 right turns and 245 left-turns can be accommodated at the Newland Street driveway during the PM peak period.

Based on the gap analysis, adequate gap in the traffic flow on Newland Street north of Talbert is expected to be available to sufficiently accommodate the right and left-turns in and out of the project site driveways

VMT Analysis Summary:

Since the project generates less than 500 daily trips, it is considered a small project and it is screened out from requiring a full VMT analysis. Hence, the project is considered to have a less than significant VMT impact

Appendix A

Existing Traffic Count Worksheets

City of Huntington Beach
 N/S: Newland Street
 E/W: Talbert Avenue
 Weather: Clear

File Name : 02_HTB_Newland_Talbert_AM
 Site Code : 10521503
 Start Date : 9/21/2021
 Page No : 1

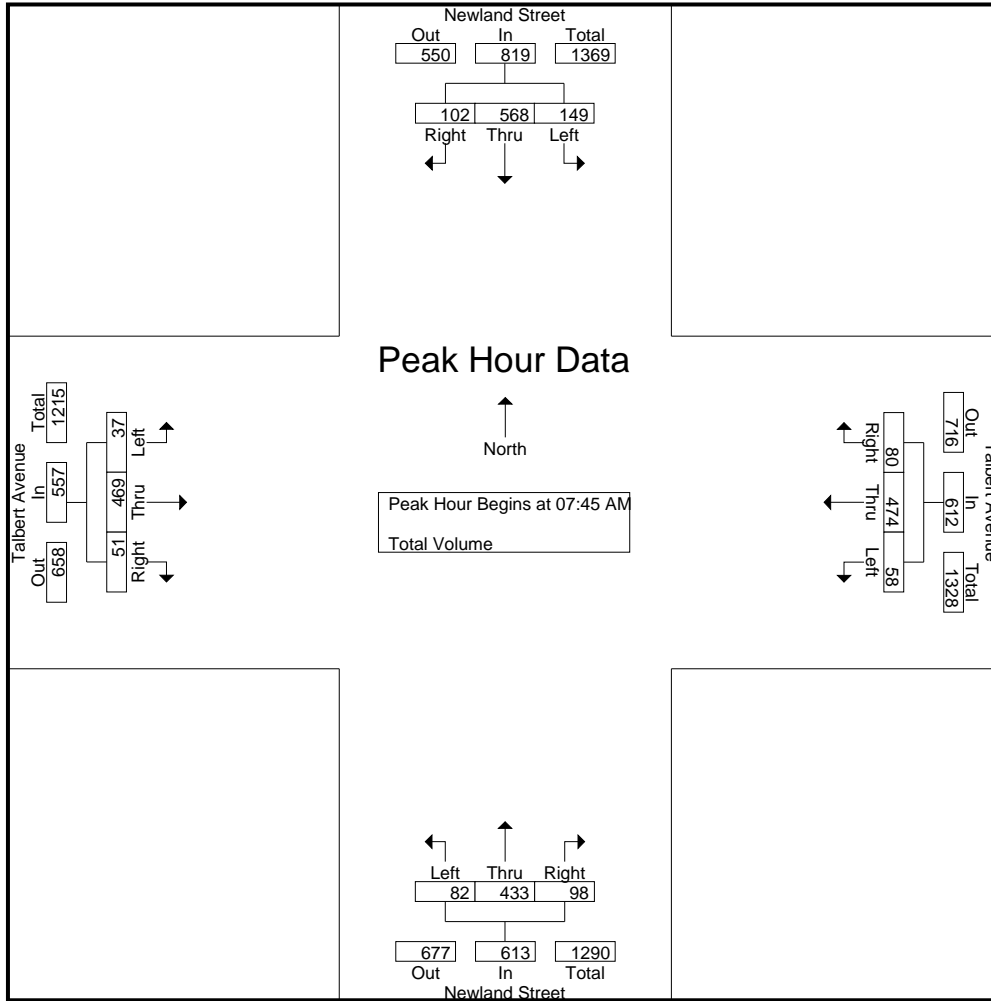
Groups Printed- Total Volume

Start Time	Newland Street Southbound				Talbert Avenue Westbound				Newland Street Northbound				Talbert Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	15	62	10	87	2	63	5	70	7	62	15	84	7	73	8	88	329
07:15 AM	27	51	10	88	5	62	12	79	10	69	13	92	9	82	6	97	356
07:30 AM	41	111	17	169	11	99	19	129	12	99	25	136	9	118	10	137	571
07:45 AM	44	155	23	222	24	127	29	180	16	136	30	182	13	118	18	149	733
Total	127	379	60	566	42	351	65	458	45	366	83	494	38	391	42	471	1989
08:00 AM	34	153	26	213	11	122	15	148	21	120	19	160	11	100	7	118	639
08:15 AM	28	133	34	195	14	122	16	152	20	102	23	145	11	131	10	152	644
08:30 AM	43	127	19	189	9	103	20	132	25	75	26	126	2	120	16	138	585
08:45 AM	20	132	20	172	17	149	22	188	18	90	22	130	13	112	16	141	631
Total	125	545	99	769	51	496	73	620	84	387	90	561	37	463	49	549	2499
Grand Total	252	924	159	1335	93	847	138	1078	129	753	173	1055	75	854	91	1020	4488
Apprch %	18.9	69.2	11.9		8.6	78.6	12.8		12.2	71.4	16.4		7.4	83.7	8.9		
Total %	5.6	20.6	3.5	29.7	2.1	18.9	3.1	24	2.9	16.8	3.9	23.5	1.7	19	2	22.7	

Start Time	Newland Street Southbound				Talbert Avenue Westbound				Newland Street Northbound				Talbert Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	44	155	23	222	24	127	29	180	16	136	30	182	13	118	18	149	733
08:00 AM	34	153	26	213	11	122	15	148	21	120	19	160	11	131	10	152	644
08:15 AM	28	133	34	195	14	122	16	152	20	102	23	145	11	131	10	152	644
08:30 AM	43	127	19	189	9	103	20	132	25	75	26	126	2	120	16	138	585
Total Volume	149	568	102	819	58	474	80	612	82	433	98	613	37	469	51	557	2601
% App. Total	18.2	69.4	12.5		9.5	77.5	13.1		13.4	70.6	16		6.6	84.2	9.2		
PHF	.847	.916	.750	.922	.604	.933	.690	.850	.820	.796	.817	.842	.712	.895	.708	.916	.887

City of Huntington Beach
 N/S: Newland Street
 E/W: Talbert Avenue
 Weather: Clear

File Name : 02_HTB_Newland_Talbert_AM
 Site Code : 10521503
 Start Date : 9/21/2021
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				08:00 AM				07:30 AM				07:45 AM			
+0 mins.	44	155	23	222	11	122	15	148	12	99	25	136	13	118	18	149
+15 mins.	34	153	26	213	14	122	16	152	16	136	30	182	11	100	7	118
+30 mins.	28	133	34	195	9	103	20	132	21	120	19	160	11	131	10	152
+45 mins.	43	127	19	189	17	149	22	188	20	102	23	145	2	120	16	138
Total Volume	149	568	102	819	51	496	73	620	69	457	97	623	37	469	51	557
% App. Total	18.2	69.4	12.5		8.2	80	11.8		11.1	73.4	15.6		6.6	84.2	9.2	
PHF	.847	.916	.750	.922	.750	.832	.830	.824	.821	.840	.808	.856	.712	.895	.708	.916

City of Huntington Beach
 N/S: Newland Street
 E/W: Talbert Avenue
 Weather: Clear

File Name : 02_HTB_Newland_Talbert_PM
 Site Code : 10521503
 Start Date : 9/21/2021
 Page No : 1

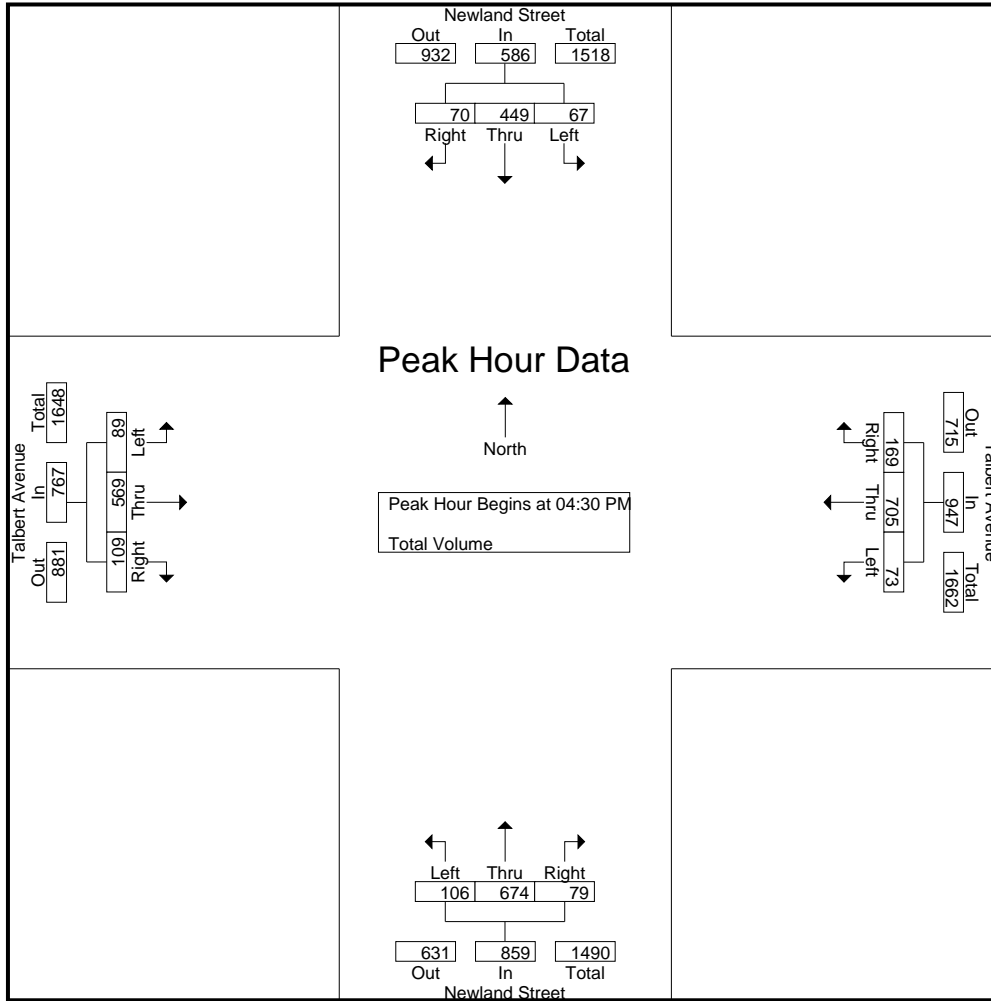
Groups Printed- Total Volume

Start Time	Newland Street Southbound				Talbert Avenue Westbound				Newland Street Northbound				Talbert Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	21	115	15	151	20	171	46	237	24	144	18	186	23	136	30	189	763
04:15 PM	13	104	18	135	26	150	43	219	27	145	27	199	15	106	33	154	707
04:30 PM	19	110	11	140	18	198	52	268	26	165	18	209	16	130	35	181	798
04:45 PM	16	111	20	147	21	171	36	228	27	153	20	200	18	138	23	179	754
Total	69	440	64	573	85	690	177	952	104	607	83	794	72	510	121	703	3022
05:00 PM	16	105	12	133	15	164	39	218	30	170	18	218	34	161	27	222	791
05:15 PM	16	123	27	166	19	172	42	233	23	186	23	232	21	140	24	185	816
05:30 PM	16	93	16	125	17	198	44	259	25	157	14	196	37	120	31	188	768
05:45 PM	10	121	19	150	18	168	41	227	25	163	16	204	14	115	28	157	738
Total	58	442	74	574	69	702	166	937	103	676	71	850	106	536	110	752	3113
Grand Total	127	882	138	1147	154	1392	343	1889	207	1283	154	1644	178	1046	231	1455	6135
Apprch %	11.1	76.9	12		8.2	73.7	18.2		12.6	78	9.4		12.2	71.9	15.9		
Total %	2.1	14.4	2.2	18.7	2.5	22.7	5.6	30.8	3.4	20.9	2.5	26.8	2.9	17	3.8	23.7	

Start Time	Newland Street Southbound				Talbert Avenue Westbound				Newland Street Northbound				Talbert Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	19	110	11	140	18	198	52	268	26	165	18	209	16	130	35	181	798
04:45 PM	16	111	20	147	21	171	36	228	27	153	20	200	18	138	23	179	754
05:00 PM	16	105	12	133	15	164	39	218	30	170	18	218	34	161	27	222	791
05:15 PM	16	123	27	166	19	172	42	233	23	186	23	232	21	140	24	185	816
Total Volume	67	449	70	586	73	705	169	947	106	674	79	859	89	569	109	767	3159
% App. Total	11.4	76.6	11.9		7.7	74.4	17.8		12.3	78.5	9.2		11.6	74.2	14.2		
PHF	.882	.913	.648	.883	.869	.890	.813	.883	.883	.906	.859	.926	.654	.884	.779	.864	.968

City of Huntington Beach
 N/S: Newland Street
 E/W: Talbert Avenue
 Weather: Clear

File Name : 02_HTB_Newland_Talbert_PM
 Site Code : 10521503
 Start Date : 9/21/2021
 Page No : 2



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

	04:30 PM				04:00 PM				04:30 PM				04:45 PM			
+0 mins.	19	110	11	140	20	171	46	237	26	165	18	209	18	138	23	179
+15 mins.	16	111	20	147	26	150	43	219	27	153	20	200	34	161	27	222
+30 mins.	16	105	12	133	18	198	52	268	30	170	18	218	21	140	24	185
+45 mins.	16	123	27	166	21	171	36	228	23	186	23	232	37	120	31	188
Total Volume	67	449	70	586	85	690	177	952	106	674	79	859	110	559	105	774
% App. Total	11.4	76.6	11.9		8.9	72.5	18.6		12.3	78.5	9.2		14.2	72.2	13.6	
PHF	.882	.913	.648	.883	.817	.871	.851	.888	.883	.906	.859	.926	.743	.868	.847	.872

City of Huntington Beach
 N/S: Beach Boulevard
 E/W: Talbert Avenue
 Weather: Clear

File Name : 03_HTB_Beach_Talbert_AM
 Site Code : 10521503
 Start Date : 9/21/2021
 Page No : 1

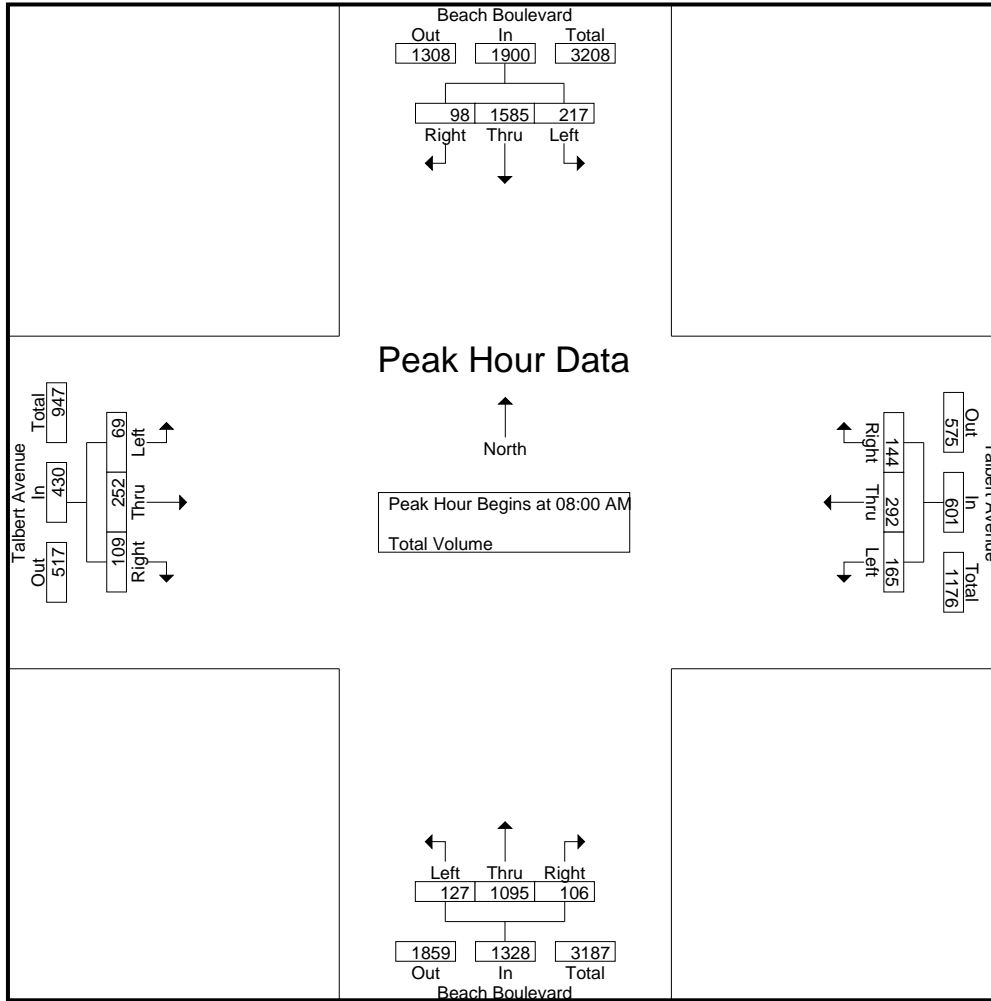
Groups Printed- Total Volume

Start Time	Beach Boulevard Southbound				Talbert Avenue Westbound				Beach Boulevard Northbound				Talbert Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	27	219	22	268	25	44	19	88	7	195	18	220	9	41	7	57	633
07:15 AM	31	299	27	357	19	51	11	81	9	246	21	276	17	50	8	75	789
07:30 AM	46	348	20	414	26	61	22	109	27	278	27	332	13	60	15	88	943
07:45 AM	61	386	29	476	30	82	35	147	25	203	24	252	19	49	22	90	965
Total	165	1252	98	1515	100	238	87	425	68	922	90	1080	58	200	52	310	3330
08:00 AM	46	342	28	416	41	82	35	158	29	293	28	350	16	68	31	115	1039
08:15 AM	65	437	25	527	37	57	24	118	26	238	26	290	18	63	28	109	1044
08:30 AM	59	372	19	450	44	81	44	169	30	261	28	319	21	75	27	123	1061
08:45 AM	47	434	26	507	43	72	41	156	42	303	24	369	14	46	23	83	1115
Total	217	1585	98	1900	165	292	144	601	127	1095	106	1328	69	252	109	430	4259
Grand Total	382	2837	196	3415	265	530	231	1026	195	2017	196	2408	127	452	161	740	7589
Apprch %	11.2	83.1	5.7		25.8	51.7	22.5		8.1	83.8	8.1		17.2	61.1	21.8		
Total %	5	37.4	2.6	45	3.5	7	3	13.5	2.6	26.6	2.6	31.7	1.7	6	2.1	9.8	

Start Time	Beach Boulevard Southbound				Talbert Avenue Westbound				Beach Boulevard Northbound				Talbert Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	46	342	28	416	41	82	35	158	29	293	28	350	16	68	31	115	1039
08:15 AM	65	437	25	527	37	57	24	118	26	238	26	290	18	63	28	109	1044
08:30 AM	59	372	19	450	44	81	44	169	30	261	28	319	21	75	27	123	1061
08:45 AM	47	434	26	507	43	72	41	156	42	303	24	369	14	46	23	83	1115
Total Volume	217	1585	98	1900	165	292	144	601	127	1095	106	1328	69	252	109	430	4259
% App. Total	11.4	83.4	5.2		27.5	48.6	24		9.6	82.5	8		16	58.6	25.3		
PHF	.835	.907	.875	.901	.938	.890	.818	.889	.756	.903	.946	.900	.821	.840	.879	.874	.955

City of Huntington Beach
 N/S: Beach Boulevard
 E/W: Talbert Avenue
 Weather: Clear

File Name : 03_HTB_Beach_Talbert_AM
 Site Code : 10521503
 Start Date : 9/21/2021
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				07:45 AM			
+0 mins.	46	342	28	416	41	82	35	158	29	293	28	350	19	49	22	90
+15 mins.	65	437	25	527	37	57	24	118	26	238	26	290	16	68	31	115
+30 mins.	59	372	19	450	44	81	44	169	30	261	28	319	18	63	28	109
+45 mins.	47	434	26	507	43	72	41	156	42	303	24	369	21	75	27	123
Total Volume	217	1585	98	1900	165	292	144	601	127	1095	106	1328	74	255	108	437
% App. Total	11.4	83.4	5.2		27.5	48.6	24		9.6	82.5	8		16.9	58.4	24.7	
PHF	.835	.907	.875	.901	.938	.890	.818	.889	.756	.903	.946	.900	.881	.850	.871	.888

City of Huntington Beach
 N/S: Beach Boulevard
 E/W: Talbert Avenue
 Weather: Clear

File Name : 03_HTB_Beach_Talbert_PM
 Site Code : 10521503
 Start Date : 9/21/2021
 Page No : 1

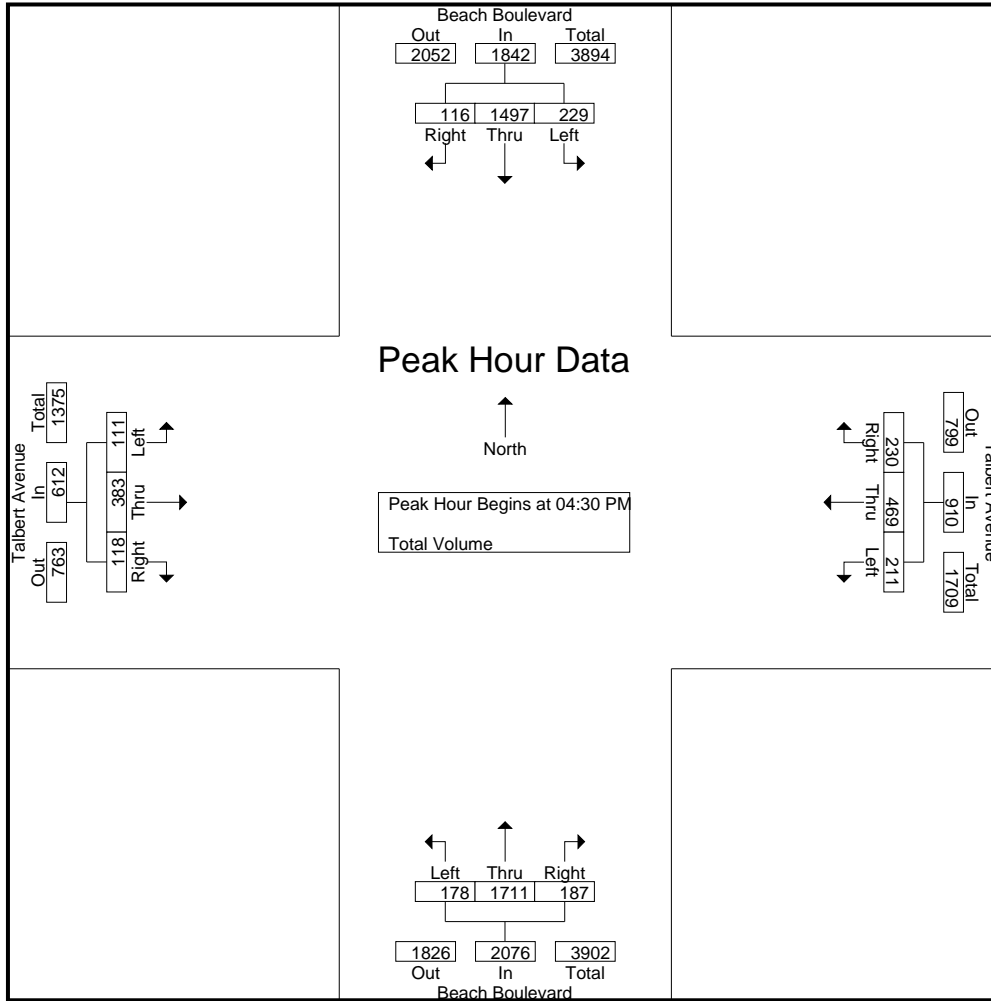
Groups Printed- Total Volume

Start Time	Beach Boulevard Southbound				Talbert Avenue Westbound				Beach Boulevard Northbound				Talbert Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	46	351	30	427	30	109	72	211	48	402	47	497	29	80	41	150	1285
04:15 PM	64	362	34	460	51	101	51	203	42	351	38	431	28	85	34	147	1241
04:30 PM	60	347	24	431	58	124	58	240	49	443	46	538	26	92	44	162	1371
04:45 PM	63	389	39	491	50	113	50	213	39	394	49	482	29	80	24	133	1319
Total	233	1449	127	1809	189	447	231	867	178	1590	180	1948	112	337	143	592	5216
05:00 PM	50	353	26	429	50	108	63	221	40	406	48	494	32	128	27	187	1331
05:15 PM	56	408	27	491	53	124	59	236	50	468	44	562	24	83	23	130	1419
05:30 PM	59	343	25	427	43	127	56	226	35	389	40	464	26	86	31	143	1260
05:45 PM	52	314	28	394	42	139	53	234	39	392	30	461	28	58	30	116	1205
Total	217	1418	106	1741	188	498	231	917	164	1655	162	1981	110	355	111	576	5215
Grand Total	450	2867	233	3550	377	945	462	1784	342	3245	342	3929	222	692	254	1168	10431
Apprch %	12.7	80.8	6.6		21.1	53	25.9		8.7	82.6	8.7		19	59.2	21.7		
Total %	4.3	27.5	2.2	34	3.6	9.1	4.4	17.1	3.3	31.1	3.3	37.7	2.1	6.6	2.4	11.2	

Start Time	Beach Boulevard Southbound				Talbert Avenue Westbound				Beach Boulevard Northbound				Talbert Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	60	347	24	431	58	124	58	240	49	443	46	538	26	92	44	162	1371
04:45 PM	63	389	39	491	50	113	50	213	39	394	49	482	29	80	24	133	1319
05:00 PM	50	353	26	429	50	108	63	221	40	406	48	494	32	128	27	187	1331
05:15 PM	56	408	27	491	53	124	59	236	50	468	44	562	24	83	23	130	1419
Total Volume	229	1497	116	1842	211	469	230	910	178	1711	187	2076	111	383	118	612	5440
% App. Total	12.4	81.3	6.3		23.2	51.5	25.3		8.6	82.4	9		18.1	62.6	19.3		
PHF	.909	.917	.744	.938	.909	.946	.913	.948	.890	.914	.954	.923	.867	.748	.670	.818	.958

City of Huntington Beach
 N/S: Beach Boulevard
 E/W: Talbert Avenue
 Weather: Clear

File Name : 03_HTB_Beach_Talbert_PM
 Site Code : 10521503
 Start Date : 9/21/2021
 Page No : 2



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

	04:30 PM				05:00 PM				04:30 PM				04:15 PM			
+0 mins.	60	347	24	431	50	108	63	221	49	443	46	538	28	85	34	147
+15 mins.	63	389	39	491	53	124	59	236	39	394	49	482	26	92	44	162
+30 mins.	50	353	26	429	43	127	56	226	40	406	48	494	29	80	24	133
+45 mins.	56	408	27	491	42	139	53	234	50	468	44	562	32	128	27	187
Total Volume	229	1497	116	1842	188	498	231	917	178	1711	187	2076	115	385	129	629
% App. Total	12.4	81.3	6.3		20.5	54.3	25.2		8.6	82.4	9		18.3	61.2	20.5	
PHF	.909	.917	.744	.938	.887	.896	.917	.971	.890	.914	.954	.923	.898	.752	.733	.841

Counts Unlimited, Inc.

City of Huntington Beach
 Newland Street
 N/ Talbert Avenue
 24 Hour Directional GAP Count

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

HTB001
 Site Code: 105-21512

Northbound

Start Time	1	3	5	7	9	11	13	15	17	19	21	23	25	27
Time	2	4	6	8	10	12	14	16	18	20	22	24	26	999
10/06/21	0	1	1	0	0	1	0	1	0	1	1	0	0	10
00:15	1	0	1	0	0	0	1	0	1	0	1	0	0	7
00:30	0	0	0	0	1	0	0	1	0	0	0	0	0	5
00:45	0	2	0	0	1	0	0	0	0	0	0	0	0	6
01:00	1	3	2	0	2	1	1	2	1	1	2	0	0	28
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	7
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	0	0	0	0	0	0	0	0	1	0	1	0	4
02:00	0	0	0	0	0	0	0	0	0	1	0	1	0	1
02:15	0	0	0	0	0	1	0	0	0	0	0	0	0	5
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	0	0	0	0	0	0	0	1	0	0	0	0	4
03:00	0	0	0	0	0	1	0	0	1	1	0	0	0	13
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	4
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:45	0	0	0	0	0	1	0	0	0	0	0	0	0	4
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	7
04:15	0	1	0	0	0	0	0	1	0	0	0	0	0	10
04:30	0	0	0	0	0	0	0	0	0	0	0	1	0	6
04:45	0	2	1	0	1	0	0	1	1	0	0	1	0	10
05:00	0	3	1	0	1	0	0	2	1	0	1	2	0	33
05:15	0	2	0	1	0	0	1	1	1	0	0	0	0	13
05:30	0	2	0	1	0	0	1	2	0	0	0	0	0	12
05:45	2	1	0	1	0	1	1	0	2	0	1	0	1	16
06:00	4	0	3	2	1	1	2	0	0	1	1	0	0	11
06:15	6	5	3	5	1	2	5	3	3	1	2	0	1	52
06:30	3	4	2	5	2	2	1	0	0	1	0	0	0	16
06:45	1	4	3	1	0	1	3	2	1	0	2	0	1	15
07:00	3	14	1	0	1	2	0	0	0	0	0	0	0	11
07:15	5	8	3	2	1	1	1	0	1	0	1	0	0	13
07:30	12	30	9	8	4	6	5	2	2	1	3	0	1	55
07:45	19	8	9	2	2	0	1	2	1	1	1	1	1	12
08:00	10	12	2	1	0	1	1	1	1	0	2	1	1	10
08:15	18	7	7	4	1	2	3	2	2	1	3	1	1	9
08:30	36	31	17	5	2	4	2	1	3	2	1	0	1	6
08:45	83	58	35	12	5	7	7	6	7	4	7	3	4	37
09:00	28	29	7	6	7	4	3	2	4	1	1	0	1	7
09:15	21	11	6	4	1	2	1	0	3	3	2	0	1	10
09:30	24	21	10	3	0	4	4	0	0	2	1	0	0	9
09:45	15	13	3	3	5	3	1	0	1	0	2	2	0	9
10:00	88	74	26	16	13	13	9	2	8	6	6	2	2	35
10:15	25	13	8	4	2	3	2	0	1	0	2	2	0	9
10:30	12	8	2	4	2	0	0	1	2	0	2	2	2	10
10:45	17	12	6	4	3	2	1	0	1	2	0	1	2	8
11:00	28	13	8	3	1	2	4	1	1	1	1	0	1	11
11:15	82	46	24	15	8	7	7	2	5	3	5	5	5	38
11:30	25	15	6	4	3	0	1	4	4	1	1	0	0	9
11:45	27	17	3	6	4	3	2	4	1	0	1	1	0	9
12:00	24	13	6	2	2	0	2	1	1	3	2	0	0	10
12:15	28	13	3	3	3	0	3	2	1	0	0	0	1	11
12:30	104	58	18	15	12	3	8	11	7	4	4	1	1	39
12:45	18	17	4	3	3	1	4	2	3	1	1	0	3	9
13:00	30	18	10	3	1	3	1	1	2	1	0	0	0	14
13:15	20	18	8	4	3	3	1	2	2	1	3	2	3	8
13:30	15	10	3	1	0	2	3	2	0	1	0	0	1	12
13:45	83	63	25	11	7	9	9	7	7	4	4	2	7	43
Total	459	340	143	82	53	50	51	37	42	26	34	16	21	406

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 24 Hour Directional GAP Count

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HTB001
 Site Code: 105-21512

Northbound

Start Time	1	3	5	7	9	11	13	15	17	19	21	23	25	27
	2	4	6	8	10	12	14	16	18	20	22	24	26	999
12 PM	27	14	6	2	4	1	0	1	1	1	1	3	0	8
12:15	24	8	10	1	2	2	3	1	1	1	1	2	0	12
12:30	31	21	10	3	1	2	4	1	2	0	0	0	0	10
12:45	28	22	9	2	5	4	1	0	1	4	0	1	2	9
	110	65	35	8	12	9	8	3	5	6	2	6	2	39
13:00	19	24	10	5	1	6	1	5	1	2	1	1	1	8
13:15	30	13	6	1	1	2	2	0	0	1	0	0	0	14
13:30	23	24	9	7	3	1	2	3	2	0	0	0	0	9
13:45	27	17	9	1	4	5	1	2	0	0	1	1	2	10
	99	78	34	14	9	14	6	10	3	3	2	2	3	41
14:00	31	10	15	7	3	3	1	1	1	1	2	1	0	8
14:15	25	27	10	4	6	3	1	1	1	2	1	3	0	8
14:30	43	29	9	4	3	2	4	2	2	1	0	1	0	7
14:45	32	32	10	9	9	3	3	1	2	1	0	1	3	4
	131	98	44	24	21	11	9	5	6	5	3	6	3	27
15:00	30	23	4	5	2	3	1	1	1	2	1	1	2	7
15:15	45	37	9	11	2	4	3	3	2	2	0	1	1	5
15:30	35	31	13	5	2	4	4	2	1	1	2	1	1	6
15:45	35	24	7	4	2	5	3	0	1	2	0	1	3	7
	145	115	33	25	8	16	11	6	5	7	3	4	7	25
16:00	48	30	12	5	6	3	1	3	1	0	1	1	0	6
16:15	42	31	11	6	3	3	0	0	2	0	1	3	0	8
16:30	47	29	10	2	6	3	2	1	1	0	2	0	3	6
16:45	50	34	8	2	6	3	2	3	3	1	2	0	1	4
	187	124	41	15	21	12	5	7	7	1	6	4	4	24
17:00	46	40	16	5	6	2	4	3	3	1	1	0	0	4
17:15	43	26	13	7	1	1	2	3	0	2	1	2	1	6
17:30	46	32	13	9	4	2	2	3	0	1	1	1	0	6
17:45	38	26	11	7	5	2	2	2	0	1	2	2	0	6
	173	124	53	28	16	7	10	11	3	5	5	5	1	22
18:00	43	22	12	8	0	1	4	1	1	1	1	0	1	7
18:15	35	25	14	9	2	1	4	1	3	2	0	0	0	8
18:30	24	24	14	4	3	0	2	2	1	1	1	1	1	10
18:45	25	16	9	4	5	2	4	2	2	4	4	0	0	7
	127	87	49	25	10	4	14	6	7	8	6	1	2	32
19:00	16	19	5	7	1	2	2	2	4	1	3	2	1	9
19:15	20	16	10	2	6	2	2	1	3	2	2	3	3	7
19:30	17	12	7	1	2	2	3	2	1	2	3	1	0	9
19:45	10	13	5	3	2	3	2	3	2	5	0	3	1	11
	63	60	27	13	11	9	9	8	10	10	8	9	5	36
20:00	8	13	9	4	2	5	3	2	2	1	1	1	0	13
20:15	7	14	6	4	2	1	3	1	3	0	0	2	1	13
20:30	4	6	5	2	3	1	2	3	2	0	3	0	1	13
20:45	7	13	6	4	5	1	1	3	0	1	0	1	0	11
	26	46	26	14	12	8	9	9	7	2	4	4	2	50
21:00	7	8	2	2	2	3	0	1	1	2	2	1	2	12
21:15	5	10	3	2	2	1	2	0	1	2	2	1	0	13
21:30	8	6	4	3	5	0	1	1	2	0	0	0	0	14
21:45	6	6	0	1	1	0	2	2	0	0	2	0	1	13
	26	30	9	8	10	4	5	4	4	4	6	2	3	52
22:00	3	2	4	2	1	2	3	3	1	0	1	1	1	10
22:15	3	3	4	1	0	3	1	1	1	0	0	1	1	13
22:30	0	1	2	3	2	1	0	1	2	0	1	0	1	11
22:45	3	2	2	2	1	2	1	1	4	0	0	0	0	13
	9	8	12	8	4	8	5	6	8	0	2	2	3	47
23:00	1	3	1	0	0	2	1	1	2	2	1	0	0	10
23:15	0	1	1	0	1	2	0	0	0	1	0	1	0	9
23:30	0	1	1	1	0	1	2	0	0	0	0	0	1	9
23:45	1	2	4	0	1	4	1	0	0	1	0	0	0	13
	2	7	7	1	2	9	4	1	2	4	1	1	1	41
Total	1098	842	370	183	136	111	95	76	67	55	48	46	36	436
Grand Total	1557	1182	513	265	189	161	146	113	109	81	82	62	57	842

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HTB001
 Site Code: 105-21512

Southbound

Start Time	1	3	5	7	9	11	13	15	17	19	21	23	25	27
	2	4	6	8	10	12	14	16	18	20	22	24	26	999
10/06/21	0	0	1	0	0	1	0	0	0	1	0	0	0	10
00:15	0	0	0	0	0	0	0	0	0	0	0	1	0	6
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	3
00:45	0	0	0	0	0	0	0	1	0	0	0	0	0	5
01:00	0	0	1	0	0	1	0	1	0	1	0	1	0	24
01:15	0	0	1	0	0	0	0	0	0	0	0	0	0	2
01:30	0	0	0	0	0	1	0	0	0	0	0	0	0	7
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	0	1	0	0	1	0	0	0	0	0	0	0	1
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	12
02:30	1	0	0	0	0	0	0	0	0	0	0	0	0	4
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:30	0	0	1	0	0	0	0	0	1	0	0	0	0	3
03:45	0	0	1	0	0	0	0	0	0	1	1	0	1	4
04:00	0	0	2	0	0	0	0	0	1	1	1	0	1	11
04:15	0	0	0	0	0	0	0	0	0	1	0	0	0	3
04:30	0	0	0	0	1	0	1	0	0	0	0	0	0	4
04:45	0	2	0	0	0	0	1	0	0	0	1	0	0	7
05:00	0	2	0	0	1	1	2	0	0	1	1	1	2	12
05:15	1	1	1	0	0	0	2	1	0	0	0	0	0	26
05:30	0	1	0	0	0	0	0	1	0	0	0	0	0	11
05:45	0	1	0	1	2	0	0	0	0	0	1	1	0	9
06:00	2	3	6	5	0	4	0	2	1	1	1	1	0	8
06:15	3	6	7	6	2	4	2	4	1	1	2	2	0	14
06:30	7	10	5	1	1	0	3	1	1	0	0	1	2	8
06:45	3	3	1	1	2	2	0	0	1	0	1	0	1	14
07:00	5	7	3	2	4	1	2	1	1	1	1	0	1	9
07:15	9	10	5	4	1	3	0	2	0	2	5	0	0	11
07:30	24	30	14	8	8	6	5	4	3	3	7	1	4	42
07:45	13	8	5	2	4	3	2	2	0	0	2	0	1	12
08:00	14	14	6	2	5	1	2	2	2	1	1	3	0	11
08:15	21	18	9	4	2	0	2	1	5	2	1	2	2	11
08:30	44	35	18	8	1	3	4	3	4	1	2	2	0	4
08:45	92	75	38	16	12	7	10	8	11	4	6	7	3	38
09:00	37	39	24	12	6	3	3	3	4	0	0	0	0	3
09:15	31	33	6	8	4	6	2	2	2	4	1	1	1	4
09:30	27	14	9	10	4	1	3	3	2	1	4	2	0	8
09:45	23	23	11	6	2	1	2	3	2	2	0	2	3	8
10:00	118	109	50	36	16	11	10	11	10	7	5	5	4	23
10:15	27	17	6	10	4	4	1	4	1	1	3	0	0	8
10:30	15	11	7	4	4	3	1	1	2	2	1	2	3	10
10:45	16	20	7	6	3	4	4	0	2	1	4	0	1	9
11:00	19	19	5	3	3	4	2	3	2	3	1	0	2	9
11:15	77	67	25	23	14	15	8	8	7	7	9	2	6	36
11:30	14	14	10	4	5	2	3	2	1	0	1	3	1	9
11:45	13	15	10	4	5	1	0	1	3	4	2	0	3	9
Total	14	12	2	4	7	4	4	3	0	0	2	1	0	11
	20	17	7	7	4	2	5	3	2	1	4	4	1	6
	61	58	29	19	21	9	12	9	6	5	9	8	5	35
	12	12	7	3	7	1	3	2	1	2	1	0	3	9
	24	12	6	5	2	2	4	4	4	2	1	3	1	8
	28	28	10	5	1	6	2	3	5	1	0	2	0	8
	20	24	5	3	5	2	4	3	1	1	0	0	1	10
Total	84	76	28	16	15	11	13	12	11	6	2	5	5	35
Total	460	423	195	124	89	66	62	57	50	36	42	32	30	336

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HTB001
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Southbound

Start Time	1	3	5	7	9	11	13	15	17	19	21	23	25	27
Time	2	4	6	8	10	12	14	16	18	20	22	24	26	999
12 PM	15	11	10	5	3	3	1	4	2	6	0	0	2	9
12:15	27	19	13	3	5	5	2	1	1	0	3	1	2	11
12:30	23	21	4	5	3	2	3	1	4	1	2	3	0	9
12:45	22	25	6	3	4	1	5	2	1	1	0	3	0	9
13:00	87	76	33	16	15	11	11	8	8	8	5	7	4	38
13:15	20	18	7	3	2	3	2	3	2	2	2	0	0	10
13:30	15	14	6	7	2	5	0	3	1	3	3	1	0	10
13:45	16	21	6	5	2	2	3	4	2	0	2	0	1	9
14:00	28	21	7	5	3	0	3	1	4	3	0	1	0	9
14:15	79	74	26	20	9	10	8	11	9	8	7	2	1	38
14:30	29	29	11	5	6	4	6	2	0	0	2	1	2	8
14:45	26	24	8	7	1	3	5	2	3	2	1	1	0	8
15:00	45	29	12	7	4	6	0	3	4	0	2	1	0	4
15:15	33	38	15	10	6	2	3	3	2	0	2	0	1	6
15:30	133	120	46	29	17	15	14	10	9	2	7	3	3	26
15:45	33	26	10	5	6	3	4	2	2	5	1	0	0	8
16:00	30	19	11	1	3	4	2	3	2	2	0	0	0	10
16:15	21	24	18	7	5	3	5	3	3	3	1	0	1	5
16:30	22	23	10	9	5	4	4	2	2	2	2	1	2	7
16:45	106	92	49	22	19	14	15	10	9	12	4	1	3	30
17:00	31	22	8	5	2	3	7	4	2	0	1	2	0	8
17:15	32	23	10	7	3	6	2	1	1	2	3	2	2	6
17:30	23	25	9	8	2	5	2	3	1	1	1	1	1	8
17:45	18	23	9	5	7	4	1	3	3	0	0	0	1	8
18:00	104	93	36	25	14	18	12	11	7	3	5	5	4	30
18:15	25	20	12	2	2	2	1	2	3	1	2	4	1	8
18:30	30	24	12	8	6	4	2	3	4	1	4	0	0	6
18:45	32	30	9	4	3	2	2	1	2	1	1	3	1	9
19:00	24	19	8	8	5	2	3	3	4	0	1	0	3	7
19:15	111	93	41	22	16	10	8	9	13	3	8	7	5	30
19:30	23	29	11	5	1	3	2	0	4	2	0	2	0	10
19:45	18	24	6	6	2	2	4	2	1	4	2	2	1	8
20:00	22	20	8	6	4	2	2	8	1	0	2	2	0	7
20:15	22	23	6	8	2	4	1	2	2	3	1	2	1	8
20:30	85	96	31	25	9	11	9	12	8	9	5	8	2	33
20:45	12	12	7	5	4	4	0	3	2	4	1	1	1	10
21:00	14	11	8	9	3	3	1	1	4	1	1	1	1	12
21:15	9	16	6	0	1	0	1	3	1	1	2	2	3	9
21:30	10	12	7	6	1	1	2	0	2	0	0	2	2	13
21:45	45	51	28	20	9	8	4	7	9	6	4	6	7	44
22:00	5	7	4	0	0	2	0	0	0	0	2	0	0	13
22:15	6	13	1	2	0	5	2	2	4	0	1	0	0	13
22:30	5	7	3	2	4	0	0	4	1	1	5	2	2	9
22:45	1	4	3	2	4	2	1	0	2	4	0	3	1	9
23:00	17	31	11	6	8	9	3	6	7	5	8	5	3	44
23:15	7	5	0	1	1	1	0	0	0	0	1	0	0	15
23:30	4	9	6	2	1	2	4	1	2	0	1	1	4	11
23:45	1	2	2	1	1	1	1	1	0	0	1	0	0	13
24:00	4	4	2	2	1	1	0	0	1	2	0	0	0	13
24:15	16	20	10	6	4	5	5	2	3	2	3	1	4	52
24:30	1	3	0	1	1	0	0	0	1	1	0	1	0	9
24:45	1	1	2	1	2	3	1	0	0	0	0	1	0	10
25:00	5	2	2	2	1	0	0	1	0	1	2	3	0	11
25:15	0	0	2	0	1	1	2	0	0	0	1	1	0	13
25:30	7	6	6	4	5	4	3	1	1	2	3	6	0	43
25:45	0	2	0	0	0	1	3	1	0	0	0	0	0	12
26:00	0	1	1	0	0	0	0	0	0	0	0	0	1	8
26:15	0	0	1	1	0	0	0	0	2	0	0	0	0	6
26:30	1	1	1	0	1	0	0	0	0	1	0	0	0	9
26:45	1	4	3	1	1	1	3	1	2	1	0	0	1	35
Total	791	756	320	196	126	116	95	88	85	61	59	51	37	443
Grand Total	1251	1179	515	320	215	182	157	145	135	97	101	83	67	779

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 email: counts@countsunlimited.com

HTB001
 Site Code: 105-21512

Northbound, Southbound

Start Time	1	3	5	7	9	11	13	15	17	19	21	23	25	27
Time	2	4	6	8	10	12	14	16	18	20	22	24	26	999
10/06/21	0	1	2	0	0	2	0	1	0	2	1	0	0	20
00:15	1	0	1	0	0	0	1	0	1	0	1	1	0	13
00:30	0	0	0	0	1	0	0	1	0	0	0	0	0	8
00:45	0	2	0	0	1	0	0	1	0	0	0	0	0	11
01:00	1	3	3	0	2	2	1	3	1	2	2	1	0	52
01:15	0	0	1	0	0	0	0	0	0	0	0	0	0	9
01:30	0	0	0	0	0	1	0	0	0	0	0	0	0	11
01:45	0	0	0	0	0	0	0	0	0	1	0	1	0	6
02:00	0	0	1	0	0	1	0	0	0	1	0	1	0	2
02:15	0	0	0	0	0	1	0	0	0	0	0	0	0	28
02:30	1	0	0	0	0	0	0	0	1	0	0	0	0	9
02:45	0	0	0	0	0	0	0	0	0	1	0	0	0	3
03:00	1	0	0	0	0	1	0	0	1	1	0	0	0	7
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	6
03:30	0	0	1	0	0	1	0	0	1	0	0	0	0	25
03:45	0	0	1	0	0	0	0	0	0	1	1	0	1	7
04:00	0	0	2	0	0	1	0	0	1	1	1	0	1	11
04:15	0	1	0	0	0	1	1	1	0	0	0	0	0	28
04:30	0	0	0	0	1	0	0	0	0	1	1	0	0	10
04:45	0	4	1	0	1	0	1	1	1	0	0	2	2	14
05:00	0	5	1	0	2	1	2	2	1	1	2	3	2	13
05:15	1	3	1	1	0	0	3	2	1	0	0	0	0	22
05:30	0	3	0	1	0	0	1	3	0	0	0	0	0	59
05:45	2	2	0	2	2	1	1	0	2	0	2	1	1	24
06:00	6	3	9	7	1	5	2	2	1	2	2	1	0	25
06:15	9	11	10	11	3	6	7	7	4	2	4	2	1	94
06:30	10	14	7	6	3	2	4	1	1	1	0	1	2	24
06:45	4	7	4	2	2	3	3	2	2	0	3	0	2	29
07:00	8	21	4	2	5	3	2	1	1	1	1	0	1	20
07:15	14	18	8	6	2	4	1	2	1	2	6	0	0	24
07:30	36	60	23	16	12	12	10	6	5	4	10	1	5	97
07:45	32	16	14	4	6	3	3	4	1	1	3	1	2	24
08:00	24	26	8	3	5	2	3	3	3	1	3	4	1	21
08:15	39	25	16	8	3	2	5	3	7	3	4	3	3	20
08:30	80	66	35	13	3	7	6	4	7	3	3	2	1	10
08:45	175	133	73	28	17	14	17	14	18	8	13	10	7	75
09:00	65	68	31	18	13	7	6	5	8	1	1	0	1	10
09:15	52	44	12	12	5	8	3	2	5	7	3	1	2	14
09:30	51	35	19	13	4	5	7	3	2	3	5	2	0	17
09:45	38	36	14	9	7	4	3	3	3	2	2	4	3	17
10:00	206	183	76	52	29	24	19	13	18	13	11	7	6	58
10:15	52	30	14	14	6	7	3	4	2	1	5	2	0	17
10:30	27	19	9	8	6	3	1	2	4	2	3	4	5	20
10:45	33	32	13	10	6	6	5	0	3	3	4	1	3	17
11:00	47	32	13	6	4	6	6	4	3	4	2	0	3	20
11:15	159	113	49	38	22	22	15	10	12	10	14	7	11	74
11:30	39	29	16	8	8	2	4	6	5	1	2	3	1	18
11:45	40	32	13	10	9	4	2	5	4	4	3	1	3	18
12:00	38	25	8	6	9	4	6	4	1	3	4	1	0	21
12:15	48	30	10	10	7	2	8	5	3	1	4	4	2	17
12:30	165	116	47	34	33	12	20	20	13	9	13	9	6	74
12:45	30	29	11	6	10	2	7	4	4	3	2	0	6	18
13:00	54	30	16	8	3	5	5	5	6	3	1	3	1	22
13:15	48	46	18	9	4	9	3	5	7	2	3	4	3	16
13:30	35	34	8	4	5	4	7	5	1	2	0	0	2	22
13:45	167	139	53	27	22	20	22	19	18	10	6	7	12	78
Total	919	763	338	206	142	116	113	94	92	62	76	48	51	742

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HTB001
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Northbound, Southbound

Start Time	1	3	5	7	9	11	13	15	17	19	21	23	25	27
Time	2	4	6	8	10	12	14	16	18	20	22	24	26	999
12 PM	42	25	16	7	7	4	1	5	3	7	1	3	2	17
12:15	51	27	23	4	7	7	5	2	2	1	4	3	2	23
12:30	54	42	14	8	4	4	7	2	6	1	2	3	0	19
12:45	50	47	15	5	9	5	6	2	2	5	0	4	2	18
13:00	197	141	68	24	27	20	19	11	13	14	7	13	6	77
13:15	39	42	17	8	3	9	3	8	3	4	3	1	1	18
13:30	45	27	12	8	3	7	2	3	1	4	3	1	0	24
13:45	39	45	15	12	5	3	5	7	4	0	2	0	1	18
14:00	55	38	16	6	7	5	4	3	4	3	1	2	2	19
14:15	178	152	60	34	18	24	14	21	12	11	9	4	4	79
14:30	60	39	26	12	9	7	7	3	1	1	4	2	2	16
14:45	51	51	18	11	7	6	6	3	4	4	2	4	0	16
15:00	88	58	21	11	7	8	4	5	6	1	2	2	0	11
15:15	65	70	25	19	15	5	6	4	4	1	2	1	4	10
15:30	264	218	90	53	38	26	23	15	15	7	10	9	6	53
15:45	63	49	14	10	8	6	5	3	3	7	2	1	2	15
16:00	75	56	20	12	5	8	5	6	4	4	0	1	1	15
16:15	56	55	31	12	7	7	9	5	4	4	3	1	2	11
16:30	57	47	17	13	7	9	7	2	3	4	2	2	5	14
16:45	251	207	82	47	27	30	26	16	14	19	7	5	10	55
17:00	79	52	20	10	8	6	8	7	3	0	2	3	0	14
17:15	74	54	21	13	6	9	2	1	3	2	4	5	2	14
17:30	70	54	19	10	8	8	4	4	2	1	3	1	4	14
17:45	68	57	17	7	13	7	3	6	6	1	2	0	2	12
18:00	291	217	77	40	35	30	17	18	14	4	11	9	8	54
18:15	71	60	28	7	8	4	5	5	6	2	3	4	1	12
18:30	73	50	25	15	7	5	4	6	4	3	5	2	1	12
18:45	78	62	22	13	7	4	4	4	2	2	2	4	1	15
19:00	62	45	19	15	10	4	5	5	4	1	3	2	3	13
19:15	284	217	94	50	32	17	18	20	16	8	13	12	6	52
19:30	66	51	23	13	1	4	6	1	5	3	1	2	1	17
19:45	53	49	20	15	4	3	8	3	4	6	2	2	1	16
20:00	46	44	22	10	7	2	4	10	2	1	3	3	1	17
20:15	47	39	15	12	7	6	5	4	4	7	5	2	1	15
20:30	212	183	80	50	19	15	23	18	15	17	11	9	4	65
20:45	28	31	12	12	5	6	2	5	6	5	4	3	2	19
21:00	34	27	18	11	9	5	3	2	7	3	3	4	4	19
21:15	26	28	13	1	3	2	4	5	2	3	5	3	3	18
21:30	20	25	12	9	3	4	4	3	4	5	0	5	3	24
21:45	108	111	55	33	20	17	13	15	19	16	12	15	12	80
22:00	13	20	13	4	2	7	3	2	2	1	3	1	0	26
22:15	13	27	7	6	2	6	5	3	7	0	1	2	1	26
22:30	9	13	8	4	7	1	2	7	3	1	8	2	3	22
22:45	8	17	9	6	9	3	2	3	2	5	0	4	1	20
23:00	43	77	37	20	20	17	12	15	14	7	12	9	5	94
23:15	14	13	2	3	3	4	0	1	1	2	3	1	2	27
23:30	9	19	9	4	3	3	6	1	3	2	3	2	4	24
23:45	9	8	6	4	6	1	2	2	2	0	1	0	0	27
24:00	10	10	2	3	2	1	2	2	1	2	2	0	1	26
24:15	42	50	19	14	14	9	10	6	7	6	9	3	7	104
24:30	4	5	4	3	2	2	3	3	2	1	1	2	1	19
24:45	4	4	6	2	2	6	2	1	1	0	0	2	1	23
25:00	5	3	4	5	3	1	0	2	2	1	3	3	1	22
25:15	3	2	4	2	2	3	3	1	4	0	1	1	0	26
25:30	16	14	18	12	9	12	8	7	9	2	5	8	3	90
25:45	1	5	1	0	0	3	4	2	2	2	1	0	0	22
26:00	0	2	2	0	1	2	0	0	0	1	0	1	1	17
26:15	0	1	2	2	0	1	2	0	2	0	0	0	1	15
26:30	2	3	5	0	2	4	1	0	0	2	0	0	0	22
26:45	3	11	10	2	3	10	7	2	4	5	1	1	2	76
Total	1889	1598	690	379	262	227	190	164	152	116	107	97	73	879
Grand Total	2808	2361	1028	585	404	343	303	258	244	178	183	145	124	1621

Appendix B

Existing Conditions Intersection Analysis Worksheets

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
EXISTING CONDITIONS
AM PEAK HOUR

Scenario Report

Scenario: EX_AM
Command: EX_AM
Volume: EX_AM
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: NONE
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: EX

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING CONDITIONS
 AM PEAK HOUR

Turning Movement Report
 NONE

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 NEWLAND STREET (NS) / PROJECT ACCESS 1 (EW)													
Base	0	550	0	0	819	0	0	0	0	0	0	0	1369
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	550	0	0	819	0	0	0	0	0	0	0	1369
#2 NEWLAND STREET (NS) / TALBERT AVENUE (EW)													
Base	82	433	98	149	568	102	37	469	51	58	474	80	2601
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	82	433	98	149	568	102	37	469	51	58	474	80	2601
#3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)													
Base	127	1095	106	217	1585	98	69	252	109	165	292	144	4259
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	127	1095	106	217	1585	98	69	252	109	165	292	144	4259
#10 PROJECT ACCESS 2 (NS) / TALBERT AVENUE (EW)													
Base	0	0	0	0	0	0	0	557	0	0	658	0	1215
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	557	0	0	658	0	1215

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING CONDITIONS
 AM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 NEWLAND STREET (NS) / TALBERT AVENUE(EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.466
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	82	433	98	149	568	102	37	469	51	58	474	80
Growth 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
Initial Bse:	82	433	98	149	568	102	37	469	51	58	474	80
User 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
PHF 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
PHF Volume:	82	433	98	149	568	102	37	469	51	58	474	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	433	98	149	568	102	37	469	51	58	474	80
PCE 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
MLF 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
FinalVolume:	82	433	98	149	568	102	37	469	51	58	474	80

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.63	0.37	1.00	1.70	0.30	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2773	627	1700	2882	518	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.05	0.16	0.16	0.09	0.20	0.20	0.02	0.14	0.03	0.03	0.14	0.05
Crit Moves:	****			****			****			****		

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING CONDITIONS
 AM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.543
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	1	0	1	0	3	1	0	1	0	2	0	1	1	0	1	1	0

Volume Module:

Base Vol:	127	1095	106	217	1585	98	69	252	109	165	292	144
Growth 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
Initial Bse:	127	1095	106	217	1585	98	69	252	109	165	292	144
User 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
PHF 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
PHF Volume:	127	1095	106	217	1585	98	69	252	109	165	292	144
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	1095	106	217	1585	98	69	252	109	165	292	144
PCE 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
MLF 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
FinalVolume:	127	1095	106	217	1585	98	69	252	109	165	292	144

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.65	0.35	1.00	3.77	0.23	1.00	2.00	1.00	1.00	1.34	0.66
Final Sat.:	1700	6200	600	1700	6404	396	1700	3400	1700	1700	2277	1123

Capacity Analysis Module:

Vol/Sat:	0.07	0.18	0.18	0.13	0.25	0.25	0.04	0.07	0.06	0.10	0.13	0.13
Crit Moves:	****			****			****			****		

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
EXISTING CONDITIONS
PM PEAK HOUR

Scenario Report

Scenario: EX_PM
Command: EX_PM
Volume: EX_PM
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: NONE
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: EX

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING CONDITIONS
 PM PEAK HOUR

Turning Movement Report
 NONE

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 NEWLAND STREET (NS) / PROJECT ACCESS 1 (EW)													
Base	0	932	0	0	586	0	0	0	0	0	0	0	1518
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	932	0	0	586	0	0	0	0	0	0	0	1518
#2 NEWLAND STREET (NS) / TALBERT AVENUE (EW)													
Base	106	674	79	67	449	70	89	569	109	73	705	169	3159
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	106	674	79	67	449	70	89	569	109	73	705	169	3159
#3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)													
Base	178	1711	187	229	1497	116	111	383	118	211	469	230	5440
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	178	1711	187	229	1497	116	111	383	118	211	469	230	5440
#10 PROJECT ACCESS 2 (NS) / TALBERT AVENUE (EW)													
Base	0	0	0	0	0	0	0	586	0	0	881	0	1467
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	586	0	0	881	0	1467

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING CONDITIONS
 PM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 NEWLAND STREET (NS) / TALBERT AVENUE(EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.571
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	106	674	79	67	449	70	89	569	109	73	705	169
Growth 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
Initial Bse:	106	674	79	67	449	70	89	569	109	73	705	169
User 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
PHF 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
PHF Volume:	106	674	79	67	449	70	89	569	109	73	705	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	674	79	67	449	70	89	569	109	73	705	169
PCE 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
MLF 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
FinalVolume:	106	674	79	67	449	70	89	569	109	73	705	169

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	1.73	0.27	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3043	357	1700	2941	459	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.06	0.22	0.22	0.04	0.15	0.15	0.05	0.17	0.06	0.04	0.21	0.10
Crit Moves:	****			****			****			****		

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING CONDITIONS
 PM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.735
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound					South Bound					East Bound			West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
Control:	Protected					Protected					Protected			Protected							
Rights:	Include					Include					Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	1	0	1	0	3	1	0	1	0	2	0	1	1	0	1	1	0	

Volume Module:

Base Vol:	178	1711	187	229	1497	116	111	383	118	211	469	230
Growth 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
Initial Bse:	178	1711	187	229	1497	116	111	383	118	211	469	230
User 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
PHF 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
PHF Volume:	178	1711	187	229	1497	116	111	383	118	211	469	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	1711	187	229	1497	116	111	383	118	211	469	230
PCE 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
MLF 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
FinalVolume:	178	1711	187	229	1497	116	111	383	118	211	469	230

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.61	0.39	1.00	3.71	0.29	1.00	2.00	1.00	1.00	1.34	0.66
Final Sat.:	1700	6130	670	1700	6311	489	1700	3400	1700	1700	2281	1119

Capacity Analysis Module:

Vol/Sat:	0.10	0.28	0.28	0.13	0.24	0.24	0.07	0.11	0.07	0.12	0.21	0.21
Crit Moves:	****			****			****			****		

Appendix C

Existing Plus Project Conditions
Intersection Analysis Worksheets

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Scenario Report

Scenario: EX+P_AM
Command: EX+P_AM
Volume: EX_AM
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: P_AM
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: EX

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING PLUS PROJECT CONDITIONS
 AM PEAK HOUR

Trip Generation Report

Forecast for P_AM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	4.00	12.00	4	12	16	100.0
	Zone 1 Subtotal		.....			4	12	16	100.0
TOTAL						4	12	16	100.0

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING PLUS PROJECT CONDITIONS
 AM PEAK HOUR

Turning Movement Report
 P_AM

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 NEWLAND STREET (NS) / PROJECT ACCESS 1 (EW)													
Base	0	550	0	0	819	0	0	0	0	0	0	0	1369
Added	2	0	0	0	0	1	2	0	8	0	0	0	13
Total	2	550	0	0	819	1	2	0	8	0	0	0	1382
#2 NEWLAND STREET (NS) / TALBERT AVENUE (EW)													
Base	82	433	98	149	568	102	37	469	51	58	474	80	2601
Added	0	0	0	5	2	1	1	0	0	0	1	0	10
Total	82	433	98	154	570	103	38	469	51	58	475	80	2611
#3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)													
Base	127	1095	106	217	1585	98	69	252	109	165	292	144	4259
Added	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	127	1095	106	217	1585	98	69	252	109	166	292	144	4260
#10 PROJECT ACCESS 2 (NS) / TALBERT AVENUE (EW)													
Base	0	0	0	0	0	0	0	557	0	0	658	0	1215
Added	0	0	0	0	0	1	0	1	0	0	1	2	5
Total	0	0	0	0	0	1	0	558	0	0	659	2	1220

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING PLUS PROJECT CONDITIONS
 AM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 NEWLAND STREET (NS) / TALBERT AVENUE(EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.469
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	82	433	98	149	568	102	37	469	51	58	474	80
Growth 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
Initial Bse:	82	433	98	149	568	102	37	469	51	58	474	80
Added Vol:	0	0	0	5	2	1	1	0	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	82	433	98	154	570	103	38	469	51	58	475	80
User 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
PHF 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
PHF Volume:	82	433	98	154	570	103	38	469	51	58	475	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	433	98	154	570	103	38	469	51	58	475	80
PCE 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
MLF 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
FinalVolume:	82	433	98	154	570	103	38	469	51	58	475	80

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.63	0.37	1.00	1.69	0.31	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2773	627	1700	2880	520	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.05	0.16	0.16	0.09	0.20	0.20	0.02	0.14	0.03	0.03	0.14	0.05
Crit Moves:	****			****			****			****		

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING PLUS PROJECT CONDITIONS
 AM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.544
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	1	0	1	0	3	1	0	1	0	2	0	1	1	0	1	1	0

Volume Module:

Base Vol:	127	1095	106	217	1585	98	69	252	109	165	292	144
Growth 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
Initial Bse:	127	1095	106	217	1585	98	69	252	109	165	292	144
Added Vol:	0	0	0	0	0	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	127	1095	106	217	1585	98	69	252	109	166	292	144
User 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
PHF 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
PHF Volume:	127	1095	106	217	1585	98	69	252	109	166	292	144
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	1095	106	217	1585	98	69	252	109	166	292	144
PCE 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
MLF 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
FinalVolume:	127	1095	106	217	1585	98	69	252	109	166	292	144

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.65	0.35	1.00	3.77	0.23	1.00	2.00	1.00	1.00	1.34	0.66
Final Sat.:	1700	6200	600	1700	6404	396	1700	3400	1700	1700	2277	1123

Capacity Analysis Module:

Vol/Sat:	0.07	0.18	0.18	0.13	0.25	0.25	0.04	0.07	0.06	0.10	0.13	0.13
Crit Moves:	****			****			****			****		

Lanes and Geometrics NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY
 1: Newland Street & Project Access 1 11/19/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.890					
Flt Protected	0.991					
Satd. Flow (prot)	1643	0	0	3539	3539	0
Flt Permitted	0.991					
Satd. Flow (perm)	1643	0	0	3539	3539	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	898			615	879	
Travel Time (s)	20.4			14.0	20.0	

Intersection Summary

Area Type: Other

Volume

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

1: Newland Street & Project Access 1

11/19/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	2	8	2	550	819	1
Future Volume (vph)	2	8	2	550	819	1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	2	9	2	598	890	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	0	600	891	0
Intersection Summary						

HCM 6th TWSC
1: Newland Street & Project Access 1

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

11/19/2021

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	2	8	2	550	819	1
Future Vol, veh/h	2	8	2	550	819	1
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	-	-	-	-	-
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	2	9	2	598	890	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1194	446	891	0	0
Stage 1	891	-	-	-	-
Stage 2	303	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-
Pot Cap-1 Maneuver	179	560	757	-	-
Stage 1	361	-	-	-	-
Stage 2	723	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	178	560	757	-	-
Mov Cap-2 Maneuver	178	-	-	-	-
Stage 1	360	-	-	-	-
Stage 2	723	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	757	-	392	-	-
HCM Lane V/C Ratio	0.003	-	0.028	-	-
HCM Control Delay (s)	9.8	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lanes and Geometrics NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY
 10: Talbert Avenue & Project Access 2

11/19/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	0	3539	3539	0	1611	0
Flt Permitted						
Satd. Flow (perm)	0	3539	3539	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1564	1093		547	
Travel Time (s)		35.5	24.8		12.4	

Intersection Summary

Area Type: Other

Volume
10: Talbert Avenue & Project Access 2

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

11/19/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Volume (vph)	0	558	659	2	0	1
Future Volume (vph)	0	558	659	2	0	1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	607	716	2	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	607	718	0	1	0
Intersection Summary						

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	0	558	659	2	0	1
Future Vol, veh/h	0	558	659	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	607	716	2	0	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	1021 359
Stage 1	-	-	-	-	717 -
Stage 2	-	-	-	-	304 -
Critical Hdwy	-	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	0	-	-	-	232 638
Stage 1	0	-	-	-	445 -
Stage 2	0	-	-	-	722 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	232 638
Mov Cap-2 Maneuver	-	-	-	-	232 -
Stage 1	-	-	-	-	445 -
Stage 2	-	-	-	-	722 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	638
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s)	-	-	-	10.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

Scenario Report

Scenario: EX+P_PM
Command: EX+P_PM
Volume: EX_PM
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: P_PM
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: EX

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING PLUS PROJECT CONDITIONS
 PM PEAK HOUR

Trip Generation Report

Forecast for P_PM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	12.00	7.00	12	7	19	100.0
	Zone 1 Subtotal		.....			12	7	19	100.0
TOTAL						12	7	19	100.0

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING PLUS PROJECT CONDITIONS
 PM PEAK HOUR

Turning Movement Report
 P_PM

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 NEWLAND STREET (NS) / PROJECT ACCESS 1 (EW)													
Base	0	932	0	0	586	0	0	0	0	0	0	0	1518
Added	5	0	0	0	0	2	1	0	5	0	0	0	13
Total	5	932	0	0	586	2	1	0	5	0	0	0	1531
#2 NEWLAND STREET (NS) / TALBERT AVENUE (EW)													
Base	106	674	79	67	449	70	89	569	109	73	705	169	3159
Added	1	1	0	3	1	0	2	0	0	0	4	1	13
Total	107	675	79	70	450	70	91	569	109	73	709	170	3172
#3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)													
Base	178	1711	187	229	1497	116	111	383	118	211	469	230	5440
Added	0	0	1	1	0	0	0	0	0	1	0	0	3
Total	178	1711	188	230	1497	116	111	383	118	212	469	230	5443
#10 PROJECT ACCESS 2 (NS) / TALBERT AVENUE (EW)													
Base	0	0	0	0	0	0	0	586	0	0	881	0	1467
Added	0	0	0	0	0	1	0	2	0	0	0	5	8
Total	0	0	0	0	0	1	0	588	0	0	881	5	1475

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING PLUS PROJECT CONDITIONS
 PM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 NEWLAND STREET (NS) / TALBERT AVENUE(EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.575
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	106	674	79	67	449	70	89	569	109	73	705	169
Growth 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
Initial Bse:	106	674	79	67	449	70	89	569	109	73	705	169
Added Vol:	1	1	0	3	1	0	2	0	0	0	4	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	107	675	79	70	450	70	91	569	109	73	709	170
User 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
PHF 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
PHF Volume:	107	675	79	70	450	70	91	569	109	73	709	170
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	675	79	70	450	70	91	569	109	73	709	170
PCE 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
MLF 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
FinalVolume:	107	675	79	70	450	70	91	569	109	73	709	170

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	1.73	0.27	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3044	356	1700	2942	458	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.06	0.22	0.22	0.04	0.15	0.15	0.05	0.17	0.06	0.04	0.21	0.10
Crit Moves:	****			****			****			****		

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 EXISTING PLUS PROJECT CONDITIONS
 PM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.735
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	1	0	1	0	3	1	0	1	0	2	0	1	1	0	1	1	0

Volume Module:

Base Vol:	178	1711	187	229	1497	116	111	383	118	211	469	230
Growth 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
Initial Bse:	178	1711	187	229	1497	116	111	383	118	211	469	230
Added Vol:	0	0	1	1	0	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	178	1711	188	230	1497	116	111	383	118	212	469	230
User 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
PHF 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
PHF Volume:	178	1711	188	230	1497	116	111	383	118	212	469	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	1711	188	230	1497	116	111	383	118	212	469	230
PCE 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
MLF 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
FinalVolume:	178	1711	188	230	1497	116	111	383	118	212	469	230

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.60	0.40	1.00	3.71	0.29	1.00	2.00	1.00	1.00	1.34	0.66
Final Sat.:	1700	6127	673	1700	6311	489	1700	3400	1700	1700	2281	1119

Capacity Analysis Module:

Vol/Sat:	0.10	0.28	0.28	0.14	0.24	0.24	0.07	0.11	0.07	0.12	0.21	0.21
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

Lanes and Geometrics NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY
 1: Newland Street & Project Access 1 11/19/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.887					
Flt Protected	0.992					
Satd. Flow (prot)	1639	0	0	3539	3539	0
Flt Permitted	0.992					
Satd. Flow (perm)	1639	0	0	3539	3539	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	898			615	879	
Travel Time (s)	20.4			14.0	20.0	

Intersection Summary

Area Type: Other

Volume

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

1: Newland Street & Project Access 1

11/19/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	1	5	5	932	586	2
Future Volume (vph)	1	5	5	932	586	2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1	5	5	1013	637	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	1018	639	0
Intersection Summary						

HCM 6th TWSC
1: Newland Street & Project Access 1

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

11/19/2021

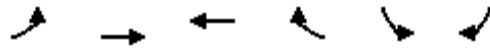
Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	1	5	5	932	586	2
Future Vol, veh/h	1	5	5	932	586	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	1	5	5	1013	637	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1155	320	639	0	-	0
Stage 1	638	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	190	676	941	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	188	676	941	-	-	-
Mov Cap-2 Maneuver	188	-	-	-	-	-
Stage 1	482	-	-	-	-	-
Stage 2	563	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	941	-	472	-	-
HCM Lane V/C Ratio	0.006	-	0.014	-	-
HCM Control Delay (s)	8.8	0.1	12.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lanes and Geometrics NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY
 10: Talbert Avenue & Project Access 2 11/19/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.865	
Flt Protected						
Satd. Flow (prot)	0	3539	3536	0	1611	0
Flt Permitted						
Satd. Flow (perm)	0	3539	3536	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1564	1093		547	
Travel Time (s)		35.5	24.8		12.4	

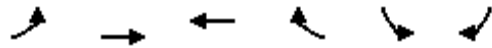
Intersection Summary

Area Type: Other

Volume
10: Talbert Avenue & Project Access 2

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

11/19/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Volume (vph)	0	588	881	5	0	1
Future Volume (vph)	0	588	881	5	0	1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	639	958	5	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	639	963	0	1	0
Intersection Summary						

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	0	588	881	5	0	1
Future Vol, veh/h	0	588	881	5	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	639	958	5	0	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	1281 482
Stage 1	-	-	-	-	961 -
Stage 2	-	-	-	-	320 -
Critical Hdwy	-	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	0	-	-	-	157 530
Stage 1	0	-	-	-	332 -
Stage 2	0	-	-	-	709 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	-	157 530
Mov Cap-2 Maneuver	-	-	-	-	157 -
Stage 1	-	-	-	-	332 -
Stage 2	-	-	-	-	709 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	530
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s)	-	-	-	11.8
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Appendix D

Opening Year (2024) Without Project Conditions
Intersection Analysis Worksheets

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
OPENING YEAR WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Scenario Report

Scenario: OY_AM
Command: OY_AM
Volume: EX_AM
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: C_AM
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: OY

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITHOUT PROJECT CONDITIONS
 AM PEAK HOUR

Trip Generation Report

Forecast for C_AM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
100	C1	1.00	C1	3.00	10.00	3	10	13	59.1
	Zone 100	Subtotal				3	10	13	59.1
200	C2	1.00	C2	3.00	6.00	3	6	9	40.9
	Zone 200	Subtotal				3	6	9	40.9
TOTAL						6	16	22	100.0

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITHOUT PROJECT CONDITIONS
 AM PEAK HOUR

Turning Movement Report
 C_AM

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 NEWLAND STREET (NS) / PROJECT ACCESS 1 (EW)													
Base	0	567	0	0	844	0	0	0	0	0	0	0	1410
Added	0	2	0	0	3	0	0	0	0	0	0	0	5
Total	0	568	0	0	847	0	0	0	0	0	0	0	1415
#2 NEWLAND STREET (NS) / TALBERT AVENUE (EW)													
Base	84	446	101	153	585	105	38	483	53	60	488	82	2679
Added	0	2	0	0	3	0	0	0	0	0	0	0	5
Total	84	448	101	153	588	105	38	483	53	60	488	82	2684
#3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)													
Base	131	1128	109	224	1633	101	71	260	112	170	301	148	4387
Added	0	1	0	0	1	0	0	0	0	0	0	0	2
Total	131	1129	109	224	1634	101	71	260	112	170	301	148	4389
#10 PROJECT ACCESS 2 (NS) / TALBERT AVENUE (EW)													
Base	0	0	0	0	0	0	0	574	0	0	678	0	1251
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	574	0	0	678	0	1251

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITHOUT PROJECT CONDITIONS
 AM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 NEWLAND STREET (NS) / TALBERT AVENUE(EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.479
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	82	433	98	149	568	102	37	469	51	58	474	80
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	84	446	101	153	585	105	38	483	53	60	488	82
Added Vol:	0	2	0	0	3	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	84	448	101	153	588	105	38	483	53	60	488	82
User 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
PHF 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
PHF Volume:	84	448	101	153	588	105	38	483	53	60	488	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	448	101	153	588	105	38	483	53	60	488	82
PCE 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
MLF 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
FinalVolume:	84	448	101	153	588	105	38	483	53	60	488	82

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.63	0.37	1.00	1.70	0.30	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2775	625	1700	2885	515	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.05	0.16	0.16	0.09	0.20	0.20	0.02	0.14	0.03	0.04	0.14	0.05
Crit Moves:	****			****			****			****		

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITHOUT PROJECT CONDITIONS
 AM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.558
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	1	0	1	0	3	1	0	1	0	2	0	1	1	0	1	1	0

Volume Module:

Base Vol:	127	1095	106	217	1585	98	69	252	109	165	292	144
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	131	1128	109	224	1633	101	71	260	112	170	301	148
Added Vol:	0	1	0	0	1	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	131	1129	109	224	1634	101	71	260	112	170	301	148
User 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
PHF 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
PHF Volume:	131	1129	109	224	1634	101	71	260	112	170	301	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	1129	109	224	1634	101	71	260	112	170	301	148
PCE 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
MLF 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
FinalVolume:	131	1129	109	224	1634	101	71	260	112	170	301	148

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.65	0.35	1.00	3.77	0.23	1.00	2.00	1.00	1.00	1.34	0.66
Final Sat.:	1700	6200	600	1700	6404	396	1700	3400	1700	1700	2277	1123

Capacity Analysis Module:

Vol/Sat:	0.08	0.18	0.18	0.13	0.26	0.26	0.04	0.08	0.07	0.10	0.13	0.13
Crit Moves:	****			****			****			****		

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
OPENING YEAR WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Scenario Report

Scenario: OY_PM
Command: OY_PM
Volume: EX_PM
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: C_PM
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: OY

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITHOUT PROJECT CONDITIONS
 PM PEAK HOUR

Trip Generation Report

Forecast for C_PM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
100	C1	1.00	C1	11.00	7.00	11	7	18	62.1
	Zone 100	Subtotal					11	7	18 62.1
200	C2	1.00	C2	6.00	5.00	6	5	11	37.9
	Zone 200	Subtotal					6	5	11 37.9
TOTAL						17	12	29	100.0

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITHOUT PROJECT CONDITIONS
 PM PEAK HOUR

Turning Movement Report
 C_PM

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 NEWLAND STREET (NS) / PROJECT ACCESS 1 (EW)													
Base	0	960	0	0	604	0	0	0	0	0	0	0	1564
Added	0	3	0	0	3	0	0	0	0	0	0	0	6
Total	0	963	0	0	607	0	0	0	0	0	0	0	1570
#2 NEWLAND STREET (NS) / TALBERT AVENUE (EW)													
Base	109	694	81	69	462	72	92	586	112	75	726	174	3254
Added	0	3	0	0	3	0	0	0	0	0	0	0	6
Total	109	697	81	69	465	72	92	586	112	75	726	174	3260
#3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)													
Base	183	1762	193	236	1542	119	114	394	122	217	483	237	5603
Added	0	2	0	0	1	0	0	0	0	0	0	0	3
Total	183	1764	193	236	1543	119	114	394	122	217	483	237	5606
#10 PROJECT ACCESS 2 (NS) / TALBERT AVENUE (EW)													
Base	0	0	0	0	0	0	0	604	0	0	907	0	1511
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	604	0	0	907	0	1511

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITHOUT PROJECT CONDITIONS
 PM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 NEWLAND STREET (NS) / TALBERT AVENUE(EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.587
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	106	674	79	67	449	70	89	569	109	73	705	169
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	109	694	81	69	462	72	92	586	112	75	726	174
Added Vol:	0	3	0	0	3	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	109	697	81	69	465	72	92	586	112	75	726	174
User 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
PHF 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
PHF Volume:	109	697	81	69	465	72	92	586	112	75	726	174
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	697	81	69	465	72	92	586	112	75	726	174
PCE 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
MLF 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
FinalVolume:	109	697	81	69	465	72	92	586	112	75	726	174

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	1.73	0.27	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3045	355	1700	2944	456	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.06	0.23	0.23	0.04	0.16	0.16	0.05	0.17	0.07	0.04	0.21	0.10
Crit Moves:	****			****			****			****		

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITHOUT PROJECT CONDITIONS
 PM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.756
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 44 Level Of Service: C

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	1	0	1	0	3	1	0	1	0	2	0	1	1	0	1	1	0

Volume Module:

Base Vol:	178	1711	187	229	1497	116	111	383	118	211	469	230
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	183	1762	193	236	1542	119	114	394	122	217	483	237
Added Vol:	0	2	0	0	1	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	183	1764	193	236	1543	119	114	394	122	217	483	237
User 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
PHF 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
PHF Volume:	183	1764	193	236	1543	119	114	394	122	217	483	237
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	183	1764	193	236	1543	119	114	394	122	217	483	237
PCE 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
MLF 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
FinalVolume:	183	1764	193	236	1543	119	114	394	122	217	483	237

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.61	0.39	1.00	3.71	0.29	1.00	2.00	1.00	1.00	1.34	0.66
Final Sat.:	1700	6131	669	1700	6311	489	1700	3400	1700	1700	2281	1119

Capacity Analysis Module:

Vol/Sat:	0.11	0.29	0.29	0.14	0.24	0.24	0.07	0.12	0.07	0.13	0.21	0.21
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

Appendix E

Opening Year (2024) With Project Conditions
Intersection Analysis Worksheets

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
OPENING YEAR WITH PROJECT CONDITIONS
AM PEAK HOUR

Scenario Report

Scenario: OY+P_AM
Command: OY+P_AM
Volume: EX_AM
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: C+P_AM
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: OY

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 AM PEAK HOUR

Trip Generation Report

Forecast for P_AM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	4.00	12.00	4	12	16	42.1
	Zone 1 Subtotal		.....			4	12	16	42.1
TOTAL						4	12	16	42.1

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 AM PEAK HOUR

Trip Generation Report

Forecast for C_AM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
100	C1	1.00	C1	3.00	10.00	3	10	13	34.2
	Zone 100	Subtotal				3	10	13	34.2
200	C2	1.00	C2	3.00	6.00	3	6	9	23.7
	Zone 200	Subtotal				3	6	9	23.7
TOTAL						6	16	22	57.9

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 AM PEAK HOUR

Turning Movement Report
 P_AM + C_AM

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 NEWLAND STREET (NS) / PROJECT ACCESS 1 (EW)													
Base	0	567	0	0	844	0	0	0	0	0	0	0	1410
Added	2	2	0	0	3	1	2	0	8	0	0	0	18
Total	2	568	0	0	847	1	2	0	8	0	0	0	1428
#2 NEWLAND STREET (NS) / TALBERT AVENUE (EW)													
Base	84	446	101	153	585	105	38	483	53	60	488	82	2679
Added	0	2	0	5	5	1	1	0	0	0	1	0	15
Total	84	448	101	158	590	106	39	483	53	60	489	82	2694
#3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)													
Base	131	1128	109	224	1633	101	71	260	112	170	301	148	4387
Added	0	1	0	0	1	0	0	0	0	1	0	0	3
Total	131	1129	109	224	1634	101	71	260	112	171	301	148	4390
#10 PROJECT ACCESS 2 (NS) / TALBERT AVENUE (EW)													
Base	0	0	0	0	0	0	0	574	0	0	678	0	1251
Added	0	0	0	0	0	1	0	1	0	0	1	2	5
Total	0	0	0	0	0	1	0	575	0	0	679	2	1256

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 AM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 NEWLAND STREET (NS) / TALBERT AVENUE(EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.482
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	82	433	98	149	568	102	37	469	51	58	474	80
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	84	446	101	153	585	105	38	483	53	60	488	82
Added Vol:	0	2	0	5	5	1	1	0	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	84	448	101	158	590	106	39	483	53	60	489	82
User 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
PHF 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
PHF Volume:	84	448	101	158	590	106	39	483	53	60	489	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	448	101	158	590	106	39	483	53	60	489	82
PCE 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
MLF 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
FinalVolume:	84	448	101	158	590	106	39	483	53	60	489	82

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.63	0.37	1.00	1.70	0.30	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2775	625	1700	2882	518	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.05	0.16	0.16	0.09	0.20	0.20	0.02	0.14	0.03	0.04	0.14	0.05
Crit Moves:	****			****			****			****		

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 AM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.559
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	1	0	1	0	3	1	0	1	0	2	0	1	1	0	1	1	0

Volume Module:

Base Vol:	127	1095	106	217	1585	98	69	252	109	165	292	144
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	131	1128	109	224	1633	101	71	260	112	170	301	148
Added Vol:	0	1	0	0	1	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	131	1129	109	224	1634	101	71	260	112	171	301	148
User 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
PHF 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
PHF Volume:	131	1129	109	224	1634	101	71	260	112	171	301	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	1129	109	224	1634	101	71	260	112	171	301	148
PCE 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
MLF 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
FinalVolume:	131	1129	109	224	1634	101	71	260	112	171	301	148

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.65	0.35	1.00	3.77	0.23	1.00	2.00	1.00	1.00	1.34	0.66
Final Sat.:	1700	6200	600	1700	6404	396	1700	3400	1700	1700	2277	1123

Capacity Analysis Module:

Vol/Sat:	0.08	0.18	0.18	0.13	0.26	0.26	0.04	0.08	0.07	0.10	0.13	0.13
Crit Moves:	****			****			****			****		

Lanes and Geometrics NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY
 1: Newland Street & Project Access 1 11/19/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.890					
Flt Protected	0.991					
Satd. Flow (prot)	1643	0	0	3539	3539	0
Flt Permitted	0.991					
Satd. Flow (perm)	1643	0	0	3539	3539	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	898			615	879	
Travel Time (s)	20.4			14.0	20.0	

Intersection Summary

Area Type: Other

Volume

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

1: Newland Street & Project Access 1

11/19/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	2	8	2	569	847	1
Future Volume (vph)	2	8	2	569	847	1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	2	9	2	618	921	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	0	620	922	0
Intersection Summary						

HCM 6th TWSC
1: Newland Street & Project Access 1

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

11/19/2021

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	2	8	2	569	847	1
Future Vol, veh/h	2	8	2	569	847	1
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	-	-	-	-	-
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	2	9	2	618	921	1

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1235	461	922	0	-	0
Stage 1	922	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	169	547	736	-	-	-
Stage 1	348	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	168	547	736	-	-	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	347	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	736	-	377	-	-
HCM Lane V/C Ratio	0.003	-	0.029	-	-
HCM Control Delay (s)	9.9	0	14.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lanes and Geometrics NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY
 10: Talbert Avenue & Project Access 2

11/19/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	0	3539	3539	0	1611	0
Flt Permitted						
Satd. Flow (perm)	0	3539	3539	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1564	1093		547	
Travel Time (s)		35.5	24.8		12.4	

Intersection Summary

Area Type: Other

Volume
10: Talbert Avenue & Project Access 2

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

11/19/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Volume (vph)	0	575	679	2	0	1
Future Volume (vph)	0	575	679	2	0	1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	625	738	2	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	625	740	0	1	0
Intersection Summary						

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	0	575	679	2	0	1
Future Vol, veh/h	0	575	679	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	625	738	2	0	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	1052 370
Stage 1	-	-	-	-	739 -
Stage 2	-	-	-	-	313 -
Critical Hdwy	-	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	0	-	-	-	222 627
Stage 1	0	-	-	-	433 -
Stage 2	0	-	-	-	715 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	222 627
Mov Cap-2 Maneuver	-	-	-	-	222 -
Stage 1	-	-	-	-	433 -
Stage 2	-	-	-	-	715 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	627
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s)	-	-	-	10.8
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
OPENING YEAR WITH PROJECT CONDITIONS
PM PEAK HOUR

Scenario Report

Scenario: OY+P_PM
Command: OY+P_PM
Volume: EX_PM
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: C+P_PM
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: OY

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 PM PEAK HOUR

Trip Generation Report

Forecast for P_PM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	12.00	7.00	12	7	19	39.6
	Zone 1 Subtotal		.....			12	7	19	39.6
TOTAL						12	7	19	39.6

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 PM PEAK HOUR

Trip Generation Report

Forecast for C_PM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
100	C1	1.00	C1	11.00	7.00	11	7	18	37.5
	Zone 100	Subtotal				11	7	18	37.5
200	C2	1.00	C2	6.00	5.00	6	5	11	22.9
	Zone 200	Subtotal				6	5	11	22.9
TOTAL						17	12	29	60.4

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 PM PEAK HOUR

Turning Movement Report
 P_PM + C_PM

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 NEWLAND STREET (NS) / PROJECT ACCESS 1 (EW)													
Base	0	960	0	0	604	0	0	0	0	0	0	0	1564
Added	5	3	0	0	3	2	1	0	5	0	0	0	19
Total	5	963	0	0	607	2	1	0	5	0	0	0	1583
#2 NEWLAND STREET (NS) / TALBERT AVENUE (EW)													
Base	109	694	81	69	462	72	92	586	112	75	726	174	3254
Added	1	4	0	3	4	0	2	0	0	0	4	1	19
Total	110	698	81	72	466	72	94	586	112	75	730	175	3273
#3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)													
Base	183	1762	193	236	1542	119	114	394	122	217	483	237	5603
Added	0	2	1	1	1	0	0	0	0	1	0	0	6
Total	183	1764	194	237	1543	119	114	394	122	218	483	237	5609
#10 PROJECT ACCESS 2 (NS) / TALBERT AVENUE (EW)													
Base	0	0	0	0	0	0	0	604	0	0	907	0	1511
Added	0	0	0	0	0	1	0	2	0	0	0	5	8
Total	0	0	0	0	0	1	0	606	0	0	907	5	1519

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 PM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 NEWLAND STREET (NS) / TALBERT AVENUE(EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.591
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	106	674	79	67	449	70	89	569	109	73	705	169
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	109	694	81	69	462	72	92	586	112	75	726	174
Added Vol:	1	4	0	3	4	0	2	0	0	0	4	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	110	698	81	72	466	72	94	586	112	75	730	175
User 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
PHF 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
PHF Volume:	110	698	81	72	466	72	94	586	112	75	730	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	110	698	81	72	466	72	94	586	112	75	730	175
PCE 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
MLF 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
FinalVolume:	110	698	81	72	466	72	94	586	112	75	730	175

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	1.73	0.27	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3045	355	1700	2945	455	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.06	0.23	0.23	0.04	0.16	0.16	0.06	0.17	0.07	0.04	0.21	0.10
Crit Moves:	****			****			****			****		

 NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY (1445-2021-01)
 OPENING YEAR WITH PROJECT CONDITIONS
 PM PEAK HOUR

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 BEACH BOULEVARD (NS) / TALBERT AVENUE (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.756
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 44 Level Of Service: C

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	1	0	1	0	3	1	0	1	0	2	0	1	1	0	1	1	0

Volume Module:

Base Vol:	178	1711	187	229	1497	116	111	383	118	211	469	230
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	183	1762	193	236	1542	119	114	394	122	217	483	237
Added Vol:	0	2	1	1	1	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	183	1764	194	237	1543	119	114	394	122	218	483	237
User 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
PHF 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
PHF Volume:	183	1764	194	237	1543	119	114	394	122	218	483	237
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	183	1764	194	237	1543	119	114	394	122	218	483	237
PCE 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
MLF 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
FinalVolume:	183	1764	194	237	1543	119	114	394	122	218	483	237

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.60	0.40	1.00	3.71	0.29	1.00	2.00	1.00	1.00	1.34	0.66
Final Sat.:	1700	6128	672	1700	6311	489	1700	3400	1700	1700	2281	1119

Capacity Analysis Module:

Vol/Sat:	0.11	0.29	0.29	0.14	0.24	0.24	0.07	0.12	0.07	0.13	0.21	0.21
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

Lanes and Geometrics NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY
 1: Newland Street & Project Access 1 11/19/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.887					
Flt Protected	0.992					
Satd. Flow (prot)	1639	0	0	3539	3539	0
Flt Permitted	0.992					
Satd. Flow (perm)	1639	0	0	3539	3539	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	898			615	879	
Travel Time (s)	20.4			14.0	20.0	

Intersection Summary

Area Type: Other

Volume

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

1: Newland Street & Project Access 1

11/19/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	1	5	5	963	607	2
Future Volume (vph)	1	5	5	963	607	2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1	5	5	1047	660	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	1052	662	0
Intersection Summary						

HCM 6th TWSC
1: Newland Street & Project Access 1

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

11/19/2021

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	1	5	5	963	607	2
Future Vol, veh/h	1	5	5	963	607	2
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	-	-	-	-	-
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	1	5	5	1047	660	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1195	331	662	0	-	0
Stage 1	661	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	179	665	922	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	177	665	922	-	-	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	552	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	922	-	456	-	-
HCM Lane V/C Ratio	0.006	-	0.014	-	-
HCM Control Delay (s)	8.9	0.1	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lanes and Geometrics NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY
 10: Talbert Avenue & Project Access 2

11/19/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.999		0.865	
Flt Protected						
Satd. Flow (prot)	0	3539	3536	0	1611	0
Flt Permitted						
Satd. Flow (perm)	0	3539	3536	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1564	1093		547	
Travel Time (s)		35.5	24.8		12.4	

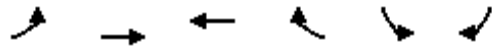
Intersection Summary

Area Type: Other

Volume
10: Talbert Avenue & Project Access 2

NEWLAND & TALBERT RESIDENTIAL PROJECT TRAFFIC STUDY

11/19/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Volume (vph)	0	606	907	5	0	1
Future Volume (vph)	0	606	907	5	0	1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	659	986	5	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	659	991	0	1	0
Intersection Summary						

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	0	606	907	5	0	1
Future Vol, veh/h	0	606	907	5	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	659	986	5	0	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	1319 496
Stage 1	-	-	-	-	989 -
Stage 2	-	-	-	-	330 -
Critical Hdwy	-	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	0	-	-	-	149 519
Stage 1	0	-	-	-	321 -
Stage 2	0	-	-	-	701 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	149 519
Mov Cap-2 Maneuver	-	-	-	-	149 -
Stage 1	-	-	-	-	321 -
Stage 2	-	-	-	-	701 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	519
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s)	-	-	-	12
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0