

CITY OF ALBUQUERQUE



March 28, 2017

Terry Brown, P.E.
P.O Box 92051
Albuquerque, NM 87199

**Re: Hope Christian School Masterplan
Palomas Ave. / Louisiana Blvd.
Traffic Impact Study**
Engineer's Stamp dated 02-02-17 (D18-D015)

Dear Mr. Brown,

The subject Traffic Impact Study received on February 2, 2017 has been reviewed and approved by the Transportation Development Section. All comments have been adequately addressed.

The final Traffic Impact Study shall be valid for a period of three years. Should significant modifications to the approved development proposal occur, the approved study shall be revised to incorporate the changes.

If you have any questions, please feel free to contact me at (505) 924-3991.

Sincerely,

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services

via: email

C: Applicant, File

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Terry O. Brown P.E.

Hope Christian School Masterplan
(Palomas Ave. / Louisiana Blvd.)

Traffic Impact Study

February 2, 2017

F I N A L

Presented to:

City of Albuquerque
Transportation Development Section



Prepared for:

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A handwritten signature in blue ink that reads "Terry O. Brown".

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Hope Christian School Masterplan
(Palomas Ave. / Louisiana Blvd.)
TRAFFIC IMPACT STUDY

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Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.) TRAFFIC IMPACT STUDY

STUDY PURPOSE

This study is being conducted in conjunction with a request for approval of a site development plan for implementation of Hope Christian School Masterplan shown in the Appendix (Page A-3) of this report. The purpose of this study is to identify the impact of the proposed development on the adjacent transportation system, and to make recommendations to mitigate any significant adverse impact on the adjacent transportation system. This study is being submitted to satisfy the requirements of the City of Albuquerque Transportation Development Section.

STUDY PROCEDURES

A scoping meeting was held with City of Albuquerque Transportation staff members as well as with New Mexico Department of Transportation, District 3 prior to beginning the study to discuss scope and methodology to be utilized within the proposed Hope Christian School Traffic Impact Study. Specific items included format, intersections to be studied, intersection analysis procedures, existing traffic counts, trip distribution methodology, and implementation year definition.

The basic procedure followed is described as follows:

- 1) Calculate the generated *difference in* trips for the proposed development consisting of the following described land uses (See Appendix Pages A-7 thru A-9):
 - a. *A 1,715-student Private School [K-12] (proposed)*
 - b. *A 1,351-student Private School [K-12] (existing)*
- 2) Calculate trip distribution for the newly generated trips by this development. The new school trips will be distributed based on existing directional traffic trends determined from the 2016 traffic counts conducted for this analysis (See Appendix Page A-10).
- 3) Determine Trip Assignments for the newly generated trips based on the results of the Trip Distribution Analysis and logical routing to and from the site (See Appendix Pages A-11 thru A-12).
- 4) Acquire recent traffic counts for the signalized intersections of Paseo del Norte / Louisiana Blvd., Paseo del Norte / San Pedro Dr. and Palomas Ave. / San Pedro Dr. and for the unsignalized intersection of Palomas Ave. / Louisiana Blvd. to be analyzed in this report (See Appendix Pages A-94 thru A-96).
- 5) Calculate growth rates for the area utilizing a Mid-Region Council of Governments' 2006 thru 2015 Traffic Flow Map Data to define traffic growth rates (See Appendix Pages A-13 thru A-21).
- 6) Determine 2021 NO BUILD Volumes by growing the existing turning movement counts to the year 2021 utilizing the calculated annual historic growth rate for the area (See Appendix Pages A-22 thru A-55).
- 7) Add the trips generated by the development to the 2021 NO BUILD Volumes to obtain 2021 BUILD Volumes for this project (See Appendix Pages A-22 thru A-55).

- 8) Provide signalized and / or unsignalized intersection analyses for the following intersections:

INTERSECTION	TYPE CONTROL	NO BUILD	BUILD
1) Paseo del Norte / Louisiana Blvd.	Traffic Signal	2021	2021
2) Paseo del Norte / San Pedro Dr.	Traffic Signal	2021	2021
3) Palomas Ave. / Louisiana Blvd.	Stop Sign	2021	2021
4) Palomas Ave. / San Pedro Dr.	Traffic Signal	2021	2021
5) Palomas Ave. / Driveway "A"	Stop Sign	N/A	2021
6) Palomas Ave. / Driveway "B"	Stop Sign	N/A	2021
7) Palomas Ave. / Driveway "C"	Stop Sign	N/A	2021
8) Palomas Ave. / Driveway "D"	Stop Sign	N/A	2021
9) Palomas Ave. / Driveway "E"	Stop Sign	N/A	2021
10) Palomas Ave. / Driveway "F"	Stop Sign	N/A	2021
11) Palomas Ave. / Driveway "G"	Stop Sign	N/A	2021
12) Palomas Ave. / Driveway "H"	Stop Sign	N/A	2021
13) Palomas Ave. / Driveway "I"	Stop Sign	N/A	2021
14) Palomas Ave. / Driveway "J"	Stop Sign	N/A	2021
15) Driveway "K" / Louisiana Blvd.	Stop Sign	N/A	2021

PREVIOUS RELATED TRAFFIC IMPACT STUDIES

There are no trips from previously approved projects to consider for this development.

GENERAL AREA CHARACTERISTICS

The proposed requested site development plan is for a northern property bounded on the north by Paseo del Norte, on the east by Louisiana Blvd., on the west by a small commercial property and vacant land to the west and by Palomas Ave. to the south and for a southern property bounded on the north by Palomas Ave., on the east by Louisiana Ave., on the West by Edmund G. Ross Elementary School and on the south by South Domingo Baca Arroyo and Bike Trail as shown on the Vicinity Map on Page A-2 of the Appendix of this report. An aerial map of the adjacent transportation system to be considered and analyzed in this study may be found on Page A-1 in the Appendix of this report. The surrounding development is a mix of commercial, school and residential uses.

AREA STREET NETWORK

The impacted adjacent street network targeted for analysis in this study are defined on the Futures 2040 Metropolitan Transportation Plan as defined by the Mid-Region Metropolitan Planning Organization (MRMPO) located on Appendix Pages A-4 thru A-5.

Paseo del Norte (NM S.R. 423) is classified as a Regional Principal Arterial Roadway and is generally a six lane urban facility with raised medians, sidewalk and curb and gutter. The posted speed limit along Montano Rd. in the vicinity of this project is 55 MPH.

Louisiana Blvd. and San Pedro Dr. are classified as Major Collector Roadways and are generally two lane urban facilities with center two-way left-turn lanes, sidewalk, and curb and gutter. The posted speed limit along Louisiana Blvd. and San Pedro Dr. in the analysis area is 35 MPH.

Palomas Ave. is not classified on the Futures 2040 Metropolitan Transportation Plan.

EXISTING TRAFFIC VOLUMES

2015 Average Weekday Traffic Volumes (AWDT) for major streets in the site plan area are shown on Page A-6 thru A-7 of the Appendix.

Current turning movement volumes obtained during the AM and PM Peak Hours for the following intersections were acquired from recent field counts for the following intersections:

- 1) *Paseo del Norte / Louisiana Blvd.*
- 2) *Paseo del Norte / San Pedro Dr.*
- 3) *Palomas Ave. / Louisiana Blvd.*
- 4) *Palomas Ave. / San Pedro Dr.*

The counts are included in Appendix Pages A-94 thru A-96.

EXISTING TRANSIT, BICYCLE AND PEDESTRIAN SERVICES

Currently, there are no existing ABQ Ride routes along the roadways being analyzed in this report adjacent to the project area. However, there are routes near the area such as the San Pedro Commuter (Route 34) and two routes along Wyoming Blvd., Wyoming (Route 31) and Wyoming Commuter (Route 98) which allow access to the site via sidewalks and trails. See Appendix Pages A-98 thru A-101 for the ABQ Ride System Map, bus routes and schedules.

Bicycle facilities in the project area include existing and proposed bicycle lanes along Paseo del Norte, Louisiana Blvd. and San Pedro Dr. as well as an existing Paved Trail along South Domingo Baca Arroyo according to the Mid-Region Metropolitan, Planning Organization's Futures 2040 Long Range Bikeway System Map (Appendix Page A-102).

Pedestrian facilities include existing sidewalk along all of the roadway facilities analyzed in this report and an existing paved trail along South Domingo Baca Arroyo.

PROPOSED DEVELOPMENT

The proposed conceptual site development plan associated with this project consists of several different land uses summarized in the following table:

Land Use Description	Size Proposed
Private School [K-12] (proposed)	1,715 Students
Private School [K-12] (existing)	1,351 Students

See the conceptual site development plan on Page A-3 in the Appendix of this report to acquire more detailed information about the proposed development. This site plan is conceptual at this point in time and is subject to some changes as progress takes place in

the design process. The plan should, however, provide a reliable basis upon which to analyze the impact of the development on the adjacent transportation system and provide guidelines for mitigating the impact and establishing access criteria.

TRIP GENERATION

Projected trips were calculated from data in the Institute of Transportation Engineers Trip Generation Manual (9th Edition). Trips for the development were determined based on land uses defined on the Conceptual Site Development Plan on Page A-3 in the Appendix of this report.

The resulting number of trips generated for the proposed development is summarized in the following table:

Hope Christian School (2016 Master Plan) **Trip Generation Data (ITE Trip Generation Manual - 9th Edition)**

COMMENT	USE (ITE CODE)	24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.		
	DESCRIPTION	GROSS	ENTER	EXIT	ENTER	EXIT	
	Summary Sheet	Units					
Proposed	Private School [K-12] (536)	1,715	4,253	818	523	125	166
Existing	Private School [K-12] (536)	1,351	3,350	647	413	99	131
	Net Increase (Decrease) in Trips Generated		903	171	110	26	35

See Appendix Pages A-7 thru A-9 for trip generation worksheets.

TRIP DISTRIBUTION

Trip distribution was calculated by determining the traffic entering / exiting the project area via each roadway analyzed in this report based on the most current traffic counts conducted for this analysis. The entering / exiting traffic was determined as a percentage per roadway of the total entering / exiting traffic. See the Trip Distribution Map on Appendix Page A-10 for more information regarding the Trip Distribution.

TRIP ASSIGNMENTS

Trip assignments are first made on a percentage basis derived from data established in the trip distribution determination process and logical routing to and from the proposed site. Those percentages are then applied to the projected trips to determine individual traffic movements. Percentage trip assignment maps are shown in the Appendix on Pages A-11 thru A-12.

BACKGROUND TRAFFIC GROWTH

Background traffic growth rates were considered for the study area that was targeted for analysis based on data from the 2006 through 2015 Traffic Flow maps prepared by the Mid-Region Council of Governments.

Most of the Traffic Flow Data for the years 2006 through 2015 taken from the MRCOG Traffic Flow Maps were Standard Data. The data from those years for each approach was plotted on a graph and a linear “regression trend line” calculated using the equation format $y=mx+b$. The growth rate was determined by calculating the average volume increase per year during the time period considered and dividing that volume into the most recent AWDT used in the analysis from which future volumes will be calculated. The rate of growth of that trend line was utilized as the growth rate for each approach if that calculated rate appeared feasible. However, there may be some instances where the rate indicated a negative growth trend or appeared to be unreasonably high or low. In those cases, an appropriate growth rate from an adjacent segment of the same roadway was used, a shorter time span was used to determine the growth rate, or the growth rate was considered to be zero or a generic 0.5% if appropriate. Due to the potential for growth in the area, it was believed that a zero percent growth rate was inappropriate for this study. Therefore, a growth rate of 0.5% was often used if the linear regression analysis showed the growth rate to be negative. Additionally, if the R^2 value of the trend line was low, other means of establishing a probable growth rate from the data accumulated was considered. Historical Growth Rate Graphs with linear regression trendlines are shown in the Appendix on Pages A-13 through A-21. Additionally, the growth rate utilized for each approach to an intersection is printed at the top of the Turning Movement sheets for each intersection (Appendix Pages A-25 through A-55).

PROJECTED PEAK HOUR TURNING MOVEMENTS FOR 2021 BUILDOUT

The calculated growth rates were applied to the most recent peak hour traffic counts (conducted for this study) to establish the 2021 background NO BUILD traffic volumes. To these volumes, the generated trips based on implementation of the proposed Beach Retail Development (100% development) were added to obtain 2021 BUILD volumes for the intersection analyses. See Appendix Pages A-22 thru A-55 for further information regarding 2021 turning movement counts.

INTERSECTION CAPACITY ANALYSIS

Intersection capacity analyses were performed in accordance with the procedures for signalized and unsignalized intersections in the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010, using Trafficware's Synchro version 9 Highway Capacity Software for signalized and unsignalized intersections. For signalized intersections, the operational method of analysis was used for 2021 Conditions (NO BUILD and BUILD).

Capacity analyses were performed for the following traffic Conditions.

- 2021 with existing Hope Christian School (2021 NO BUILD)
- 2021 with proposed Hope Christian School Masterplan (2021 BUILD).

The results of the 2021 NO BUILD and BUILD capacity analyses are summarized in the following sections - *Results of Signalized and Unsignalized Intersection Capacity Analyses*.

The Highway Capacity Manual (2010) defines Level of Service (LOS) for signalized and unsignalized intersections in terms of average controlled delay per vehicle as follows:

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

<u>Average Delay</u> <u>(secs)</u>	<u>Level-of-Service</u>
≤ 10	A
> 10 and ≤ 20	B
> 20 and ≤ 35	C
> 35 and ≤ 55	D
> 55 and ≤ 80	E
> 80	F

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

<u>Average Delay</u> <u>(secs)</u>	<u>Level-of-Service</u>
≤ 10	A
> 10 and ≤ 15	B
> 15 and ≤ 25	C
> 25 and ≤ 35	D
> 35 and ≤ 50	E
> 50	F

Level of Service D is generally considered acceptable in urban areas and is the desirable base condition for analysis in a traffic study. In addition to consideration of the overall level-of-service of the signalized intersection, the levels-of-service of each individual movement should be considered.

RESULTS OF SIGNALIZED INTERSECTION CAPACITY ANALYSES

IMPLEMENTATION YEAR (2021)

Intersection #1 – Paseo del Norte / Louisiana Blvd. - Pages A-56 thru A-93

The results of the implementation year analysis of the signalized intersection of Paseo del Norte / Louisiana Blvd. are summarized in the following table:

Intersection: 1 - PASEO DEL NORTE / LOUISIANA BLVD.

2021 AM Peak Hour BUILD						2021 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	2	D - 52.9	2	D - 55.0	L	2	D - 54.4	2	D - 53.6	
	T	3	B - 12.8	3	B - 14.9	T	3	A - 2.9	3	A - 3.6	
	R	1	A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0	
WB	L	2	E - 55.8	2	E - 57.7	L	2	E - 59.8	2	E - 60.2	
	T	3	C - 24.2	3	C - 26.7	T	3	C - 28.0	3	C - 28.8	
	R	1	A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0	
NB	L	1	D - 41.8	1	D - 42.8	L	1	C - 29.8	1	C - 29.5	
	T	2	C - 30.0	2	C - 28.8	T	2	C - 26.2	2	C - 25.8	
	R	1	A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0	
SB	L	1	D - 39.0	1	D - 37.4	L	1	D - 37.4	1	D - 36.8	
	T	2	C - 31.0	2	C - 30.0	T	2	C - 26.1	2	C - 25.7	
	R	1	A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0	
Intersection:		C - 24.3		C - 26.4				B - 18.8		B - 19.4	

Note: ">" designates a shared right or left turn lane.

This study demonstrates that this signalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM Peak Hour NO BUILD and BUILD Conditions considered in this report. The newly generated traffic from this development will increase the delay during the AM Peak Hour by only 2.1 seconds and will increase the delay during the PM Peak Hour by only 0.6 seconds. The analysis demonstrates that there will be no significant adverse impact to the intersection. Therefore, no recommendation is made for the Paseo del Norte / Louisiana Blvd. intersection.

The results of the queueing analysis for this intersection is summarized in the following table:

Queueing Analysis Summary Sheet

Project: Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)
 Intersection: Paseo del Norte / Louisiana Blvd.

2021											
Approach		Left Turns			Thru Movements			Right Turns			
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length	2	128	335	3	1,403	Cont	1	221	420		
AM NO BUILD Queue	2	131	125	3	1,438	600	1	227	300		
AM BUILD Queue	2	140	125	3	1,446	600	1	249	300		
Existing Lane Length	2	181	335	3	1,947	Cont	1	74	420		
PM NO BUILD Queue	2	186	175	3	1,996	850	1	76	125		
PM BUILD Queue	2	189	175	3	1,998	850	1	79	150		
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length	2	187	350	3	1,927	Cont	1	154	415		
AM NO BUILD Queue	2	192	150	3	1,975	775	1	158	225		
AM BUILD Queue	2	216	175	3	1,975	775	1	158	225		
Existing Lane Length	2	77	350	3	1,551	Cont	1	142	415		
PM NO BUILD Queue	2	79	100	3	1,590	700	1	146	225		
PM BUILD Queue	2	83	100	3	1,590	700	1	146	225		
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length	1	125	200	2	150	Cont	1	117	280		
AM NO BUILD Queue	1	128	175	2	154	125	1	120	175		
AM BUILD Queue	1	147	200	2	163	150	1	128	175		
Existing Lane Length	1	75	200	2	162	Cont	1	131	280		
PM NO BUILD Queue	1	77	125	2	166	150	1	134	200		
PM BUILD Queue	1	83	150	2	169	150	1	136	200		
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length	1	128	170	2	215	Cont	1	129	150		
AM NO BUILD Queue	1	137	200	2	230	175	1	138	200		
AM BUILD Queue	1	137	200	2	257	200	1	138	200		
Existing Lane Length	1	207	170	2	143	Cont	1	124	150		
PM NO BUILD Queue	1	221	300	2	153	150	1	133	200		
PM BUILD Queue	1	221	300	2	157	150	1	133	200		

AM PM
 Cycle Length: 110 120

NOTE: Queue lengths are in feet.

Calculated Right Turn Queue Lengths can be reduced by 50% to account for right-turns-on-red and right turn overlaps.

The queueing analysis recommends lengthening the southbound left turn lane from 170 feet to 300 feet plus transition for both the NO BUILD and BUILD Conditions; however, this cannot be accomplished without adversely affecting the adjacent turn lane for the Holly Ave. /

Louisiana Blvd. intersection. Therefore, no recommendations are made for the queuing at the Paseo del Norte / Louisiana Blvd. intersection.

Intersection #2 – Paseo del Norte / San Pedro Dr. - Pages A-56 thru A-93

The results of the implementation year analysis of the signalized intersection of Paseo del Norte / San Pedro Dr. are summarized in the following table:

Intersection: 2 - PASEO DEL NORTE / SAN PEDRO DR.

2021 AM Peak Hour BUILD						2021 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	2	E - 63.4	2	E - 63.4	L	2	E - 66.1	2	E - 66.1	
	T	3	C - 23.5	3	C - 24.2	T	3	D - 40.7	3	D - 40.8	
	R	1	A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0	
WB	L	2	E - 55.5	2	E - 55.4	L	2	E - 67.3	2	E - 67.3	
	T	3	D - 50.8	3	D - 52.9	T	3	E - 55.6	3	E - 55.8	
	R	1	A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0	
NB	L	2	E - 65.2	2	E - 70.2	L	2	E - 70.0	2	E - 70.2	
	T	1	D - 48.1	1	D - 48.5	T	1	D - 51.4	1	D - 51.7	
	R	1	A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0	
SB	L	2	E - 57.1	2	E - 56.2	L	2	E - 62.3	2	E - 62.5	
	T	1	D - 53.3	1	D - 54.8	T	1	E - 57.0	1	E - 57.9	
	R	1	A - 0.0	1	A - 0.0	R	1	A - 0.0	1	A - 0.0	
Intersection:		D - 43.6		D - 45.1				D - 52.8		D - 53.0	

Note: ">" designates a shared right or left turn lane.

This study demonstrates that this signalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM Peak Hour NO BUILD and BUILD Conditions considered in this report. Specific movements will experience marginally excessive delays for both the NO BUILD and BUILD Conditions, with almost no increase due to the proposed project. The newly generated traffic from this development will increase the delay during the AM Peak Hour by only 1.5 seconds and during the PM Peak Hour by only 0.2 seconds. Therefore, no recommendation is made for the Paseo del Norte / San Pedro Dr. intersection.

The results of the queueing analysis for this intersection is summarized in the following table:

Queueing Analysis Summary Sheet

Project: Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)
 Intersection: Paseo del Norte / San Pedro Dr.

2021											
Approach		Left Turns			Thru Movements			Right Turns			
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length	2	322	345	3	1,544	Cont	1	282	400		
AM NO BUILD Queue	2	330	250	3	1,583	650	1	289	350		
AM BUILD Queue	2	330	250	3	1,595	650	1	316	375		
Existing Lane Length	2	383	345	3	1,845	Cont	1	232	400		
PM NO BUILD Queue	2	393	300	3	1,891	825	1	238	325		
PM BUILD Queue	2	393	300	3	1,893	825	1	242	325		
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length	2	123	330	3	1,843	Cont	1	203	370		
AM NO BUILD Queue	2	126	125	3	1,889	750	1	208	275		
AM BUILD Queue	2	126	125	3	1,901	750	1	215	275		
Existing Lane Length	2	233	330	3	1,612	Cont	1	183	370		
PM NO BUILD Queue	2	239	200	3	1,652	725	1	188	275		
PM BUILD Queue	2	239	200	3	1,656	725	1	190	275		
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length	2	198	355	1	186	Cont	1	68	270		
AM NO BUILD Queue	2	214	175	1	201	250	1	73	125		
AM BUILD Queue	2	227	175	1	214	275	1	90	150		
Existing Lane Length	2	354	355	1	236	Cont	1	173	270		
PM NO BUILD Queue	2	382	300	1	255	350	1	187	275		
PM BUILD Queue	2	386	300	1	259	350	1	192	275		
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length		
Existing Lane Length	2	116	200	1	235	Cont	1	149	215		
AM NO BUILD Queue	2	140	125	1	284	350	1	180	250		
AM BUILD Queue	2	150	125	1	305	375	1	180	250		
Existing Lane Length	2	188	200	1	250	Cont	1	330	215		
PM NO BUILD Queue	2	227	200	1	303	400	1	399	500		
PM BUILD Queue	2	229	200	1	306	400	1	399	500		

AM **PM**
 Cycle Length: **110** **120**

NOTE: Queue lengths are in feet.

Calculated Right Turn Queue Lengths can be reduced by 50% to account for right-turns-on-red and right turn overlaps.

The queueing analysis recommends lengthening the southbound right turn lane from 215 feet to 250 feet for both the NO BUILD and BUILD Conditions; however, this cannot be accomplished without adversely affecting the driveway to the north. Therefore, no recommendations are made for the queueing at the Paseo del Norte / San Pedro Dr. intersection.

Intersection #4 – Palomas Ave. / San Pedro Dr. - Pages A-56 thru A-93

The results of the implementation year analysis of the signalized intersection of Palomas Ave. / San Pedro Dr. are summarized in the following table:

Intersection: 4 - PALOMAS AVE. / SAN PEDRO DR.

2021 AM Peak Hour BUILD						2021 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	D - 51.9	1	D - 52.0	L	1	D - 44.7	1	D - 44.4	
	T	1	D - 45.2	1	D - 41.8	T	1	C - 33.0	1	C - 31.9	
	R	>	D - 45.2	>	D - 41.8	R	>	C - 33.0	>	C - 31.9	
WB	L	1	D - 47.5	1	D - 45.3	L	1	D - 37.8	1	D - 36.8	
	T	1	D - 48.7	1	D - 50.0	T	1	C - 29.9	1	C - 29.3	
	R	>	D - 48.7	>	D - 50.0	R	>	C - 29.9	>	C - 29.3	
NB	L	1	A - 4.9	1	A - 6.6	L	1	B - 13.9	1	B - 14.6	
	T	2	A - 8.7	2	B - 11.3	T	2	B - 17.6	2	B - 18.5	
	R	>	A - 8.7	>	B - 11.4	R	>	B - 17.6	>	B - 18.5	
SB	L	1	A - 5.8	1	A - 8.4	L	1	B - 13.6	1	B - 14.4	
	T	2	B - 11.3	2	B - 19.0	T	2	C - 30.6	2	C - 31.4	
	R	1	A - 10.0	1	B - 16.4	R	1	C - 34.5	1	D - 35.3	
Intersection:		B - 14.4		B - 18.7				C - 28.4		C - 28.8	

Note: ">" designates a shared right or left turn lane.

This study demonstrates that this signalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM Peak Hour NO BUILD and BUILD Conditions considered in this report. The newly generated traffic from this development will increase the delay by only 4.3 seconds during the AM Peak Hour and by only 0.4 seconds during the PM Peak Hour. Therefore, no recommendations are made for the Palomas Ave. / San Pedro Dr. intersection.

The results of the queueing analysis for this intersection is summarized in the following table:

Queueing Analysis Summary Sheet

Project: Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)
 Intersection: Palomas Ave. / San Pedro Dr.

2021												
Approach		Left Turns			Thru Movements			Right Turns				
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	29	110	1	47	Cont	0	19	0			
AM NO BUILD Queue	1	30	75	1	49	100	0	20	50			
AM BUILD Queue	1	30	75	1	51	100	0	20	50			
Existing Lane Length	1	259	110	1	23	Cont	0	157	0			
PM NO BUILD Queue	1	272	350	1	24	50	0	165	250			
PM BUILD Queue	1	272	350	1	24	50	0	165	250			
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	19	80	1	1	Cont	0	99	0			
AM NO BUILD Queue	1	20	50	1	1	0	0	104	150			
AM BUILD Queue	1	40	75	1	2	0	0	147	200			
Existing Lane Length	1	5	80	1	10	Cont	0	65	0			
PM NO BUILD Queue	1	5	25	1	11	50	0	68	125			
PM BUILD Queue	1	11	50	1	11	50	0	82	150			
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	16	100	2	357	Cont	0	227	0			
AM NO BUILD Queue	1	17	50	2	375	275	0	238	300			
AM BUILD Queue	1	17	50	2	375	275	0	269	325			
Existing Lane Length	1	97	100	2	476	Cont	0	15	0			
PM NO BUILD Queue	1	102	175	2	500	350	0	16	50			
PM BUILD Queue	1	102	175	2	500	350	0	21	50			
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	250	240	2	362	Cont	1	68	145			
AM NO BUILD Queue	1	270	325	2	391	275	1	73	125			
AM BUILD Queue	1	318	375	2	391	275	1	73	125			
Existing Lane Length	1	60	240	2	389	Cont	1	257	145			
PM NO BUILD Queue	1	65	125	2	420	325	1	278	375			
PM BUILD Queue	1	72	125	2	420	325	1	278	375			

AM PM
 Cycle Length: 110 120

NOTE: Queue lengths are in feet.

Calculated Right Turn Queue Lengths can be reduced by 50% to account for right-turns-on-red and right turn overlaps.

The queuing analysis recommends lengthening the eastbound left turn lane from 110 feet to 350 feet plus transition, lengthening the northbound left turn lane from 100 feet to 175 feet plus transition, lengthening the southbound left turn lane from 240 feet to 375 feet plus transition and lengthening the southbound right turn lane from 145 feet to 190 feet plus transition for both the NO BUILD and BUILD Conditions. The eastbound left turn lane is

actually turns into a two-way left turn lane which will be adequate. The northbound and southbound left turn lanes cannot be lengthened without adversely affecting the adjacent turn lanes. The southbound right turn lane can be lengthened to the desired length; however, this would only allow for approximately one additional vehicle and is not worth the expense of construction. Also, this lengthening is required for the NO BUILD condition and is not due to the proposed development. Therefore, no recommendations are made for the queuing at the Palomas Ave. / San Pedro Dr. intersection.

RESULTS OF UNSIGNALIZED INTERSECTION CAPACITY ANALYSES

IMPLEMENTATION YEAR (2021)

Intersection #3 – Palomas Ave. / Louisiana Blvd. - Pages A-56 thru A-93

The results of the implementation year analysis of the signalized intersection of Palomas Ave. / Louisiana Blvd. are summarized in the following table:

Intersection: 3 - PALOMAS AVE. / LOUISIANA BLVD.

<u>2021 AM Peak Hour BUILD</u>					<u>2021 PM Peak Hour BUILD</u>				
(EXIST. GEOM.)					(EXIST. GEOM.)				
		NO BUILD		BUILD			NO BUILD		BUILD
		Lanes	LOS-Delay	Lanes			Lanes	LOS-Delay	Lanes
EB	L	1	C - 21.9	A - 0.0	L	1	C - 16.4	A - 0.0	
	R	1	A - 9.9	1 B - 10.9		1	A - 9.5	1 B - 10.5	
NB	L	1	A - 8.1	1 A - 8.1	L	1	A - 7.7	1 A - 7.7	
	T	2	A - 0.0	2 A - 0.0		2	A - 0.0	2 A - 0.0	
SB	T	1	A - 0.0	1 A - 0.0	T	1	A - 0.0	1 A - 0.0	
	R	1	A - 0.0	1 A - 0.0		1	A - 0.0	1 A - 0.0	
Intersection:		u - 2.7		u - 1.9		u - 3.3		u - 2.7	

Note: ">" designates a shared right or left turn lane.

This intersection will be restricted to a right-in, right-out, left-in only driveway by constructing a median and signing with the implementation of this proposed project. See Conceptual Site Plan on Appendix Page A-3.

This study demonstrates that this unsignalized intersection will operate at acceptable levels-of-service for the 2021 AM and PM Peak Hour NO BUILD and BUILD Conditions analyzed in this report. Therefore, no recommendations are made for the Palomas Ave. / Louisiana Blvd. intersection.

Intersection #5 – Palomas Ave. / Driveway “A” - Pages A-56 thru A-93

Driveway “A” is a right-in, right-out only driveway. Although this intersection was included in the analysis, Synchro 9 does not give analysis results for right-in, right-out only intersections. However, the intersection should operate at acceptable levels-of-service and delays.

Intersection #6 – Palomas Ave. / Driveway “B” - Pages A-56 thru A-93

The results of the analysis of the unsignalized intersection of Palomas Ave. / Driveway “B” are summarized in the following table:

Intersection: 6 - PALOMAS AVE. / DRIVEWAY “B”

<u>2021 AM Peak Hour BUILD</u>				<u>2021 PM Peak Hour BUILD</u>			
(EXIST. GEOM.)				(EXIST. GEOM.)			
NO BUILD		BUILD		NO BUILD		BUILD	
Lanes	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay
EB L	> A - 0.0	> B - 10.6		EB L	> A - 0.0	> A - 7.4	
EB T	1 A - 0.0	1 A - 0.0		EB T	1 A - 0.0	1 A - 0.0	
WB T	1 A - 0.0	1 A - 0.0		WB T	1 A - 0.0	1 A - 0.0	
WB R	> A - 0.0	> A - 0.0		WB R	> A - 0.0	> A - 0.0	
SB L	1 A - 0.0	1 F - 142		SB L	1 A - 0.0	1 A - 9.7	
SB R	> A - 0.0	> F - 142		SB R	> A - 0.0	> A - 9.7	
Intersection: u - 0.0		u - 51.5		u - 0.0		u - 6.2	

Note: ">" designates a shared right or left turn lane.

Driveway “B” is a full access driveway. This study demonstrates that this unsignalized intersection will experience excessive delays for the 2021 AM Peak Hour BUILD Conditions for the southbound left / right turn movement considered in this report. This intersection cannot be mitigated due to the physical constraints of the existing raised island median just east of the driveway and due to the width of Palomas Ave. Therefore, no recommendations are made for the Palomas Ave. / Driveway “B” intersection.

Intersection #7 – Palomas Ave. / Driveway “C” - Pages A-56 thru A-93

The results of the analysis of the unsignalized intersection of Palomas Ave. / Driveway “C” are summarized in the following table:

Intersection: 7 - PALOMAS AVE. / DRIVEWAY “C”

<u>2021 AM Peak Hour BUILD</u>				<u>2021 PM Peak Hour BUILD</u>			
(EXIST. GEOM.)				(EXIST. GEOM.)			
NO BUILD		BUILD		NO BUILD		BUILD	
Lanes	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay
EB L	> A - 0.0	> B - 10.3		EB L	> A - 0.0	> A - 7.8	
EB T	1 A - 0.0	1 A - 0.0		EB T	1 A - 0.0	1 A - 0.0	
WB T	1 A - 0.0	1 A - 0.0		WB T	1 A - 0.0	1 A - 0.0	
WB R	> A - 0.0	> A - 0.0		WB R	> A - 0.0	> A - 0.0	
SB L	1 A - 0.0	1 D - 26.7		SB L	1 A - 0.0	1 B - 10.3	
SB R	> A - 0.0	> D - 26.7		SB R	> A - 0.0	> B - 10.3	
Intersection: u - 0.0		u - 0.5		u - 0.0		u - 0.3	

Note: ">" designates a shared right or left turn lane.

Driveway "C" is a full access driveway. This study demonstrates that this unsignalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM Peak Hour BUILD Conditions considered in this report. Therefore, no recommendations are made for the Palomas Ave. / Driveway "C" intersection.

Intersection #8 – Palomas Ave. / Driveway "D" - Pages A-56 thru A-93

The results of the analysis of the unsignalized intersection of Palomas Ave. / Driveway "D" are summarized in the following table:

Intersection: 8 - PALOMAS AVE. / DRIVEWAY "D"

<u>2021 AM Peak Hour BUILD</u>						<u>2021 PM Peak Hour BUILD</u>					
(EXIST. GEOM.)						(EXIST. GEOM.)					
NO BUILD			BUILD			NO BUILD			BUILD		
Lanes	LOS	Delay	Lanes	LOS	Delay	Lanes	LOS	Delay	Lanes	LOS	Delay
EB	L	>	A - 0.0	>	B - 10.3	L	>	A - 0.0	>	A - 7.8	
	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
WB	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
	R	>	A - 0.0	>	A - 0.0	R	>	A - 0.0	>	A - 0.0	
SB	L	1	A - 0.0	>	D - 27.3	L	1	A - 0.0	>	B - 10.6	
	R	>	A - 0.0	1	D - 27.3	R	>	A - 0.0	1	B - 10.6	
Intersection:		<u>u - 0.0</u>		<u>u - 0.6</u>		<u>u - 0.0</u>		<u>u - 0.3</u>			

Note: ">" designates a shared right or left turn lane.

Driveway "D" is a full access driveway. This study demonstrates that this unsignalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM Peak Hour BUILD Conditions considered in this report. Therefore, no recommendations are made for the Palomas Ave. / Driveway "D" intersection.

Intersection #9 – Palomas Ave. / Driveway "E" - Pages A-56 thru A-93

The results of the analysis of the unsignalized intersection of Palomas Ave. / Driveway "E" are summarized in the following table:

Intersection: 9 - PALOMAS AVE. / DRIVEWAY "E"

2021 AM Peak Hour BUILD						2021 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	>	A - 0.0	>	B - 10.3	L	>	A - 0.0	>	A - 7.9	
	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
WB	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
	R	>	A - 0.0	1	A - 0.0	R	>	A - 0.0	1	A - 0.0	
SB	L	1	A - 0.0	>	D - 28.3	L	1	A - 0.0	>	B - 10.4	
	R	>	A - 0.0	1	D - 28.3	R	>	A - 0.0	1	B - 10.4	
Intersection:		u - 0.0		u - 0.6				u - 0.0		u - 0.3	

Note: ">" designates a shared right or left turn lane.

Driveway "E" is a full access driveway. This study demonstrates that this unsignalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM Peak Hour BUILD Conditions considered in this report. Therefore, no recommendations are made for the Palomas Ave. / Driveway "E" intersection.

Intersection #10 – Palomas Ave. / Driveway "F" - Pages A-56 thru A-93

The results of the analysis of the unsignalized intersection of Palomas Ave. / Driveway "F" are summarized in the following table:

Intersection: 10 - PALOMAS AVE. / DRIVEWAY "F"

2021 AM Peak Hour BUILD						2021 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	>	A - 0.0	>	B - 10.4	L	>	A - 0.0	>	A - 7.9	
	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
WB	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
	R	>	A - 0.0	>	A - 0.0	R	>	A - 0.0	>	A - 0.0	
SB	L	>	A - 0.0	>	D - 29.2	L	>	A - 0.0	>	B - 10.5	
	R	1	A - 0.0	1	D - 29.2	R	1	A - 0.0	1	B - 10.5	
Intersection:		u - 0.0		u - 0.6		u - 0.0		u - 0.3			

Note: ">" designates a shared right or left turn lane.

Driveway "F" is a full access driveway. This study demonstrates that this unsignalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM Peak Hour BUILD Conditions considered in this report. Therefore, no recommendations are made for the Palomas Ave. / Driveway "F" intersection.

Intersection #11 – Palomas Ave. / Driveway "G" - Pages A-56 thru A-93

The results of the analysis of the unsignalized intersection of Palomas Ave. / Driveway "G" are summarized in the following table:

Intersection: 11 - PALOMAS AVE. / DRIVEWAY "G"

2021 AM Peak Hour BUILD						2021 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
NB	EB	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0
	WB	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0
	L	1	A - 0.0	1	E - 41.3	L	1	A - 0.0	1	A - 9.7	
	R	>	A - 0.0	>	E - 41.3	R	>	A - 0.0	>	A - 9.7	
Intersection:		u - 0.0		u - 2.7				u - 0.0		u - 1.3	

Note: ">" designates a shared right or left turn lane.

Driveway "G" is an exit-only driveway. This study demonstrates that this unsignalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM Peak Hour BUILD Conditions considered in this report, except for the northbound movements which will experience marginally excessive delays during the AM Peak Hour BUILD Conditions. No recommendations are made for the Palomas Ave. / Driveway "G" intersection.

Intersection #12 – Palomas Ave. / Driveway "H" - Pages A-56 thru A-93

Driveway "H" is a right-in only driveway. Although this intersection was included in the analysis, Synchro 9 does not give analysis results for right-in only intersections. However, the intersection should operate at acceptable levels-of-service and delays.

Intersection #13 – Palomas Ave. / Driveway "I" - Pages A-56 thru A-93

The results of the analysis of the unsignalized intersection of Palomas Ave. / Driveway "I" are summarized in the following table:

Intersection: 13 - PALOMAS AVE. / DRIVEWAY "I"

2021 AM Peak Hour BUILD						2021 PM Peak Hour BUILD					
		(EXIST. GEOM.)						(EXIST. GEOM.)			
		NO BUILD		BUILD				NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay			Lanes	LOS-Delay	Lanes	LOS-Delay
NB	EB	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0
	WB	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0
	L	1	A - 0.0	1	B - 13.6	L	1	A - 0.0	1	A - 8.8	
	R	1	A - 0.0	1	B - 13.6	R	1	A - 0.0	1	A - 8.8	
Intersection:		u - 0.0		u - 1.4				u - 0.0		u - 1.8	

Note: ">" designates a shared right or left turn lane.

Driveway "I" is an exit-only driveway. This study demonstrates that this unsignalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM

Peak Hour BUILD Conditions considered in this report. Therefore, no recommendations are made for the Palomas Ave. / Driveway "I" intersection.

Intersection #14 – Palomas Ave. / Driveway "J" - Pages A-56 thru A-93

The results of the analysis of the unsignalized intersection of Palomas Ave. / Driveway "J" are summarized in the following table:

Intersection: 14 - PALOMAS AVE. / DRIVEWAY "J"

<u>2021 AM Peak Hour BUILD</u>						<u>2021 PM Peak Hour BUILD</u>					
(EXIST. GEOM.)						(EXIST. GEOM.)					
NO BUILD			BUILD			NO BUILD			BUILD		
Lanes	LOS-Delay		Lanes	LOS-Delay		Lanes	LOS-Delay		Lanes	LOS-Delay	
EB	T	1	A - 0.0	1	A - 0.0	EB	T	1	A - 0.0	1	A - 0.0
	R	>	A - 0.0	>	A - 0.0		R	>	A - 0.0	>	A - 0.0
WB	T	1	A - 0.0	1	A - 0.0	WB	T	1	A - 0.0	1	A - 0.0
	R	1	A - 0.0	1	B - 10.5		R	1	A - 0.0	1	A - 8.7
Intersection:		<u>u - 0.0</u>		<u>u - 0.0</u>		Intersection:		<u>u - 0.0</u>		<u>u - 0.1</u>	

Note: ">" designates a shared right or left turn lane.

Driveway "J" is right-in, right-out only driveway. This study demonstrates that this unsignalized intersection will operate at acceptable levels-of-service for the 2021 AM Peak Hour and PM Peak Hour BUILD Conditions considered in this report. Therefore, no recommendations are made for the Palomas Ave. / Driveway "J" intersection.

Intersection #15 – Driveway "K" / Louisiana Blvd. - Pages A-56 thru A-93

The results of the analysis of the unsignalized intersection of Driveway "K" / Louisiana Blvd. are summarized in the following table:

Intersection: 15 - DRIVEWAY "K" / LOUISIANA BLVD.

<u>2021 AM Peak Hour BUILD</u>						<u>2021 PM Peak Hour BUILD</u>					
(EXIST. GEOM.)						(EXIST. GEOM.)					
NO BUILD			BUILD			NO BUILD			BUILD		
Lanes	LOS-Delay		Lanes	LOS-Delay		Lanes	LOS-Delay		Lanes	LOS-Delay	
EB	L	1	A - 0.0	1	F - 297	EB	L	1	A - 0.0	1	F - 92117
	R	>	A - 0.0	>	A - 0.0		R	>	A - 0.0	>	A - 0.0
NB	L	>	A - 0.0	>	B - 11.0	NB	L	>	A - 0.0	>	B - 10.5
	T	1	A - 0.0	1	A - 0.0		T	1	A - 0.0	1	A - 0.0
SB	T	1	A - 0.0	1	A - 0.0	SB	T	1	A - 0.0	1	A - 0.0
	R	>	A - 0.0	>	A - 0.0		R	>	A - 0.0	>	A - 0.0
Intersection:		<u>u - 0.0</u>		<u>u - 57.3</u>		Intersection:		<u>u - 0.0</u>		<u>u - 158</u>	

Note: ">" designates a shared right or left turn lane.

Add TWLTL along Louisiana Blvd.

Driveway “K” is a full access driveway. This study demonstrates that this unsignalized intersection will experience excessive delays for the 2021 AM Peak Hour and PM Peak Hour BUILD Conditions for the eastbound left turn movement considered in this report. This intersection may be mitigated by lengthening the existing two-way left turn lane along Louisiana Blvd. to the south end of the left turn lane at Palomas Ave.

CONCLUSIONS

This analysis was conducted using the following methodology: Trip Generation was established using the Institute of Transportation Engineers’ (ITE’s) Trip Generation Manual (9th Edition). Generated Trips were distributed proportionately based on the existing direction traffic trends in the area; NO BUILD volumes were established based on recent traffic count data grown at historical growth rate; and the intersection analyses were performed in accordance with the 2010 Highway Capacity Manual. The Traffic Impact Study showed a minimal increase in traffic volumes for the adjacent transportation network based on 100% buildout of the proposed project.

In summary, the proposed plan for the Hope Christian School Masterplan presents no significant adverse impact to the adjacent transportation system provided that the following recommendations are followed:

RECOMMENDATIONS

- All site design and construction including driveways and landscaping shall maintain adequate sight distances at the driveways and the existing intersections.
- Access to the site should be via one existing right-in, right-out driveway (Driveway “A”) and five full access driveways (Driveways “B”, “C”, “D”, “E” and “F”) along the north side of Palomas Ave., two exit-only driveways (Driveway “G” and “I”), one right-in only driveway (Driveway “H”) and one right-in, right-out only driveway (Driveway “J”) along the south side of Palomas Dr. as well as one full access driveway (Driveway “K”) along Louisiana Blvd.
- **Palomas Ave. / Louisiana Blvd.** – Construct medians and signing to restrict intersection to right-in, right-out, left-in only.
- **Driveway “K” / Louisiana Blvd.** – Extend the existing two-way left-turn lane along Louisiana Blvd. north to the end of the northbound left turn lane at Palomas Ave. / Louisiana Blvd.

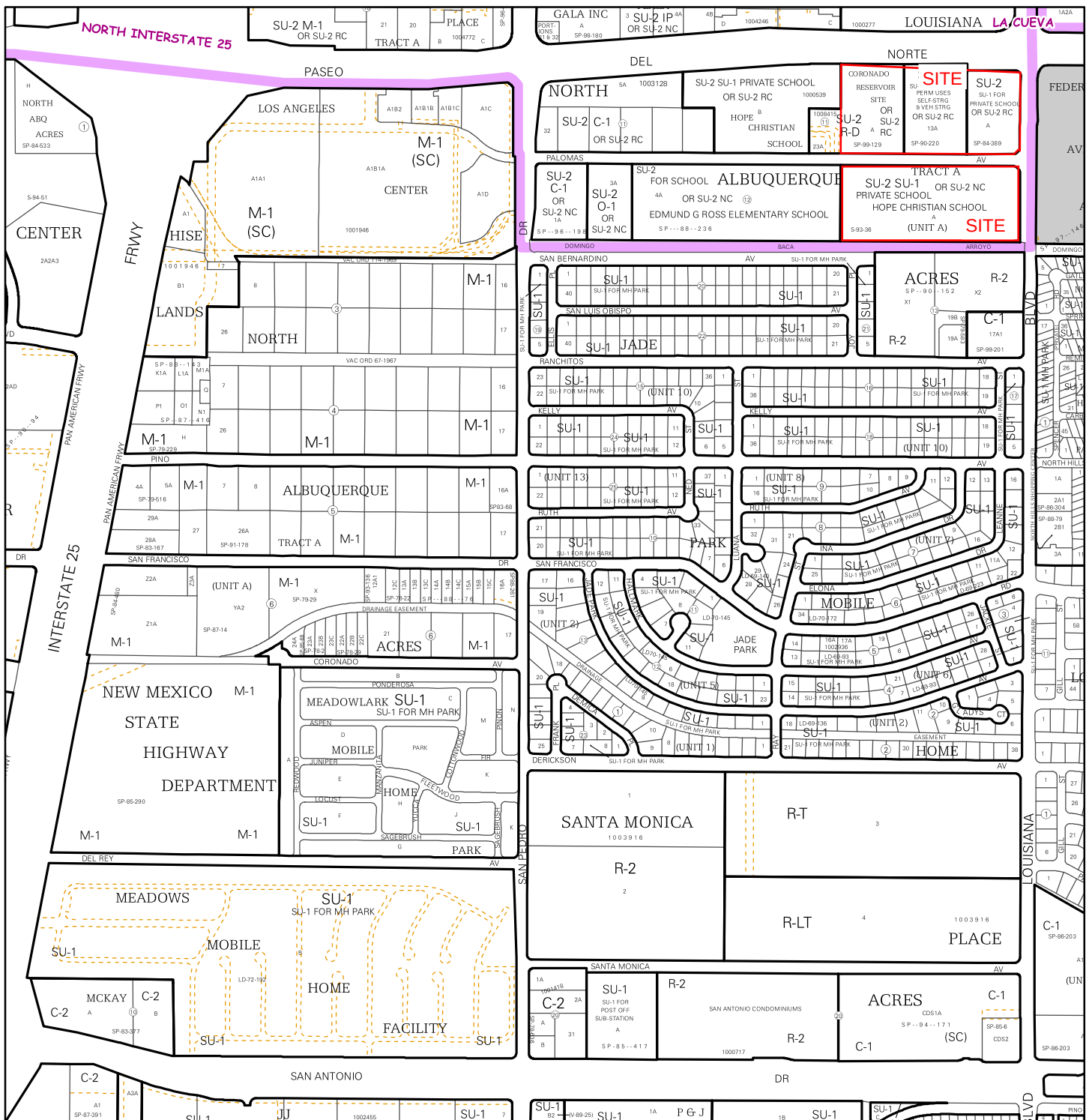
Appendix

<u>SITE INFORMATION</u>	
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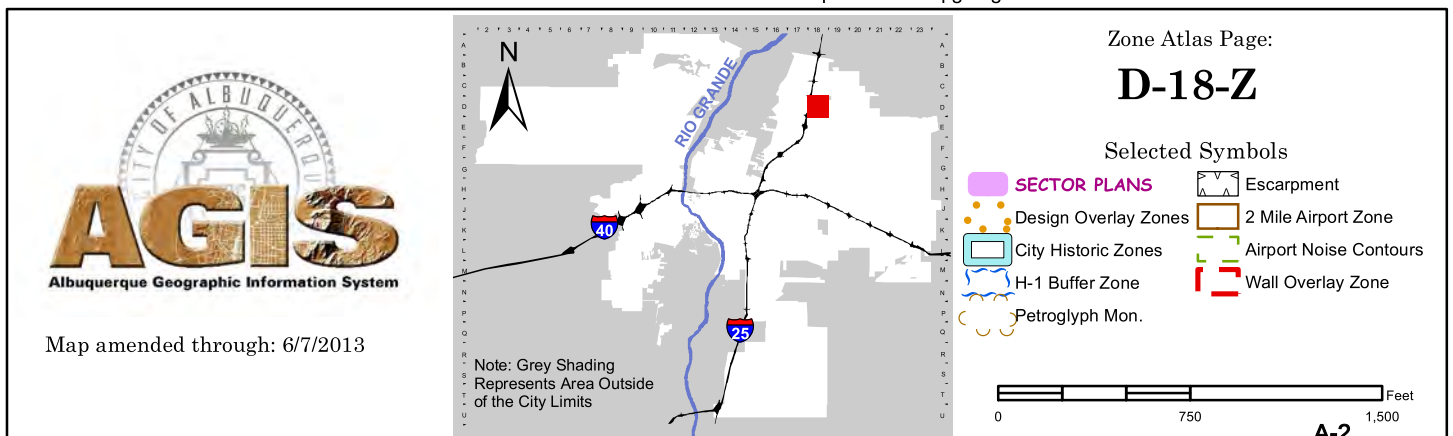
APPENDIX



Hope Christian School Masterplan
(Palomas Ave. / Louisiana Blvd.)
Aerial Map



For more current information and details visit: <http://www.cabq.gov/gis>



APPROVED FOR PARCELS:
PORTABLE BUILDINGS
REMOVED

NEW 2-STORY CLASSROOM
BUILDING, RENOVATION OF
EXISTING MPB, PARKING,
PLAYGROUND,
TRACK/SOCCER FIELD AND
FIELD HOUSE

42,283 SF FOOTPRINT.
55,148 SF HEATED.

50 PARKING REQ'D
67 PARKING PROVIDED

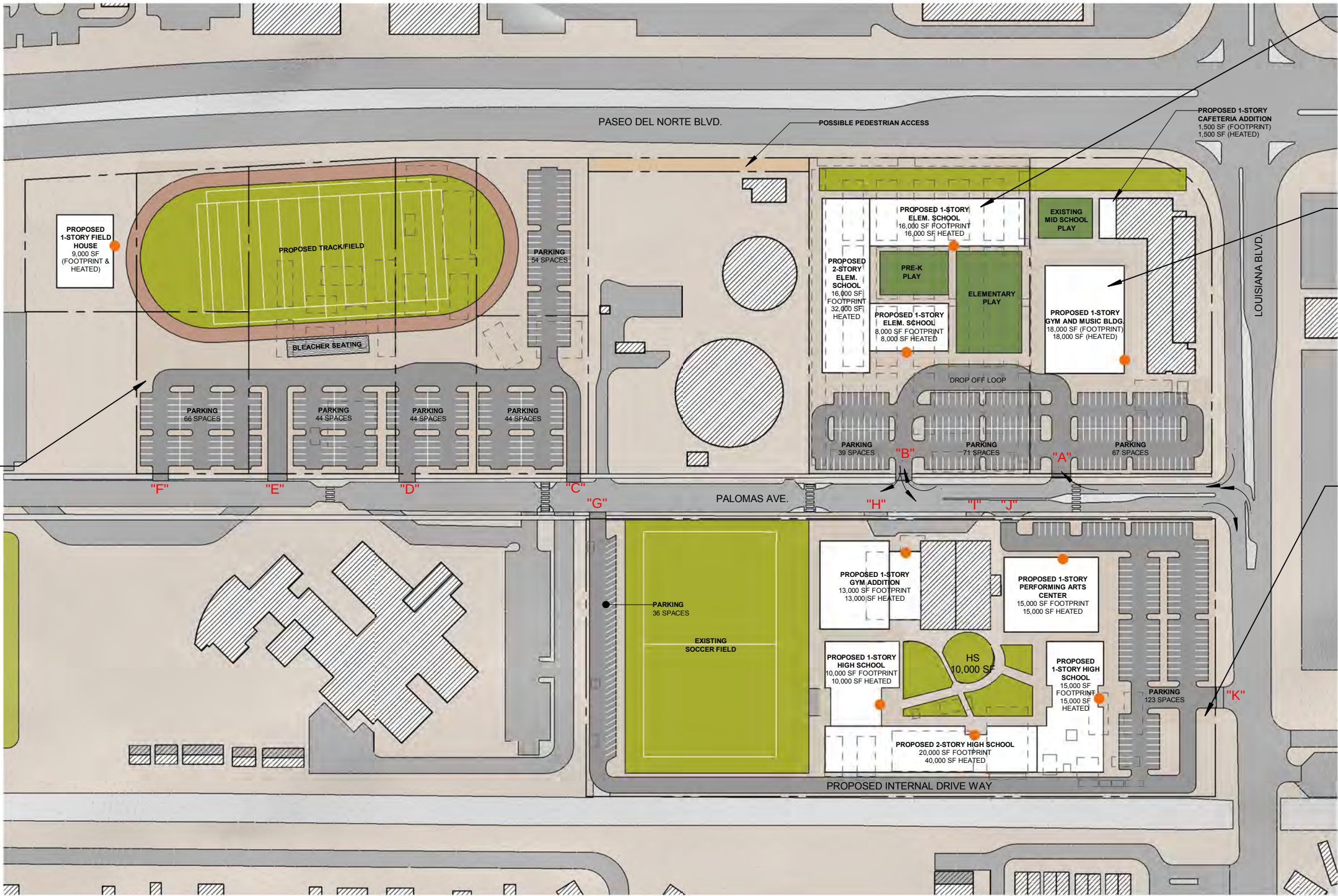
APPROVED IN MASTER PLAN
1/31/2006

2016 MASTER PLAN:
PORTABLE BUILDINGS
REMOVED

TRACK/SPORT FIELD,
FIELD HOUSE, PARKING

9,000 SF FOOTPRINT
9,000 SF HEATED

PARKING PROVIDED: 252



EXISTING ZONE:
SU-1 O-1 SELF STORAGE AND
VEHICLE STORAGE

2016 MASTER PLAN:
ELEMENTARY SCHOOL
CLASSROOMS,
PLAYGROUND, PARKING

40,000 SF FOOTPRINT
56,000 SF HEATED

PARKING PROVIDED: 110

APPROVED FOR PARCEL:
MIDDLE SCHOOL GYMNASIUM

18,126 SF FOOTPRINT.
18,126 SF HEATED.

APPROVED IN MASTER PLAN
1/31/2006

2016 MASTER PLAN:
MIDDLE SCHOOL GYMNASIUM
AND MUSIC BUILDING,
CAFETERIA ADDITION

19,500 SF FOOTPRINT
19,500 SF HEATED

PARKING PROVIDED: 67

APPROVED FOR PARCEL:
NEW H.S. ADMIN BUILDING,
CLASSROOMS,
RENOVATION OF
GYMNASIUM AND MPB
ADDITION.

73,941 SF FOOTPRINT.
102,774 SF HEATED.

200 PARKING REQ'D
233 PARKING PROVIDED

APPROVED IN MASTER
PLAN 1/31/2006

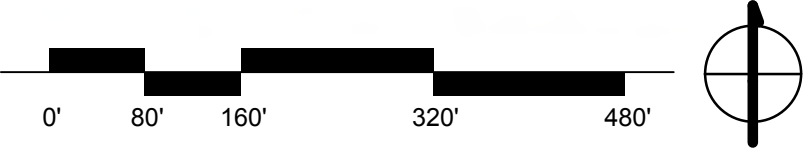
2016 MASTER PLAN:
NEW H.S. ADMIN BUILDING,
CLASSROOMS, GYMNASIUM
RENOVATION AND ADDITION

73,000 SF FOOTPRINT
93,000 SF HEATED

PARKING PROVIDED: 159

**MAIN ENTRY
LOCATION**

SITE PLAN - OPTION 1
1" = 160'-0"



2040 Long Range Roadway System

- Interchange/Crossing
- Interchange/Crossing, Post 2040
- Freeways
- Regional Principal Arterial
- Community Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Proposed Regional Principal Arterial
- Proposed Community Principal Arterial
- Proposed Minor Arterial
- Proposed Major Collector
- Proposed Minor Collector
- Proposed Regional Principal Arterial, Post 2040
- Proposed Community Principal Arterial, Post 2040
- Proposed Minor Arterial, Post 2040
- Proposed Major Collector, Post 2040
- Proposed Minor Collector, Post 2040
- Classification TBD, Post 2040

The Long Range Roadway System (LRRS) provides future recommended roadways and their regional role. This network includes roadways that are not expected to be constructed in the timeframe of the 2040 MTP, however they are included in order to identify future needed connectors.

The LRRS builds upon functional classification, by considering the character of the roadway, its role in the regional network, the types of trips taken, and the needs to all users.

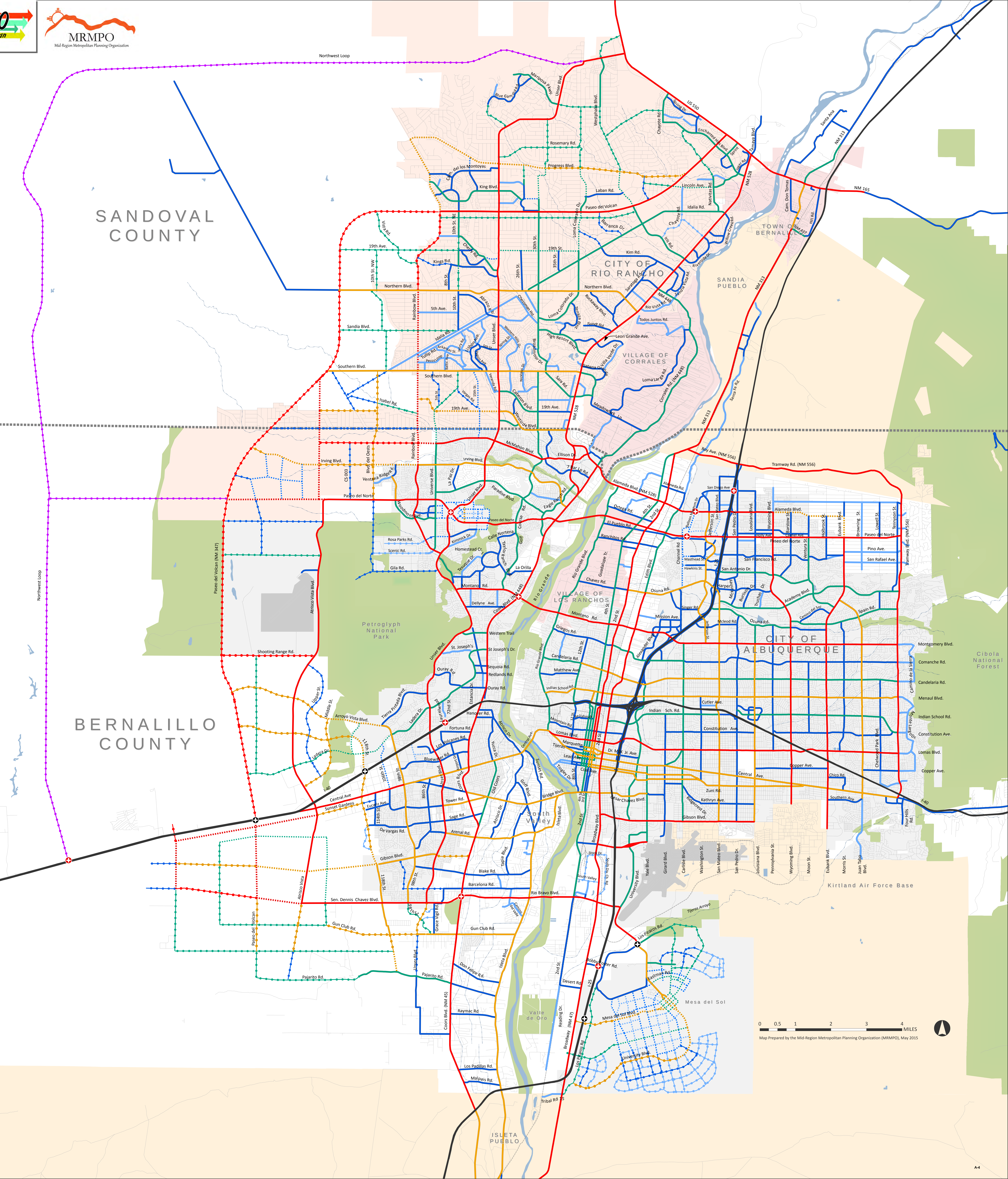
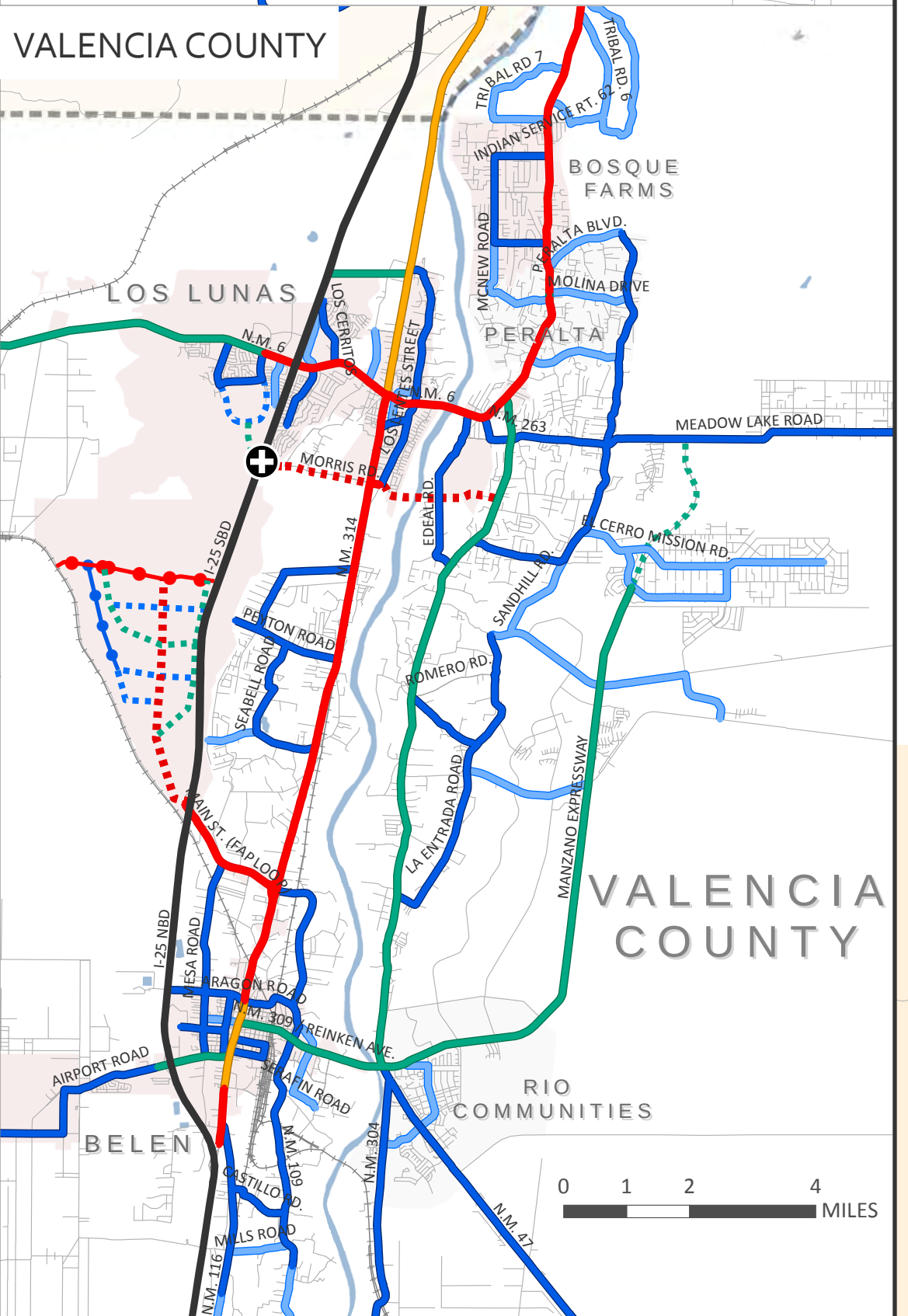
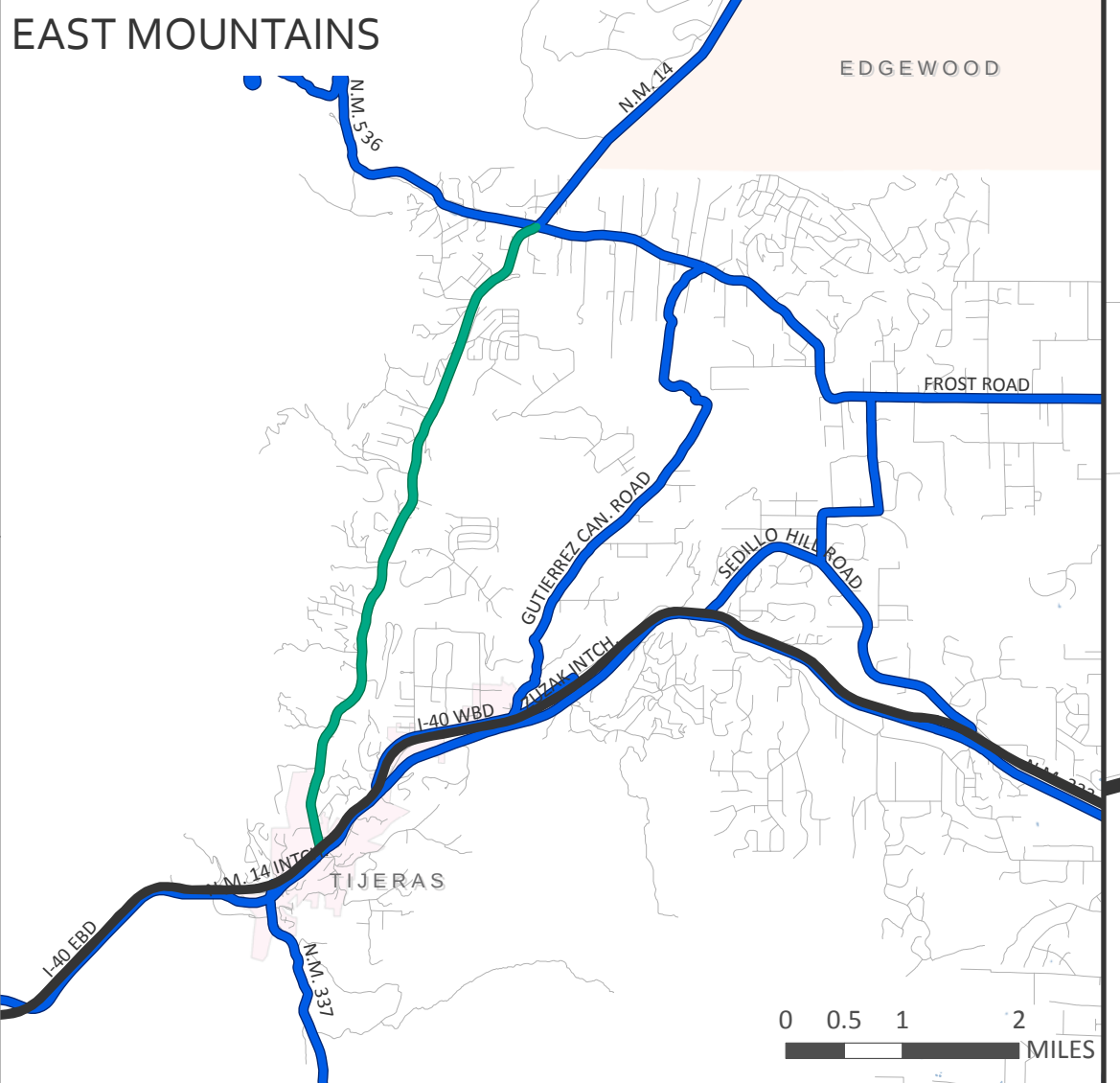
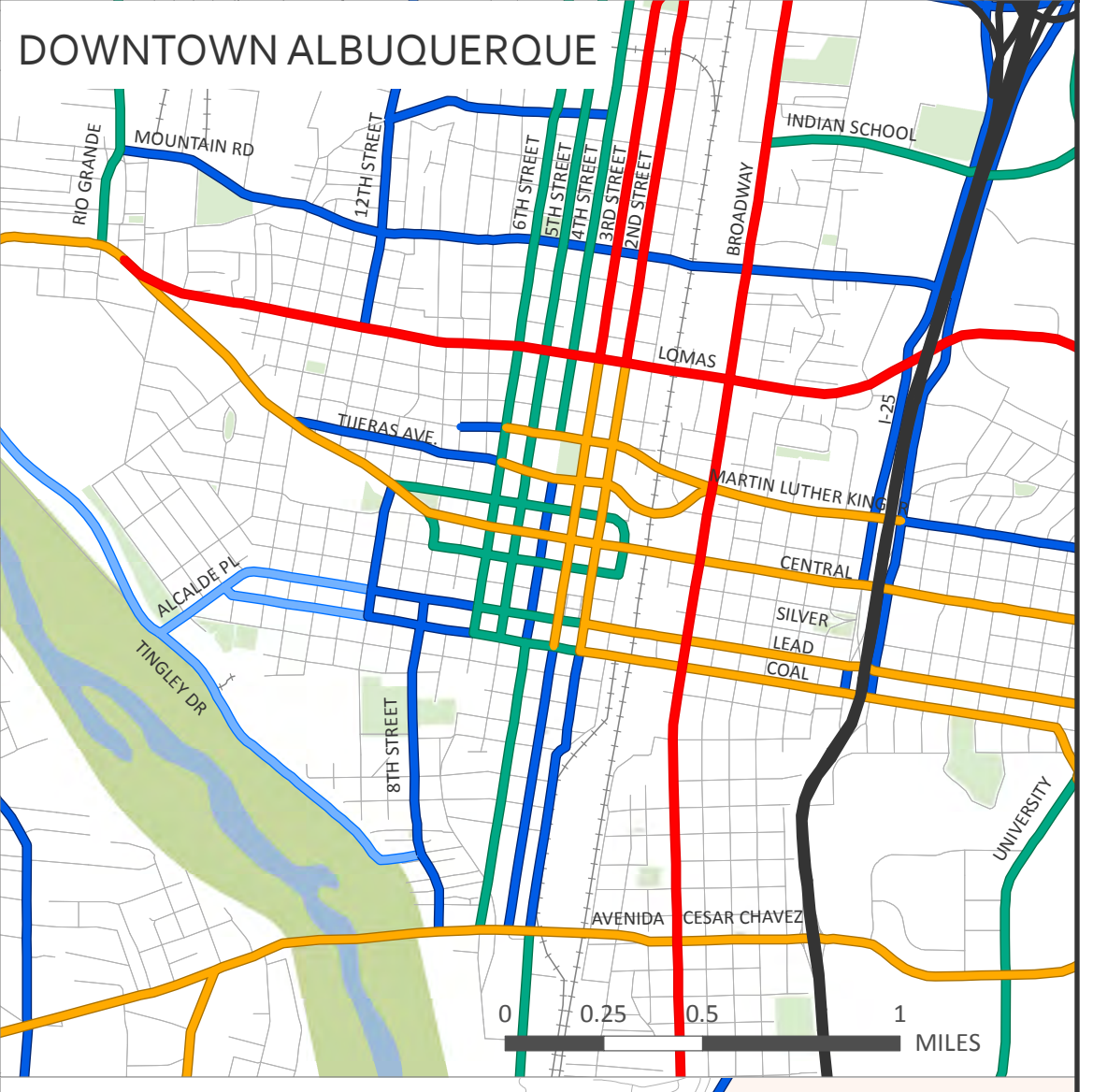
REGIONAL PRINCIPAL ARTERIAL
Trips on regional principal arterials are primarily for traveling longer distances across the region. Regional principal arterials prioritize passenger vehicles and freight. These roadways should have high levels of access management.

COMMUNITY PRINCIPAL ARTERIAL
Community principal arterial include many destinations with direct access from the arterial. Travel on community principal arterials tends to be over relatively short distances. Community principal arterials do not prioritize one mode over another; instead, they strive to achieve a balance for different user needs.

MINOR ARTERIAL
Minor arterials provide the connectivity of principal arterials, but they prioritize slower moving traffic, including bicyclists and pedestrians, to allow these modes additional options to reach destinations without needing to be on a principal arterial.

MAJOR COLLECTOR
Major collectors provide additional connectivity between destinations on arterials and neighborhoods. They prioritize bicyclists and pedestrians. Bicyclists should be able to use collectors for long segments of their trips while motorists primarily use them for short segments of their trips.

MINOR COLLECTOR
Minor collectors provide additional connectivity between destinations on arterials and neighborhoods.





Excerpt from Futures 2040 Long Range Roadway System Map

2015 Traffic Flows

for the Greater Albuquerque Area

Map prepared by the Mid-Region Council of Governments (MRCOG) in cooperation with the New Mexico Department of Transportation, the local governments in the Albuquerque Metropolitan Planning Area, and the U.S. Department of Transportation, Federal Highway Administration. Map prepared July 2015.

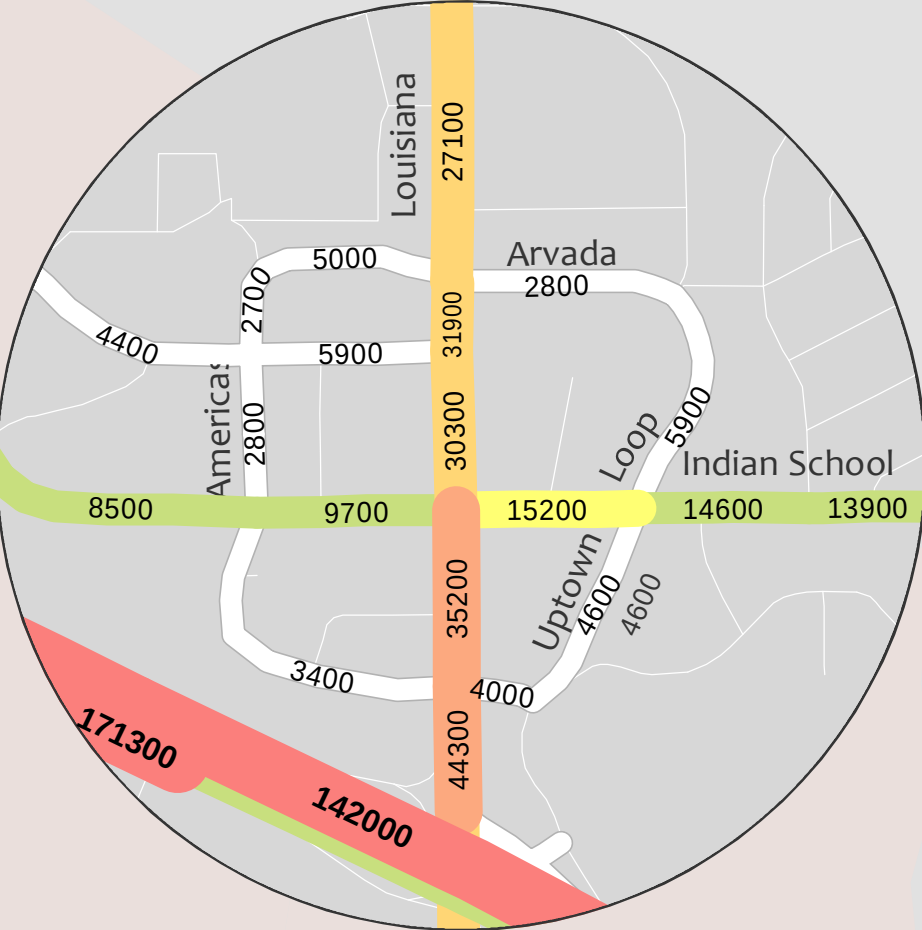
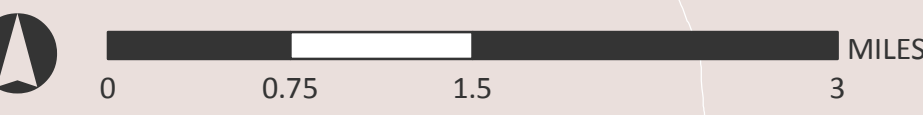
An online version of this map with complete and historic traffic count information and additional maps can be found at: www.mrcog-nm.gov



Average Weekday Traffic

- Standard Data**
9500
- Link Volume is based on traffic count data accepted by the NM Department of Transportation Traffic Monitoring System (TMS) as standard in accordance with the New Mexico State Traffic Monitoring Standards (NMSTMS).
- Non-Standard Data**
9500
- Link Volume is based either on traffic count data not in compliance with the NMSTMS or on professional judgement. NMDOT recommends that nonstandard data be used with caution.
- Link volumes have been rounded to the nearest 10th, with some count volumes being the average of two shorter segments.

- ### Average Weekday Traffic
- 0 - 2999
 - 3000 - 7999
 - 8000 - 14999
 - 15000 - 24999
 - 25000 - 34999
 - 35000 - 49999
 - >50000 + Highways



Uptown Inset



Downtown Inset

Hope Christian School (2016 Master Plan)
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

COMMENT	USE (ITE CODE)	DESCRIPTION	24 HR VOL		A. M. PEAK HR.		P. M. PEAK HR.	
			GROSS	ENTER	EXIT	ENTER	EXIT	
Summary Sheet								
			Units					
Proposed		Private School [K-12] (536)	1,715	4,253	818	523	125	166
Existing		Private School [K-12] (536)	1,351	3,350	647	413	99	131
Net Increase (Decrease) in Trips Generated			903	171	110	26	35	

Hope Christian School (2016 Master Plan)
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A.M. PEAK HOUR		P.M. PEAK HOUR
	GROSS	ENTER	EXIT	ENTER	EXIT
	4,253	818	523	125	166

Units

1,715

Students

Private School [K-12] (536)ITE Trip Generation Equations:

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

$$T = \frac{2.48 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = \frac{0.77 (X) + 19.92}{61\% \text{ Enter, } 39\% \text{ Exit}}$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$T = \frac{0.17 (X) + 0}{43\% \text{ Enter, } 57\% \text{ Exit}}$$

Comments:

Proposed

Based on ITE Trip Generation Manual - 9th Edition

Hope Christian School (2016 Master Plan) *Trip Generation Data (ITE Trip Generation Manual - 9th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A.M. PEAK HOUR		P.M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT	ENTER
Private School [K-12] (536)	3,350	647	413	99	99	131

Units

1,351

Students

ITE Trip Generation Equations:

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

$$T = \frac{2.48 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

$$T = \frac{0.77 (X) + 19.92}{61\% \text{ Enter, } 39\% \text{ Exit}}$$

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$T = \frac{0.17 (X) + 0}{43\% \text{ Enter, } 57\% \text{ Exit}}$$

Comments:

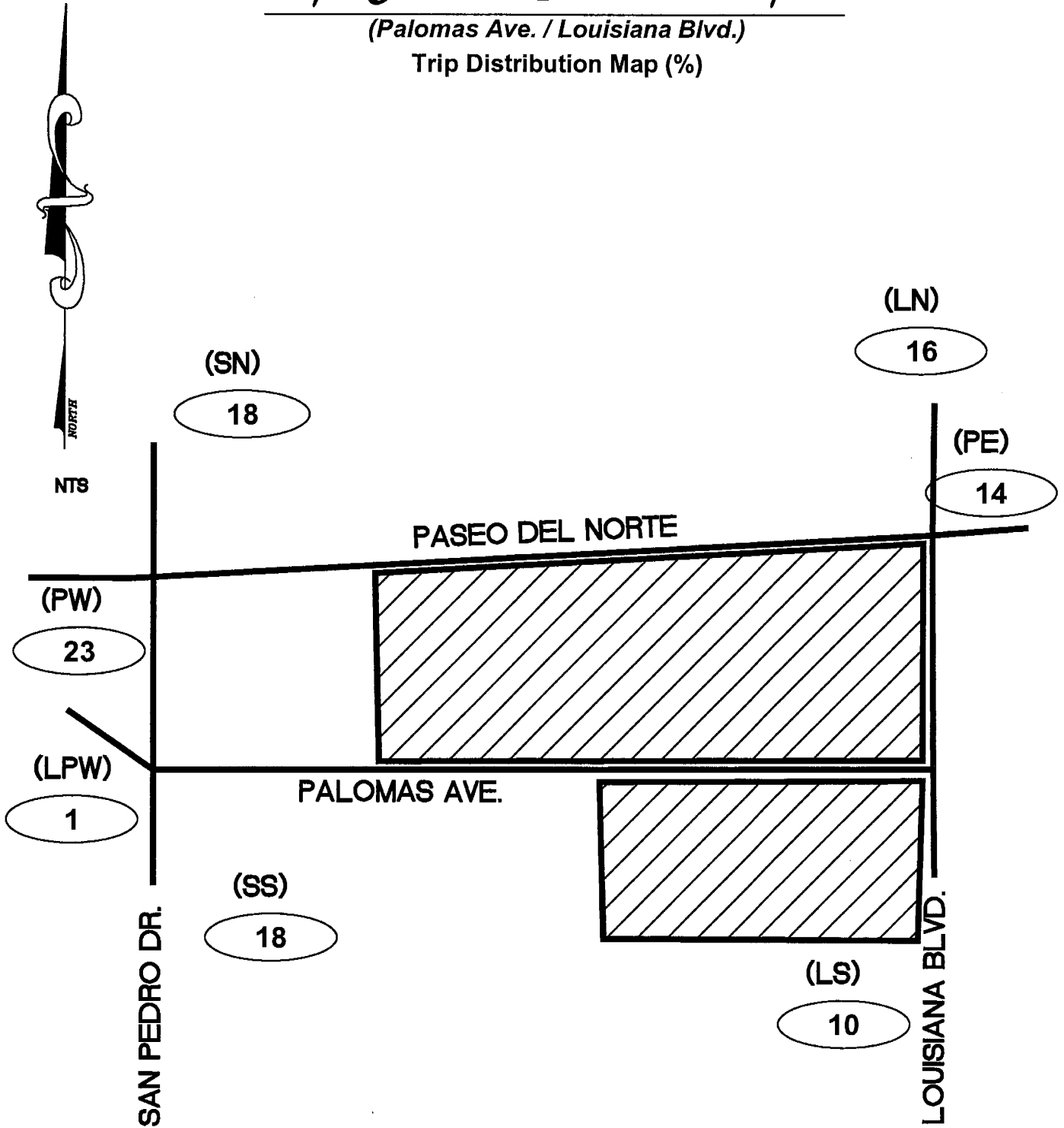
Existing

Based on ITE Trip Generation Manual - 9th Edition

Hope Christian School Masterplan

(Palomas Ave. / Louisiana Blvd.)

Trip Distribution Map (%)

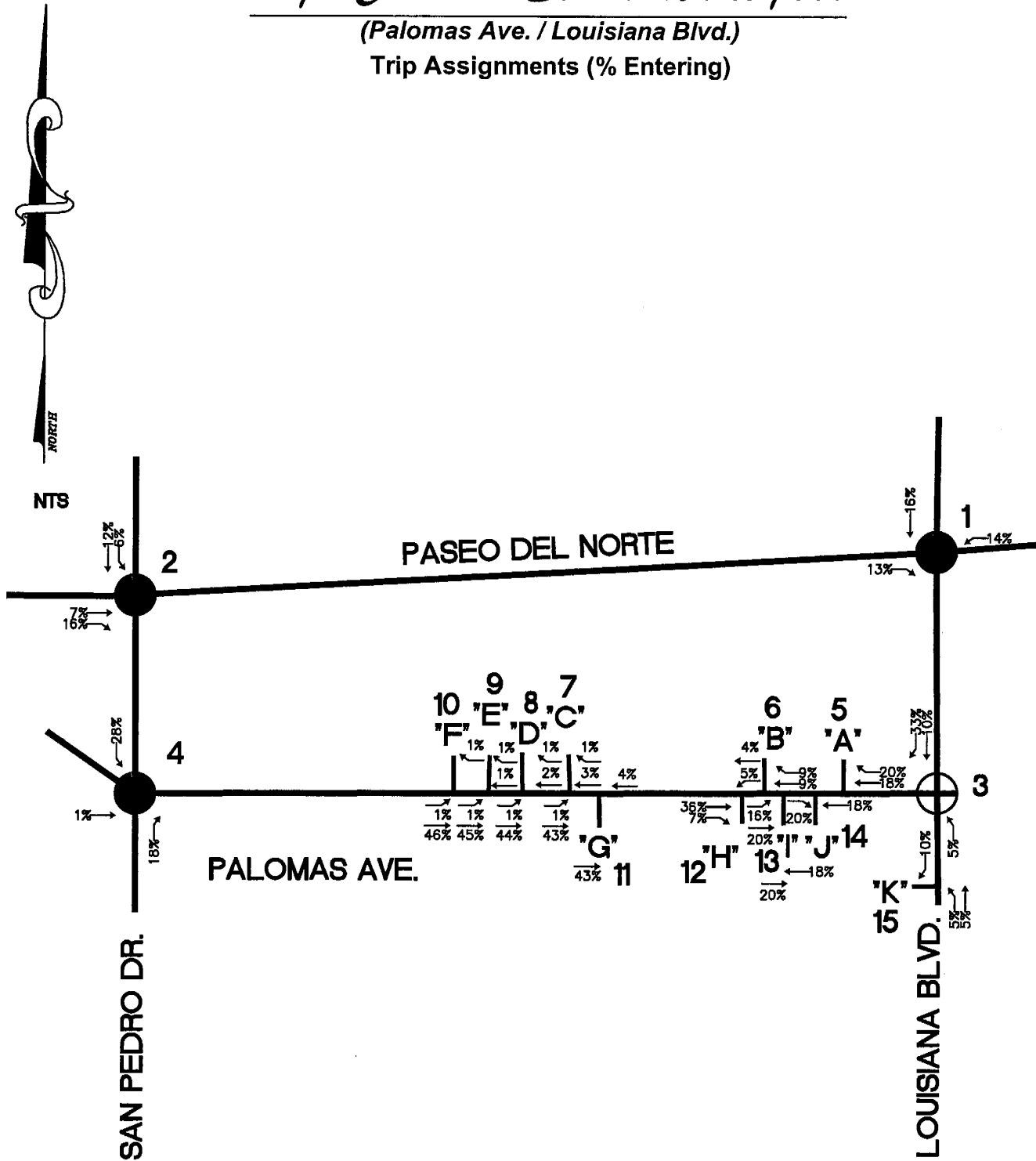


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Hope Christian School Masterplan

(Palomas Ave. / Louisiana Blvd.)

Trip Assignments (% Entering)



SIGNALIZED INTERSECTION



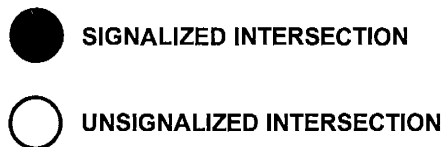
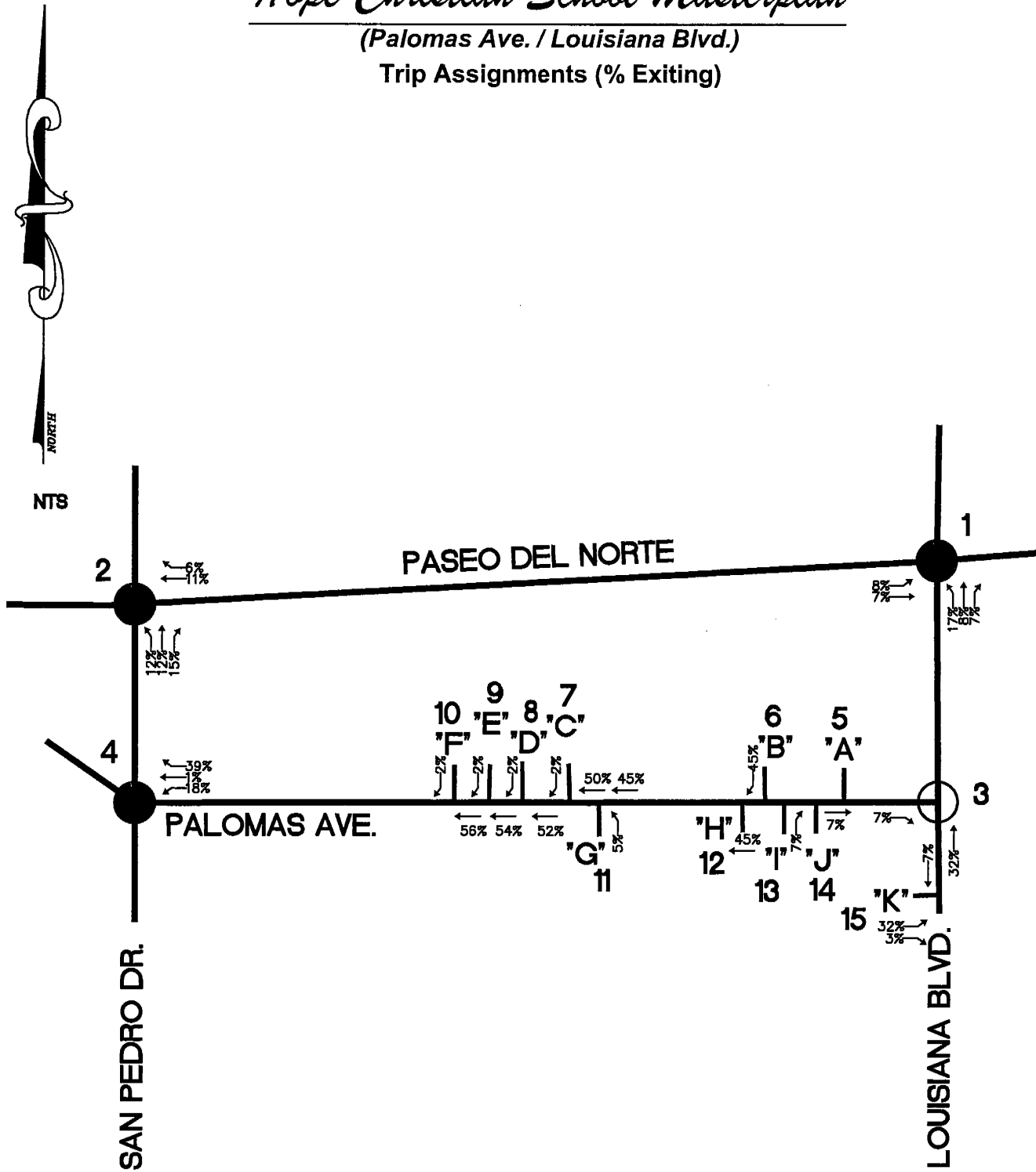
UNSIGNALIZED INTERSECTION

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Hope Christian School Masterplan

(Palomas Ave. / Louisiana Blvd.)

Trip Assignments (% Exiting)



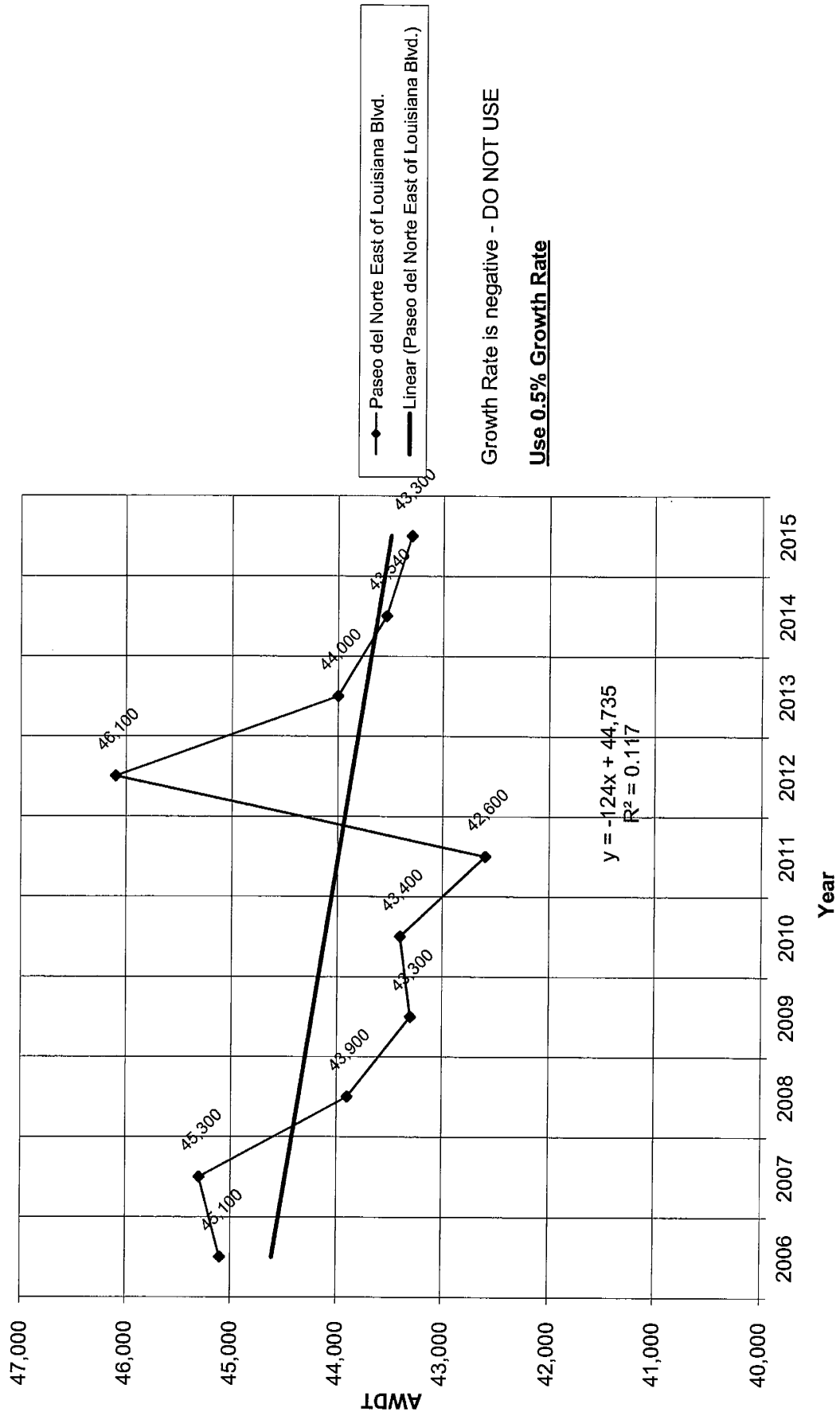
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(505)212-0267 (Fax)

Hope Christian School (Palomas Ave. / Louisiana Blvd.)
Historic Growth Rate Table

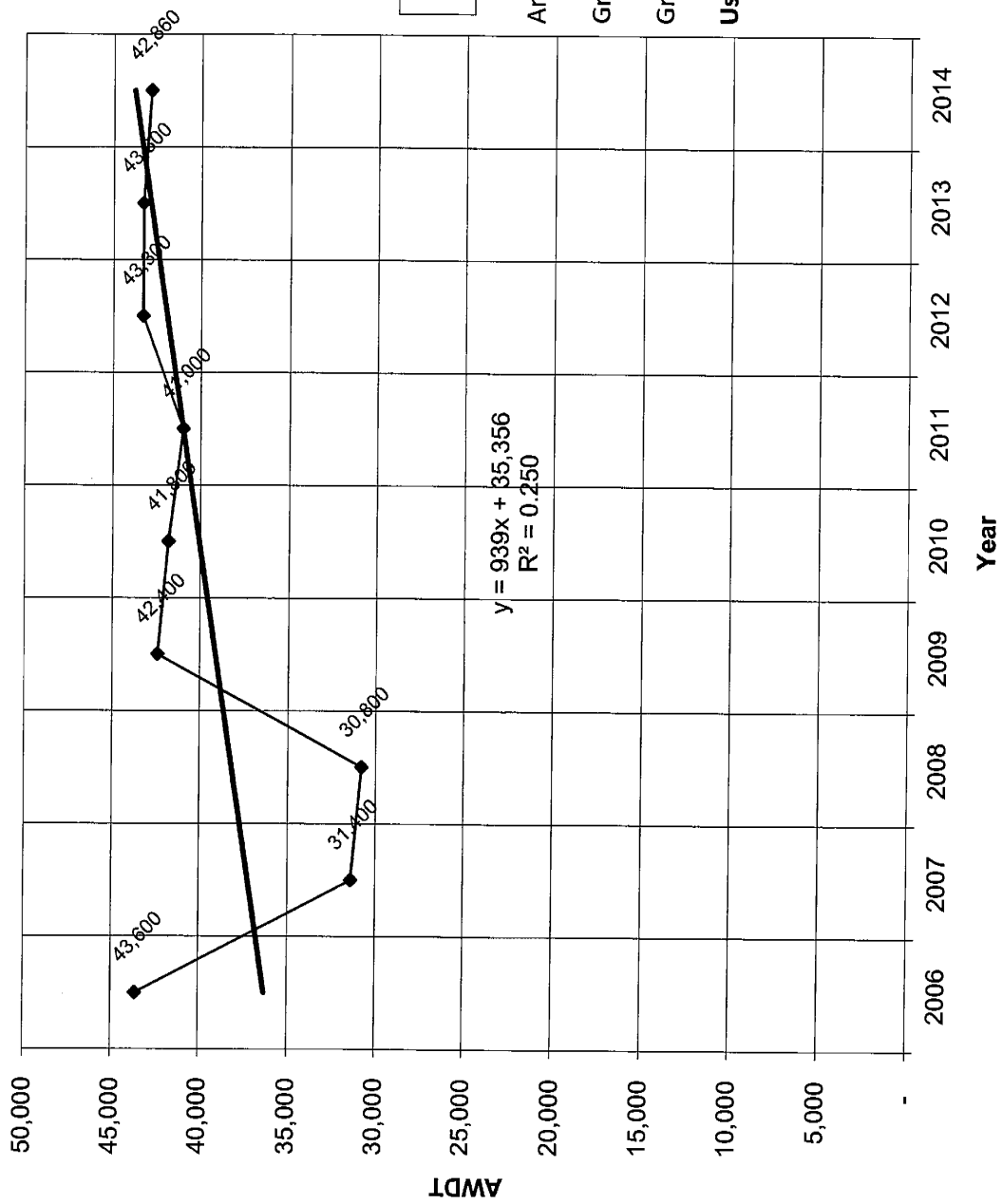
Traffic Flows from MRCOG Map

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Paseo del Norte East of Louisiana Blvd.	45,100	45,300	43,900	43,300	43,400	42,600	46,100	44,000	43,540	43,300
Paseo del Norte West of Louisiana Blvd.	43,600	31,400	30,800	42,400	41,800	41,000	43,300	43,300	42,860	-
Louisiana Blvd. North of Paseo del Norte	8,300	11,300	11,100	11,000	6,600	6,500	6,500	12,000	11,850	11,800
Louisiana Blvd. South of Paseo del Norte	8,200	6,300	7,300	7,200	7,700	8,100	8,200	8,200	7,250	7,000
Paseo del Norte West of San Pedro Dr.	48,400	48,600	44,500	43,900	36,800	36,100	-	49,300	-	4,400
San Pedro Dr. North of Paseo del Norte	11,700	11,800	11,500	13,900	13,700	13,400	16,900	16,900	16,750	16,700
San Pedro Dr. South of Paseo del Norte	8,500	8,600	12,200	12,100	11,900	11,700	13,300	13,300	9,510	9,500

Historic Growth Chart Paseo del Norte East of Louisiana (2006-2015)



Historic Growth Chart Paseo del Norte West of Louisiana (2006-2014)



—●— Paseo del Norte West of Louisiana Blvd.

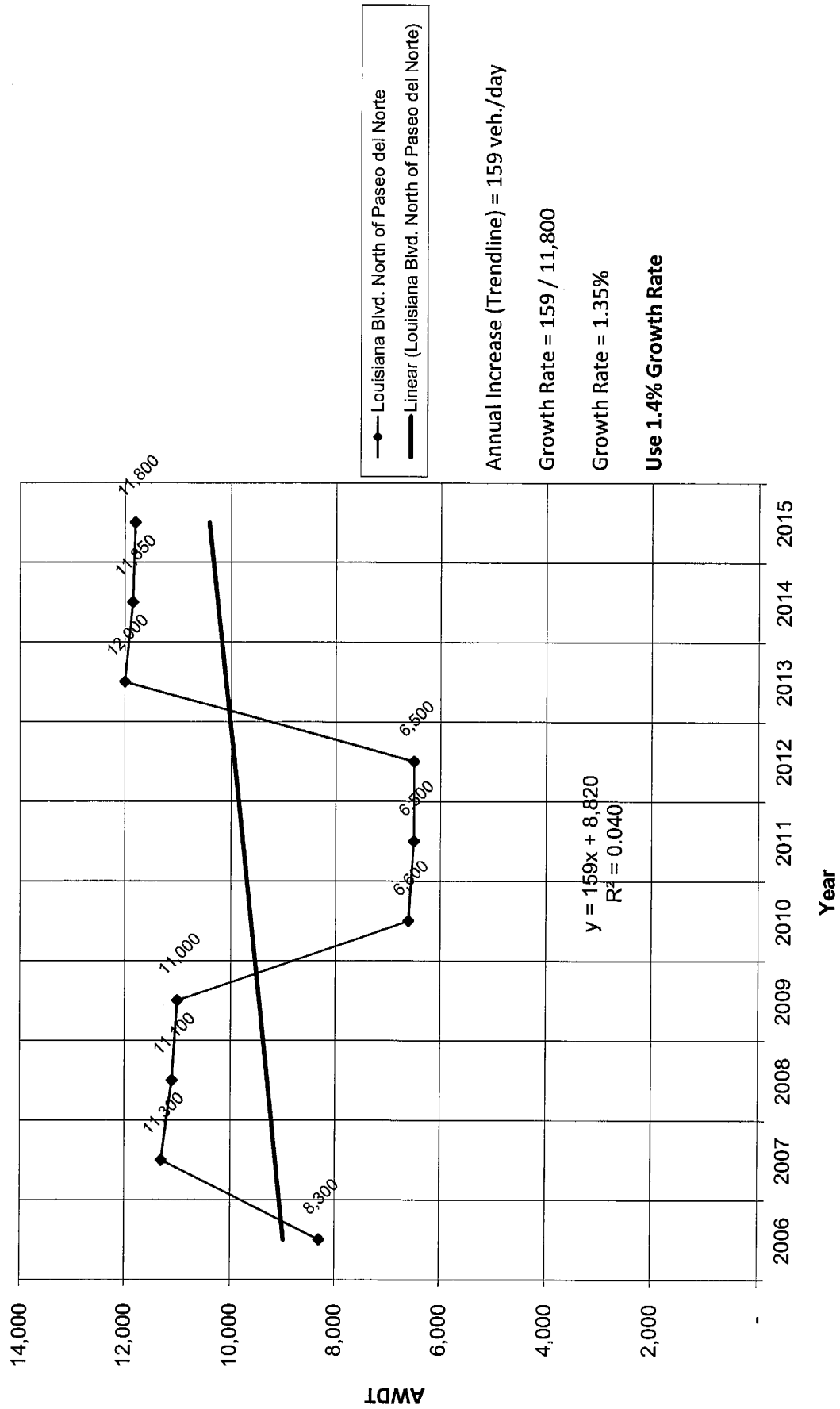
Annual Increase (Trendline) = 939 veh./day

Growth Rate = 939 / 42,860

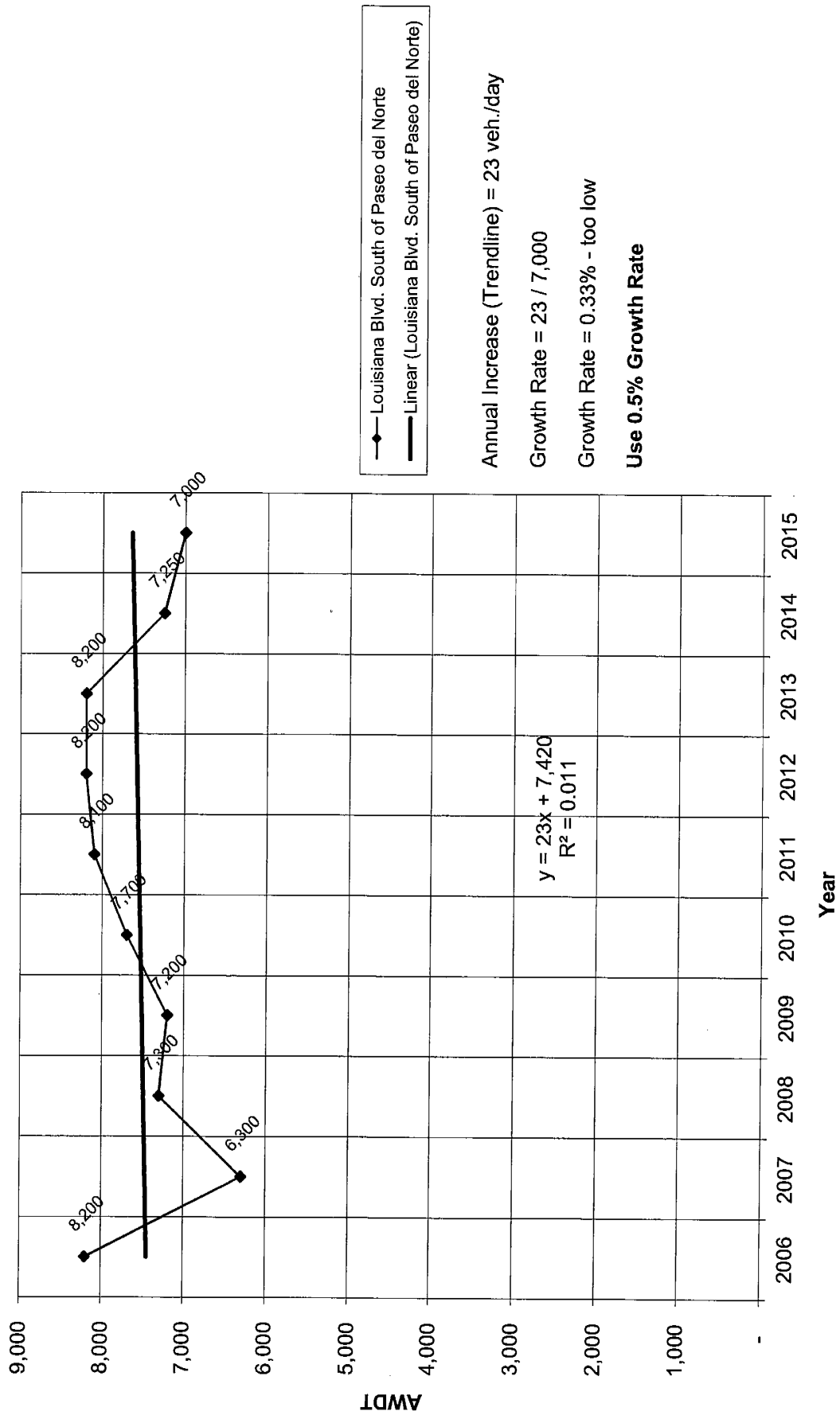
Growth Rate = 0.22% - too low

Use 0.5% Growth Rate

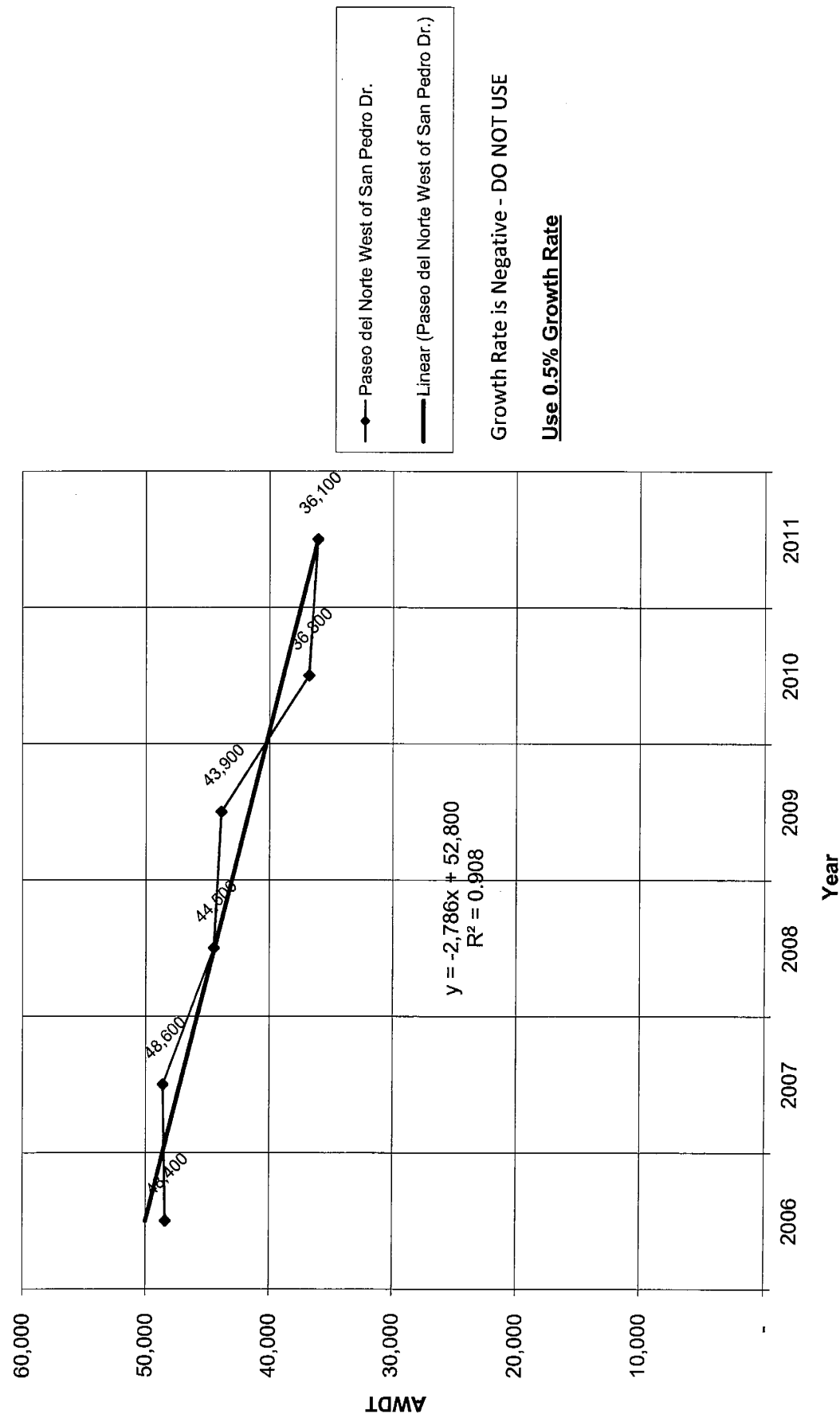
Historic Growth Chart Louisiana Blvd. North of Paseo del Norte (2006-2015)



Historic Growth Chart Louisiana Blvd. South of Paseo del Norte (2006-2015)

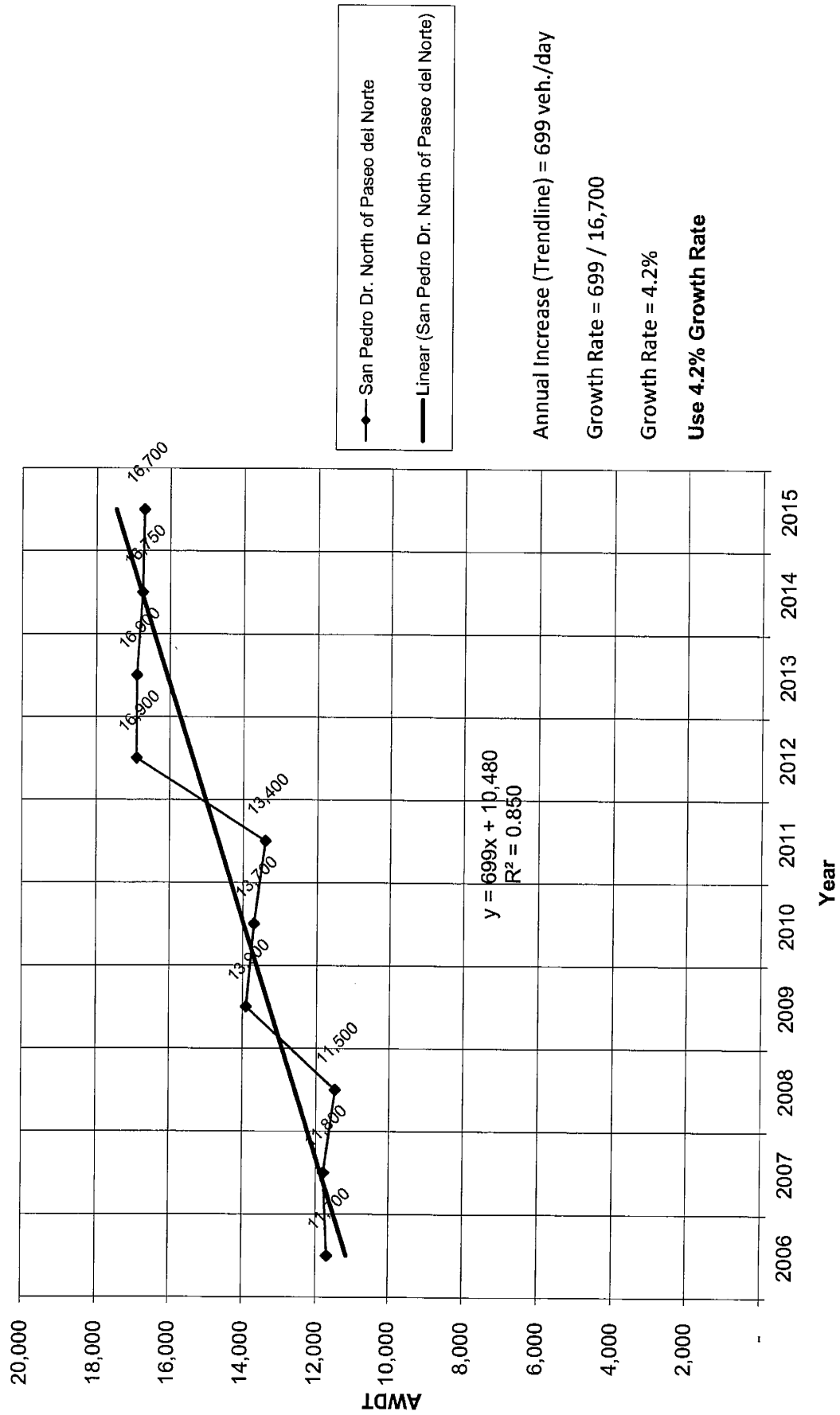


Historic Growth Chart Paseo del Norte West of San Pedro Dr. (2006-2011)

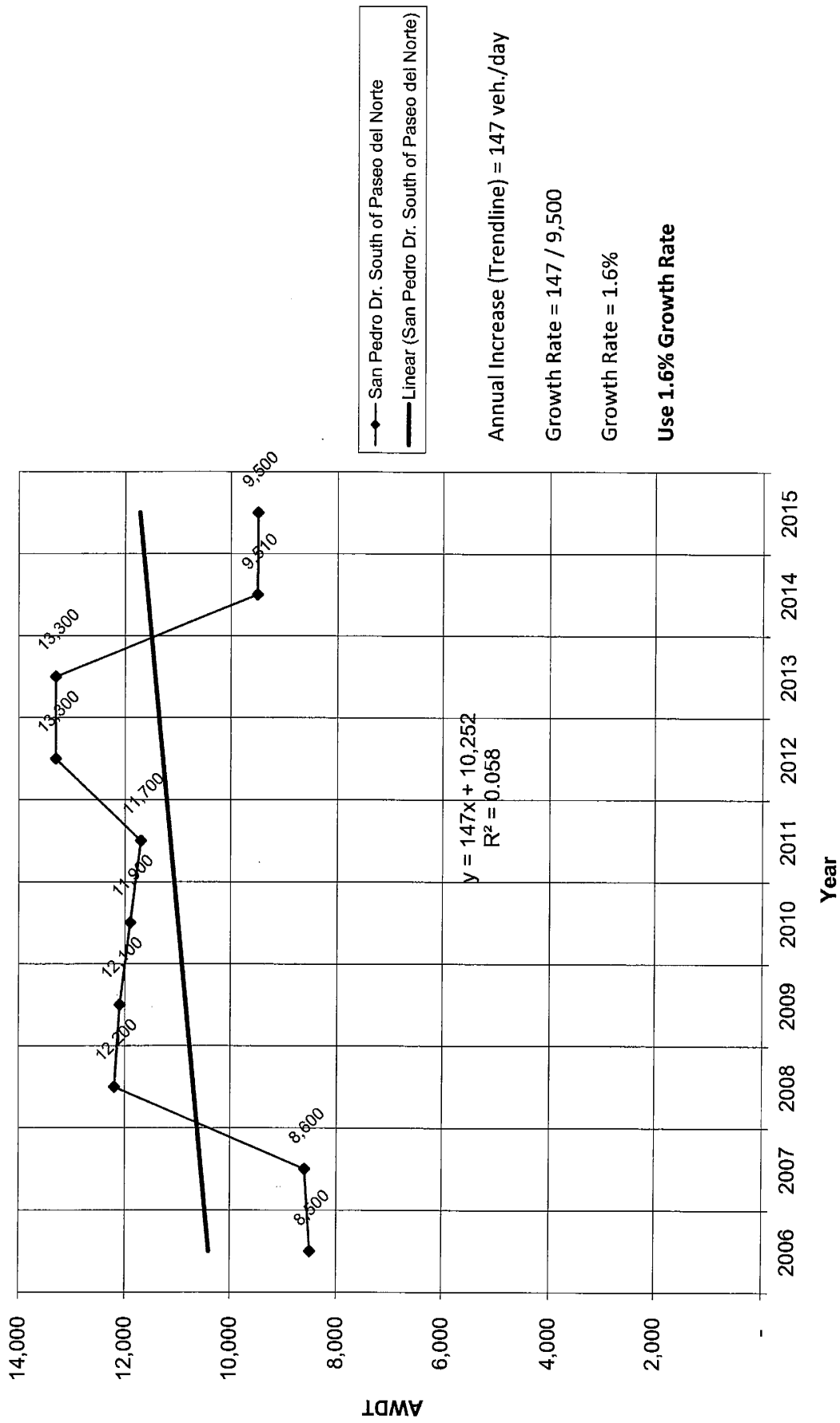


Growth Rate is Negative - DO NOT USE
Use 0.5% Growth Rate

Historic Growth Chart San Pedro Dr. North of Paseo del Norte (2006-2015)



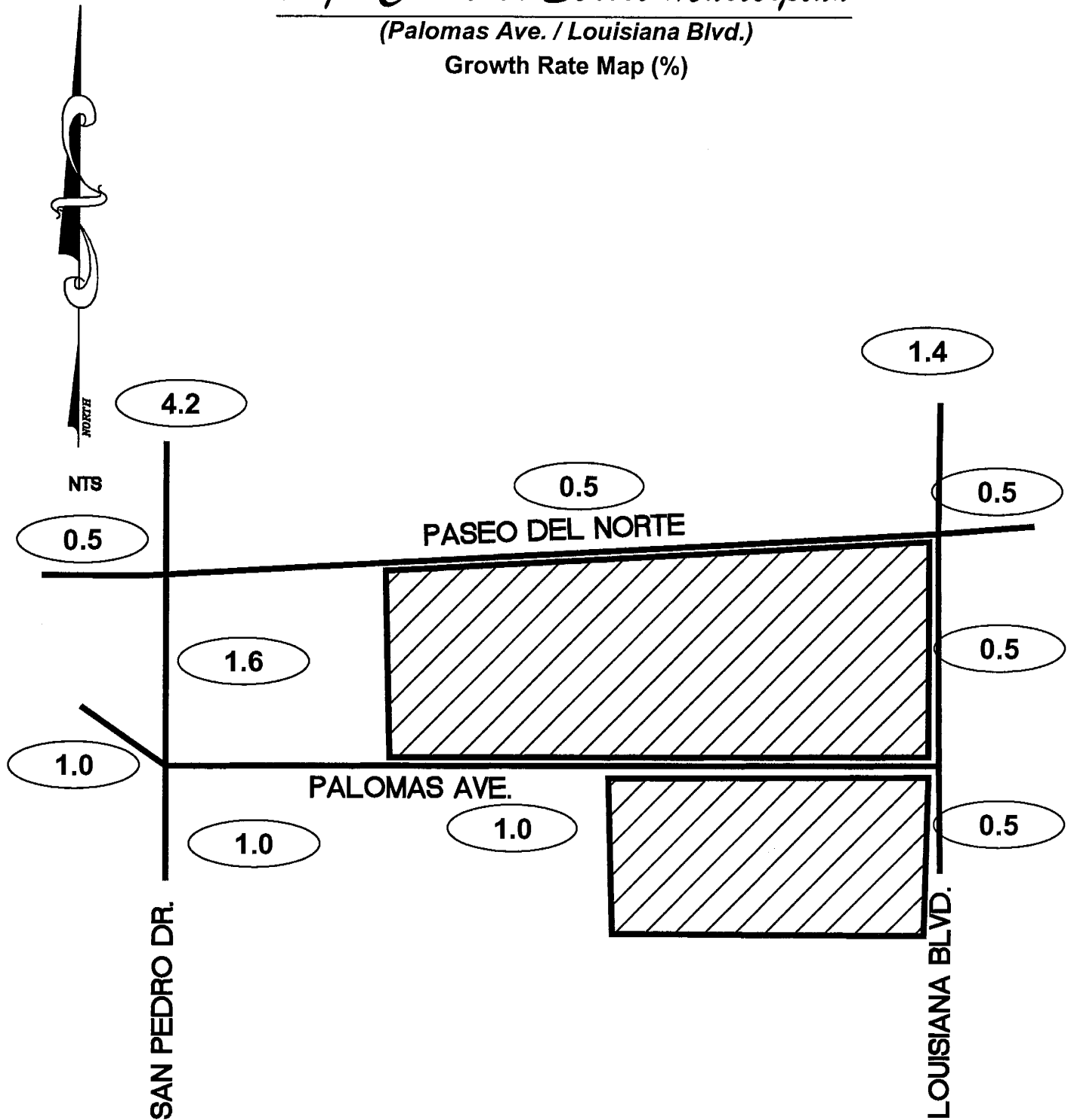
Historic Growth Chart San Pedro Dr. South of Paseo del Norte (2006-2015)



Hope Christian School Masterplan

(Palomas Ave. / Louisiana Blvd.)

Growth Rate Map (%)



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Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements SUMMARY PROPOSED DEVELOPMENT (2021) - 100% Development

INTERSECTION: Summary

Paseo del Norte / Louisiana Blvd.		0.89			0.89			0.89			0.89			PHF
(1)	0.0% Truck	Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		128	1,403	221	187	1,927	154	125	150	117	128	215	129	
2021 (NO BUILD - A.M.)		131	1,438	227	192	1,975	158	128	154	120	137	230	138	
2021 (BUILD - A.M.)		140	1,446	249	216	1,975	158	147	163	128	137	257	138	

		0.96			0.96			0.96			0.96			PHF
		Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		181	1,947	74	77	1,551	142	75	162	131	207	143	124	
2021 (NO BUILD - P.M.)		186	1,996	76	79	1,590	146	77	166	134	221	153	133	
2021 (BUILD - P.M.)		189	1,998	79	83	1,590	146	83	169	136	221	157	133	

Paseo del Norte / San Pedro Dr.		0.95			0.95			0.95			0.95			PHF
(2)	0.0% Truck	Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		322	1,544	282	123	1,843	203	198	186	68	116	235	149	
2021 (NO BUILD - A.M.)		330	1,583	289	126	1,889	208	214	201	73	140	284	180	
2021 (BUILD - A.M.)		330	1,595	316	126	1,901	215	227	214	90	150	305	180	

		0.98			0.98			0.98			0.98			PHF
		Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		383	1,845	232	233	1,612	183	354	236	173	188	250	330	
2021 (NO BUILD - P.M.)		393	1,891	238	239	1,652	188	382	255	187	227	303	399	
2021 (BUILD - P.M.)		393	1,893	242	239	1,656	190	386	259	192	229	306	399	

Palomas Ave. / Louisiana Blvd.		0.85			0.85			0.85			0.85			PHF
(3)	0.0% Truck	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		78	0	51	0	0	0	125	392	0	0	207	362	
2021 (NO BUILD - A.M.)		82	0	54	0	0	0	128	402	0	0	212	371	
2021 (BUILD - A.M.)		0	0	144	0	0	0	137	437	0	0	229	427	

		0.85			0.85			0.85			0.85			PHF
		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		102	0	75	0	0	0	75	368	0	0	133	148	
2021 (NO BUILD - P.M.)		107	0	79	0	0	0	77	377	0	0	140	152	
2021 (BUILD - P.M.)		0	0	188	0	0	0	78	388	0	0	143	161	

Palomas Ave. / San Pedro Dr.		0.85			0.85			0.85			0.85			PHF
(4)	0.0% Truck	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		29	47	19	19	1	99	16	357	227	250	362	68	
2021 (NO BUILD - A.M.)		30	49	20	20	1	104	17	375	238	270	391	73	
2021 (BUILD - A.M.)		30	51	20	40	2	147	17	375	269	318	391	73	

		0.85			0.85			0.85			0.85			PHF
		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		259	23	157	5	10	65	97	476	15	60	389	257	
2021 (NO BUILD - P.M.)		272	24	165	5	11	68	102	500	16	65	420	278	
2021 (BUILD - P.M.)		272	24	165	11	11	82	102	500	21	72	420	278	

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements SUMMARY PROPOSED DEVELOPMENT (2021) - 100% Development

INTERSECTION: Summary

Palomas Ave. / Driveway "A"

(5)

0.0% Truck

	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2016)	0	0	0	0	0	0	0	0	0	0	0	0
2021 (NO BUILD - A.M.)	0	0	0	0	0	0	0	0	0	0	0	0
2021 (BUILD - A.M.)	0	37	0	0	147	164	0	0	0	0	0	0

0.85

0.85

0.85

0.85

PHF

	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2016)	0	0	0	0	0	0	0	0	0	0	0	0
2021 (NO BUILD - P.M.)	0	0	0	0	0	0	0	0	0	0	0	0
2021 (BUILD - P.M.)	0	12	0	0	23	25	0	0	0	0	0	0

Palomas Ave. / Driveway "B"

(6)	0.0% Truck												
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "B")			Southbound (Driveway "B")			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
	131	164	0	0	74	74	0	0	0	0	0	235	
	0.85			0.85			0.85			0.85			PHF
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "B")			Southbound (Driveway "B")			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
	20	25	0	0	11	11	0	0	0	0	0	75	
	0.85			0.85			0.85			0.85			PHF

Palomas Ave. / Driveway "C"

(7)

0.0% Truck

Existing (2016)

2021 (NO BUILD - A.M.)

2021 (BUILD - A.M.)

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
8	352	0	0	287	8	0	0	0	0	0	10

0.850.850.850.85PHF

Existing (2016)

2021 (NO BUILD - P.M.)

2021 (BUILD - P.M.)

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1	54	0	0	87	1	0	0	0	0	0	3

Palomas Ave. / Driveway "D"

(8)	0.0% Truck												
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "D")			Southbound (Driveway "D")			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
	8	360	0	0	288	8	0	0	0	0	0	10	
	0.85			0.85			0.85			0.85			PHF
Existing (2016)	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "D")			Southbound (Driveway "D")			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
	1	55	0	0	89	1	0	0	0	0	0	3	
	0.85			0.85			0.85			0.85			PHF
	0.85			0.85			0.85			0.85			PHF
Existing (2016)	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "D")			Southbound (Driveway "D")			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
	1	55	0	0	89	1	0	0	0	0	0	3	
	0.85			0.85			0.85			0.85			PHF
	0.85			0.85			0.85			0.85			PHF

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements SUMMARY **PROPOSED DEVELOPMENT (2021) - 100% Development**

INTERSECTION: **Summary**

Palomas Ave. / Driveway "E"

			0.85			0.85			0.85			0.85			PHF
(9)	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "E")			Southbound (Driveway "E")					
0.0% Truck	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Existing (2016)	0	0	0	0	0	0	0	0	0	0	0	0			
2021 (NO BUILD - A.M.)	0	0	0	0	0	0	0	0	0	0	0	0			
2021 (BUILD - A.M.)	8	368	0	0	290	8	0	0	0	0	0	10			
			0.85			0.85			0.85			0.85			PHF
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "E")			Southbound (Driveway "E")					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Existing (2016)	0	0	0	0	0	0	0	0	0	0	0	0			
2021 (NO BUILD - P.M.)	0	0	0	0	0	0	0	0	0	0	0	0			
2021 (BUILD - P.M.)	1	56	0	0	91	1	0	0	0	0	0	3			

Palomas Ave. / Driveway "G"

			0.85			0.85			0.85			0.85			PHF
(10)	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "G")			Southbound (Driveway "G")					
0.0% Truck	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Existing (2016)	0	0	0	0	0	0	0	0	0	0	0	0			
2021 (NO BUILD - A.M.)	0	0	0	0	0	0	0	0	0	0	0	0			
2021 (BUILD - A.M.)	8	376	0	0	293	8	0	0	0	0	0	10			
			0.85			0.85			0.85			0.85			PHF
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "G")			Southbound (Driveway "G")					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Existing (2016)	0	0	0	0	0	0	0	0	0	0	0	0			
2021 (NO BUILD - P.M.)	0	0	0	0	0	0	0	0	0	0	0	0			
2021 (BUILD - P.M.)	1	58	0	0	93	1	0	0	0	0	0	3			

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements SUMMARY PROPOSED DEVELOPMENT (2021) - 100% Development

INTERSECTION: Summary

		0.85			0.85			0.85			0.85			PHF
Palomas Ave. / Driveway "G"		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "G")			Southbound (Driveway "G")			
(11)		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.0% Truck														
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - A.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - A.M.)		0	352	0	0	33	0	26	0	0	0	0	0	

		0.85			0.85			0.85			0.85			PHF
		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "G")			Southbound (Driveway "G")			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - P.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - P.M.)		0	54	0	0	5	0	8	0	0	0	0	0	

		0.85			0.85			0.85			0.85			PHF
Palomas Ave. / Driveway "H"		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "H")			Southbound (Driveway "H")			
(12)		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.0% Truck														
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - A.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - A.M.)		0	294	57	41	268	0	0	0	0	0	0	0	

		0.85			0.85			0.85			0.85			PHF
		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "H")			Southbound (Driveway "H")			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - P.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - P.M.)		0	45	9	6	80	0	0	0	0	0	0	0	

		0.85			0.85			0.85			0.85			PHF
Palomas Ave. / Driveway "I"		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "I")			Southbound (Driveway "I")			
(13)		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.0% Truck														
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - A.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - A.M.)		0	164	0	0	147	0	0	0	37	0	0	0	

		0.85			0.85			0.85			0.85			PHF
		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "I")			Southbound (Driveway "I")			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - P.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - P.M.)		0	25	0	0	23	0	0	0	12	0	0	0	

		0.85			0.85			0.85			0.85			PHF
Palomas Ave. / Driveway "J"		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "J")			Southbound (Driveway "J")			
(14)		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.0% Truck														
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - A.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - A.M.)		0	37	164	0	147	0	0	0	0	0	0	0	

		0.85			0.85			0.85			0.85			PHF
		Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "J")			Southbound (Driveway "J")			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - P.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - P.M.)		0	12	25	0	23	0	0	0	0	0	0	0	

		0.85			0.85			0.85			0.85			PHF
Driveway "K" / Louisiana Blvd.		Eastbound (Driveway "K")			Westbound (Driveway "K")			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)			
(15)		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0.0% Truck														
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - A.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - A.M.)		167	0	16	0	0	0	41	450	0	0	200	82	

		0.85			0.85			0.85			0.85			PHF
		Eastbound (Driveway "K")			Westbound (Driveway "K")			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2016)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (NO BUILD - P.M.)		0	0	0	0	0	0	0	0	0	0	0	0	
2021 (BUILD - P.M.)		53	0	5	0	0	0	6	400	0	0	300	13	

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Paseo del Norte / Louisiana Blvd.**INTERSECTION :**E-W Street: **Paseo del Norte** (1)N-S Street: **Louisiana Blvd.**

Year of Existing Counts 2016

Implementation Year 2021

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

0.50%			0.50%			0.50%			1.40%		
Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
128	1,403	221	187	1,927	154	125	150	117	128	215	129
3	35	6	5	48	4	3	4	3	9	15	9
131	1,438	227	192	1,975	158	128	154	120	137	230	138
0.00%	0.00%	13.00%	14.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%
8.00%	7.00%	0.00%	0.00%	0.00%	0.00%	17.00%	8.00%	7.00%	0.00%	0.00%	0.00%
9	8	22	24	0	0	19	9	8	0	27	0
140	1,446	249	216	1,975	158	147	163	128	137	257	138

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
181	1,947	74	77	1,551	142	75	162	131	207	143	124
5	49	2	2	39	4	2	4	3	14	10	9
186	1,996	76	79	1,590	146	77	166	134	221	153	133
0.00%	0.00%	13.00%	14.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%
8.00%	7.00%	0.00%	0.00%	0.00%	0.00%	17.00%	8.00%	7.00%	0.00%	0.00%	0.00%
3	2	3	4	0	0	6	3	2	0	4	0
189	1,998	79	83	1,590	146	83	169	136	221	157	133

Number of Office Trips Generated

Entering Exiting

171 110 A.M. 100% Office Development

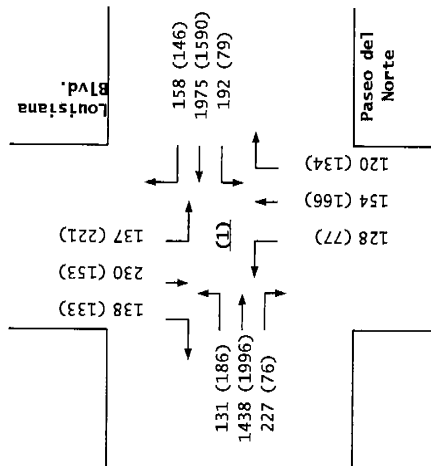
26 35 P.M.

2016 AM Peak Hr. Volumes

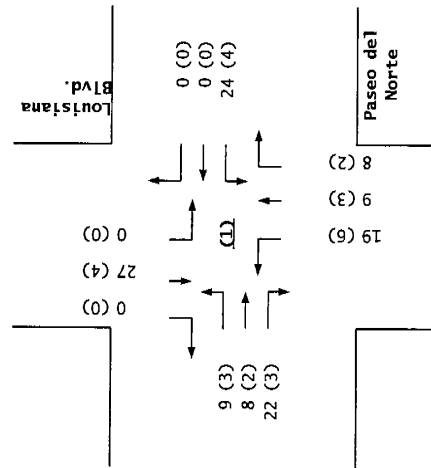
2016 PM Peak Hr. Volumes

Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
128	1403	221	187	1,927	154	125	150	117	128	215	129
181	1,947	74	77	1,551	142	75	162	131	207	143	124

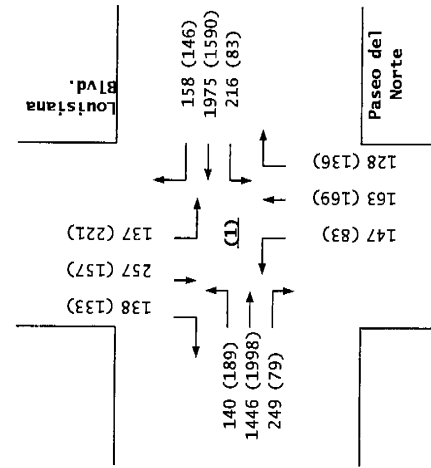
2021
NO BUILD



Trips



2021
BUILD



Paseo del Norte / Louisiana Blvd.

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Paseo del Norte / San Pedro Dr.**INTERSECTION:**E-W Street: **Paseo del Norte** (2)N-S Street: **San Pedro Dr.**

Year of Existing Counts

2016

Implementation Year

2021

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

0.50%			0.50%			1.60%			4.20%		
Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
322	1,544	282	123	1,843	203	198	186	68	116	235	149
8	39	7	3	46	5	16	15	5	24	49	31
330	1,583	289	126	1,889	208	214	201	73	140	284	180
0.00%	7.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	12.00%	0.00%
0.00%	0.00%	0.00%	0.00%	11.00%	6.00%	12.00%	12.00%	15.00%	0.00%	0.00%	0.00%
0	12	27	0	12	7	13	13	17	10	21	0
330	1,595	316	126	1,901	215	227	214	90	150	305	180

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
383	1,845	232	233	1,612	183	354	236	173	188	250	330
10	46	6	6	40	5	28	19	14	39	53	69
393	1,891	238	239	1,652	188	382	255	187	227	303	399
0.00%	7.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	12.00%	0.00%
0.00%	0.00%	0.00%	0.00%	11.00%	6.00%	12.00%	12.00%	15.00%	0.00%	0.00%	0.00%
0	2	4	0	4	2	4	4	5	2	3	0
393	1,893	242	239	1,656	190	386	259	192	229	306	399

Number of Office Trips Generated

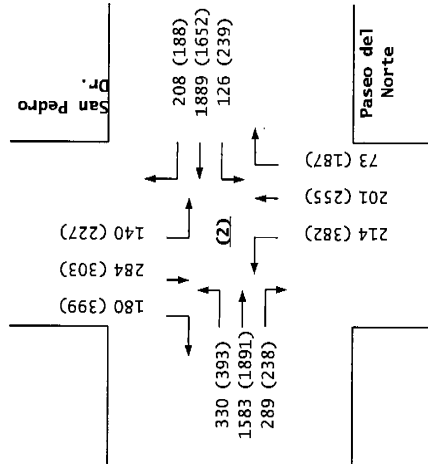
Entering	Exiting	
171	110	A.M. 100% Office Development
26	35	P.M.

2016 AM Peak Hr. Volumes

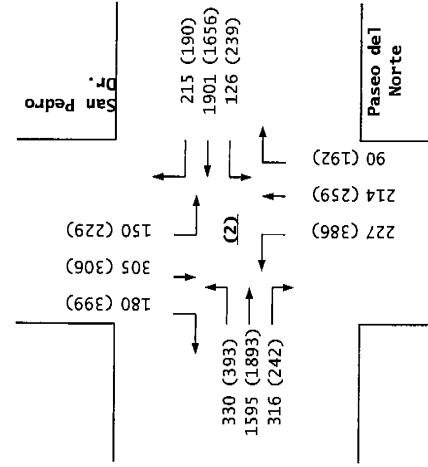
2016 PM Peak Hr. Volumes

Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
322	1,544	282	123	1,843	203	198	186	68	116	235	149
383	1,845	232	233	1,612	183	354	236	173	188	250	330

2021
NO BUILD



2021
BUILD



Paseo del Norte / San Pedro Dr.

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)**Projected Turning Movements Worksheet****Palomas Ave. / Louisiana Blvd.****INTERSECTION :**E-W Street: **Palomas Ave.** (3)N-S Street: **Louisiana Blvd.**Year of Existing Counts **2016**Implementation Year **2021**

Growth Rates

	1.00%			1.00%			0.50%			0.50%		
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	78	0	51	0	0	0	125	392	0	0	207	362
Background Traffic Growth	4	0	3	0	0	0	3	10	0	0	5	9
Subtotal (NO BUILD - A.M.)	82	0	54	0	0	0	128	402	0	0	212	371
Percent Office Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	10.00%	33.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	32.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	8	0	0	0	9	35	0	0	17	56
Total AM Peak Hour BUILD Volumes	0	0	144	0	0	0	137	437	0	0	229	427

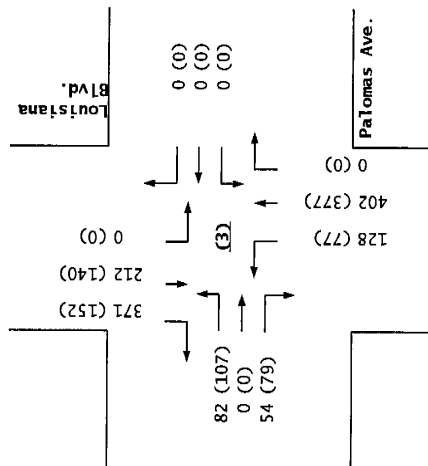
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	102	0	75	0	0	0	75	368	0	0	133	148
Background Traffic Growth	5	0	4	0	0	0	2	9	0	0	3	4
Subtotal (NO BUILD - P.M.)	107	0	79	0	0	0	77	377	0	0	140	152
Percent Office Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	10.00%	33.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	32.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	2	0	0	0	1	11	0	0	3	9
Total PM Peak Hour BUILD Volumes	0	0	188	0	0	0	78	388	0	0	143	161

Number of Office Trips Generated

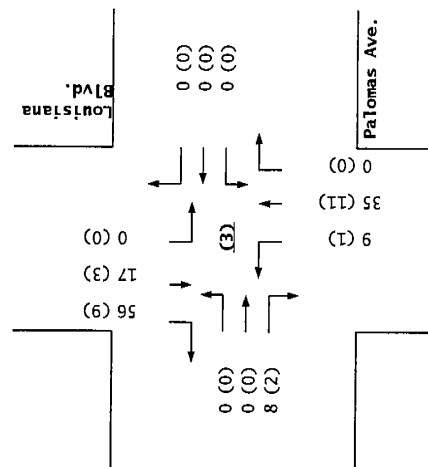
Entering	Exiting		
171	110	A.M.	100% Office Development
26	35	P.M.	

	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2016 AM Peak Hr. Volumes	78	0	51	0	0	0	125	392	0	0	207	362
2016 PM Peak Hr. Volumes	102	0	75	0	0	0	75	368	0	0	133	148

2021
NO BUILD

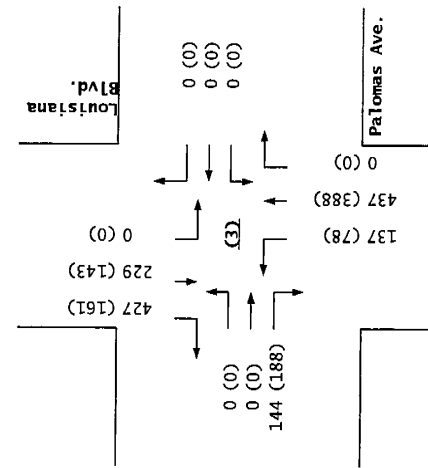


Trips



Palomas Ave. / Louisiana Blvd.

2021
BUILD



Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / San Pedro Dr.**INTERSECTION:**E-W Street: **Palomas Ave.** (4)N-S Street: **San Pedro Dr.**

Year of Existing Counts 2016

Implementation Year 2021

Growth Rates

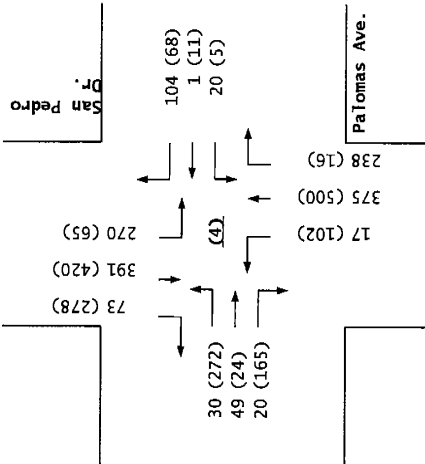
	1.00%			1.00%			1.00%			1.60%		
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	29	47	19	19	1	99	16	357	227	250	362	68
Background Traffic Growth	1	2	1	1	0	5	1	18	11	20	29	5
Subtotal (NO BUILD - A.M.)	30	49	20	20	1	104	17	375	238	270	391	73
Percent Office Trips Generated(Entering)	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.00%	28.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	18.00%	1.00%	39.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	2	0	20	1	43	0	0	31	48	0	0
Total AM Peak Hour BUILD Volumes	30	51	20	40	2	147	17	375	269	318	391	73

	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	259	23	157	5	10	65	97	476	15	60	389	257
Background Traffic Growth	13	1	8	0	1	3	5	24	1	5	31	21
Subtotal (NO BUILD - P.M.)	272	24	165	5	11	68	102	500	16	65	420	278
Percent Office Trips Generated(Entering)	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.00%	28.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	18.00%	1.00%	39.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	6	0	14	0	0	5	7	0	0
Total PM Peak Hour BUILD Volumes	272	24	165	11	11	82	102	500	21	72	420	278

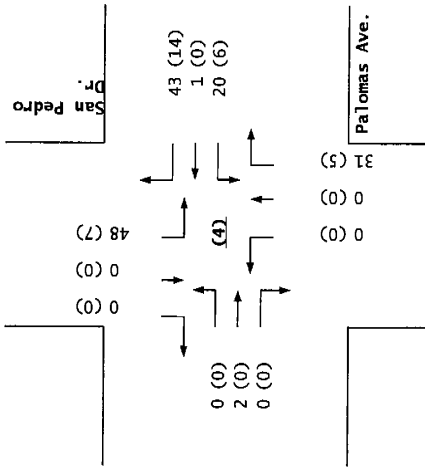
Number of Office Trips Generated	Entering	Exiting	A.M.	100% Office Development
	171	110		
	26	35	P.M.	

	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2016 AM Peak Hr. Volumes	29	47	19	19	1	99	16	357	227	250	362	68
2016 PM Peak Hr. Volumes	259	23	157	5	10	65	97	476	15	60	389	257

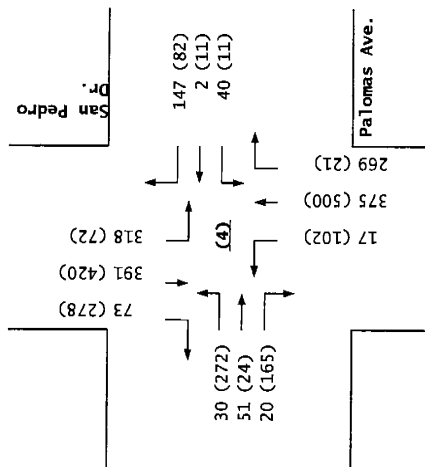
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / San Pedro Dr.

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "A"

INTERSECTION: E-W Street: Palomas Ave. (5)

N-S Street: Driveway "A"

Year of Existing Counts 2016
Implementation Year 2021

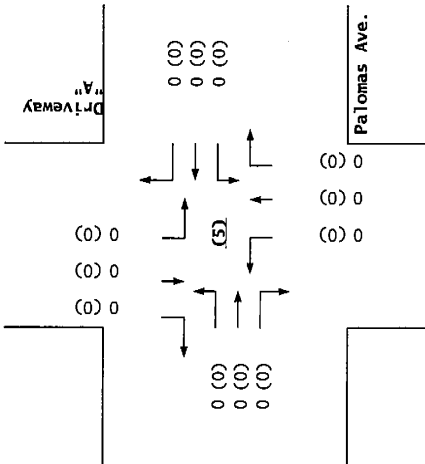
Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	0	0	0	0	0	0	0	0	0	0	0	0
Percent Office Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	18.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	37	0	0	147	164	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	0	37	0	0	147	164	0	0	0	0	0	0

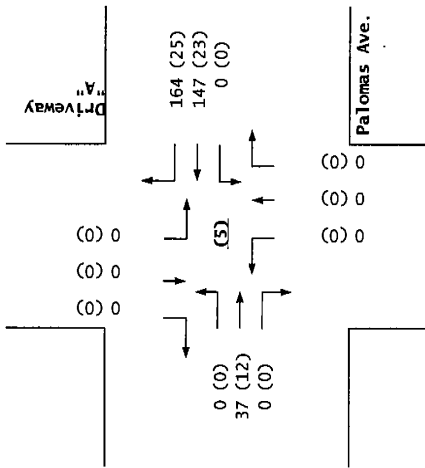
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	0	0	0	0	0	0	0	0	0	0	0
Percent Office Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	18.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	12	0	0	23	25	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	0	12	0	0	23	25	0	0	0	0	0	0

Number of Office Trips Generated	Entering	Exiting	
	818	523	A.M. 100% Office Development
	125	166	P.M.

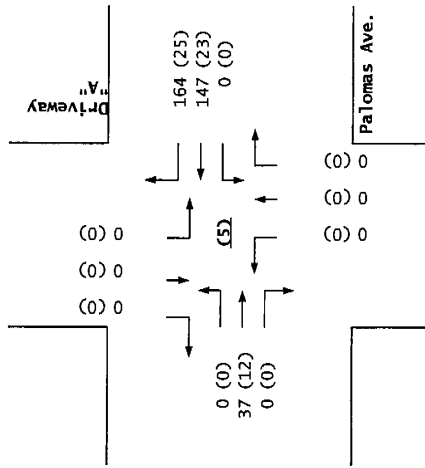
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "A"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "B"

INTERSECTION :

E-W Street: **Palomas Ave.**

(6)

N-S Street: **Driveway "B"**

Year of Existing Counts
Implementation Year

2016

2021

Growth Rates

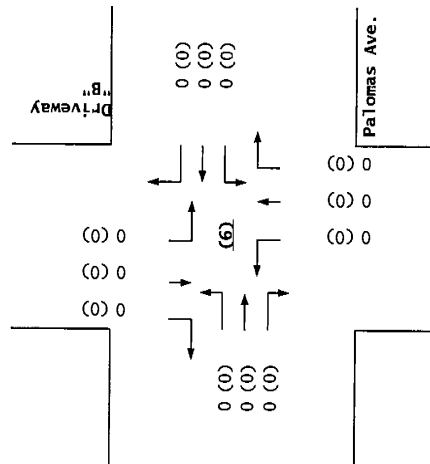
	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "B")			Southbound (Driveway "B")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	0	0	0	0	0	0	0	0	0	0	0	0
Percent Office Trips Generated(Entering)	16.00%	20.00%	0.00%	0.00%	9.00%	9.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%
Total Trips Generated	131	164	0	0	74	74	0	0	0	0	0	235
Total AM Peak Hour BUILD Volumes	131	164	0	0	74	74	0	0	0	0	0	235

	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "B")			Southbound (Driveway "B")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	0	0	0	0	0	0	0	0	0	0	0
Percent Office Trips Generated(Entering)	16.00%	20.00%	0.00%	0.00%	9.00%	9.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%
Total Trips Generated	20	25	0	0	11	11	0	0	0	0	0	75
Total PM Peak Hour BUILD Volumes	20	25	0	0	11	11	0	0	0	0	0	75

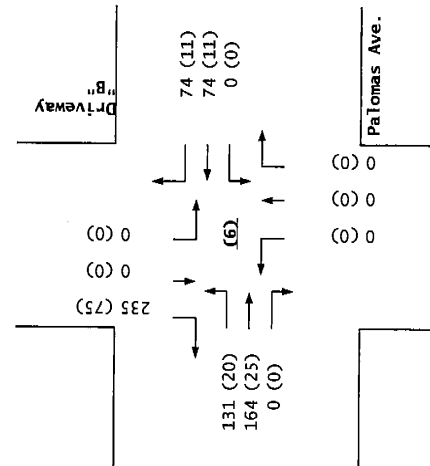
Number of Office Trips Generated

Entering	818	523	A.M.	100% Office Development
Exiting	125	166	P.M.	

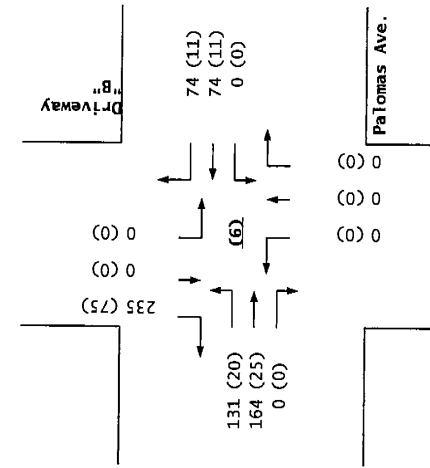
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "B"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "C"**INTERSECTION :**E-W Street: **Palomas Ave.**

(7)

N-S Street: **Driveway "C"**

Year of Existing Counts

2016

Implementation Year

2021

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

1.00%			1.00%			1.00%			1.00%		
Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1.00%	43.00%	0.00%	0.00%	3.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%
8	352	0	0	287	8	0	0	0	0	0	10
8	352	0	0	287	8	0	0	0	0	0	10

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

1.00%			1.00%			1.00%			1.00%		
Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1.00%	43.00%	0.00%	0.00%	3.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%
1	54	0	0	87	1	0	0	0	0	0	3
1	54	0	0	87	1	0	0	0	0	0	3

Number of Office Trips Generated

Entering

Exiting

818

523

A.M.

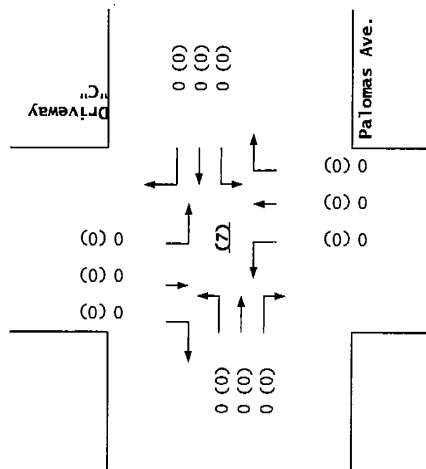
100% Office Development

125

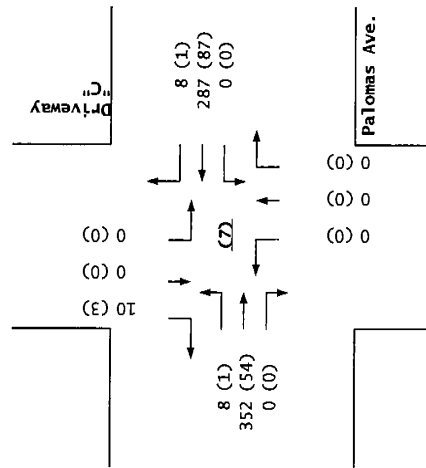
166

P.M.

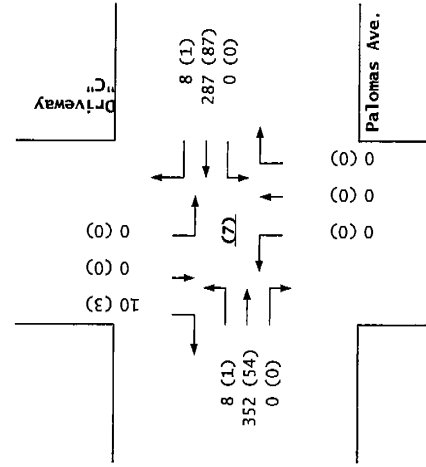
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "C"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "D"

INTERSECTION: E-W Street: **Palomas Ave.** (8)

N-S Street: **Driveway "D"**

Year of Existing Counts **2016**

Implementation Year **2021**

Growth Rates

1.00%

1.00%

1.00%

1.00%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "D")			Southbound (Driveway "D")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1.00%	44.00%	0.00%	0.00%	2.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	52.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%
8	360	0	0	288	8	0	0	0	0	0	10
8	360	0	0	288	8	0	0	0	0	0	10

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "D")			Southbound (Driveway "D")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1.00%	44.00%	0.00%	0.00%	2.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	52.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%
1	55	0	0	89	1	0	0	0	0	0	3
1	55	0	0	89	1	0	0	0	0	0	3

Number of Office Trips Generated

Entering Exiting

818 523

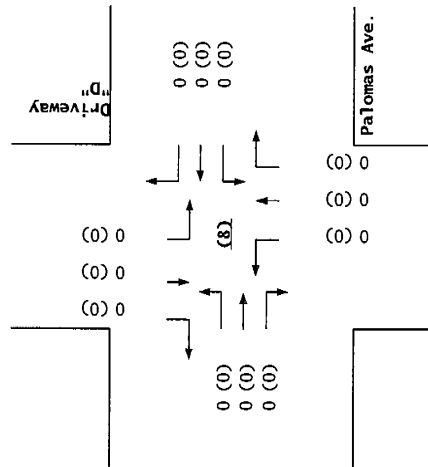
A.M.

100% Office Development

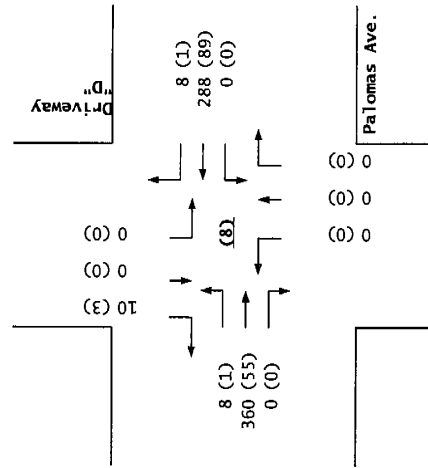
125 166

P.M.

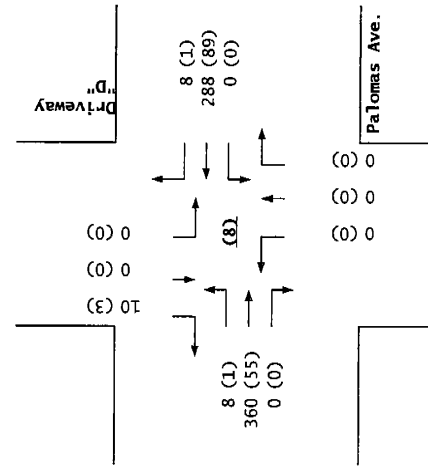
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "D"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "E"**INTERSECTION:**E-W Street: **Palomas Ave.** (9)N-S Street: **Driveway "E"**

Year of Existing Counts

2016

Implementation Year

2021

Growth Rates

1.00%

1.00%

1.00%

1.00%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "E")			Southbound (Driveway "E")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1.00%	45.00%	0.00%	0.00%	1.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	54.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%
8	368	0	0	290	8	0	0	0	0	0	10
8	368	0	0	290	8	0	0	0	0	0	10

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "E")			Southbound (Driveway "E")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1.00%	45.00%	0.00%	0.00%	1.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	54.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%
1	56	0	0	91	1	0	0	0	0	0	3
1	56	0	0	91	1	0	0	0	0	0	3

Number of Office Trips Generated

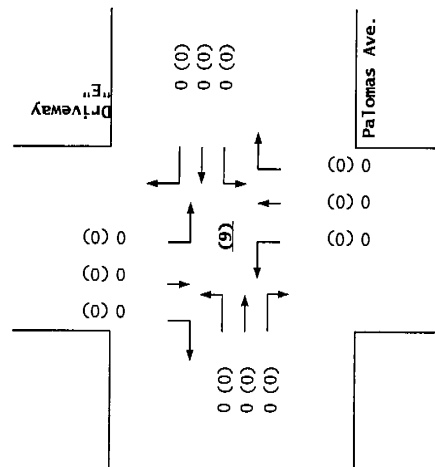
Entering Exiting

818 523 A.M.

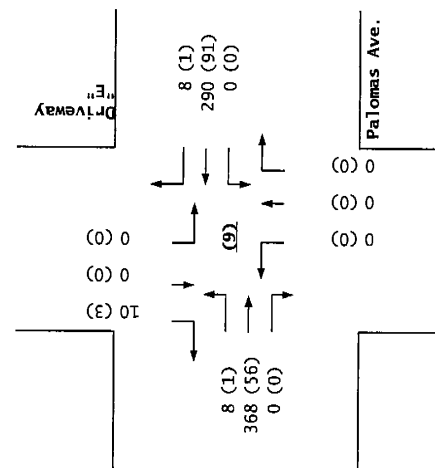
125 166 P.M.

100% Office Development

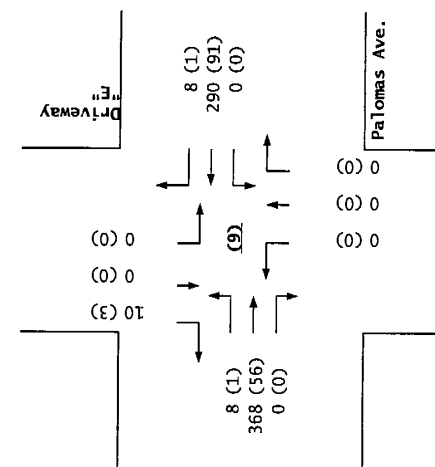
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "E"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "G"**INTERSECTION :**E-W Street: **Palomas Ave.**

(10)

N-S Street: **Driveway "G"**

Year of Existing Counts

2016

Implementation Year

2021

Growth Rates

1.00%

1.00%

1.00%

1.00%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "G")			Southbound (Driveway "G")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1.00%	46.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	56.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%
8	376	0	0	293	8	0	0	0	0	0	10
8	376	0	0	293	8	0	0	0	0	0	10

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "G")			Southbound (Driveway "G")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1.00%	46.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	56.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%
1	58	0	0	93	1	0	0	0	0	0	3
1	58	0	0	93	1	0	0	0	0	0	3

Number of Office Trips Generated

Entering

Exiting

818

523

A.M.

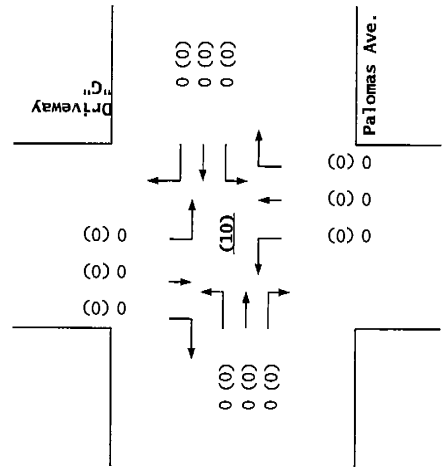
100% Office Development

125

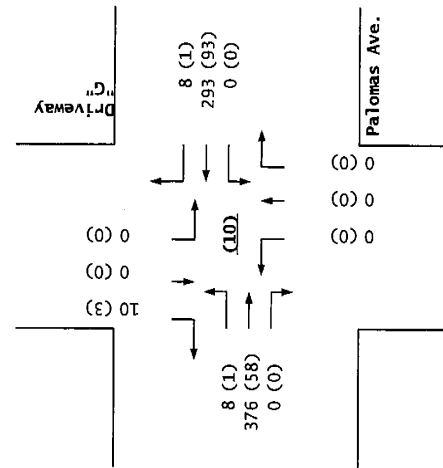
166

P.M.

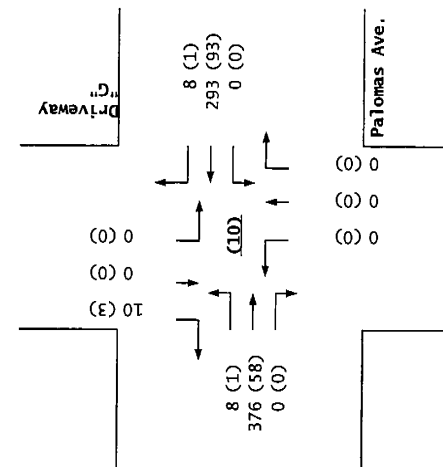
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "G"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "G"

INTERSECTION :

E-W Street: **Palomas Ave.** (11)

N-S Street: **Driveway "G"**

Year of Existing Counts

2016

Implementation Year

2021

Growth Rates

1.00%

1.00%

1.00%

1.00%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "G")			Southbound (Driveway "G")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	43.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	352	0	0	33	0	26	0	0	0	0	0
0	352	0	0	33	0	26	0	0	0	0	0

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "G")			Southbound (Driveway "G")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	43.00%	0.00%	0.00%	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	54	0	0	5	0	8	0	0	0	0	0
0	54	0	0	5	0	8	0	0	0	0	0

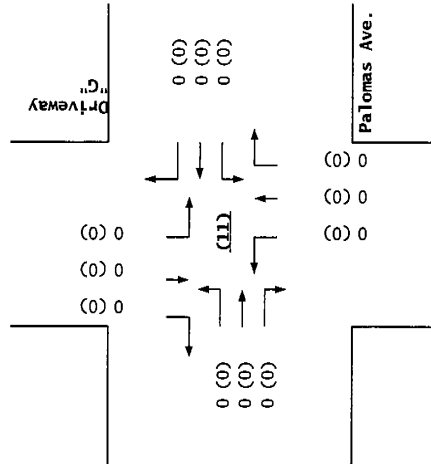
Number of Office Trips Generated

Entering Exiting

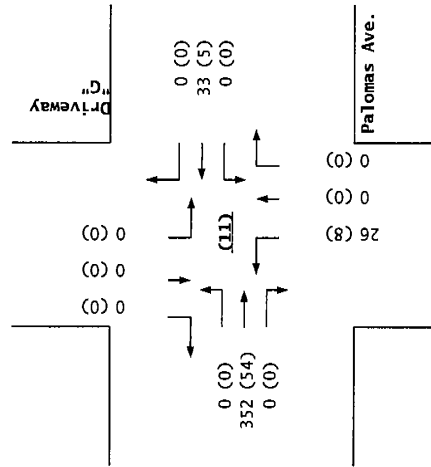
818 523 A.M.
125 166 P.M.

100% Office Development

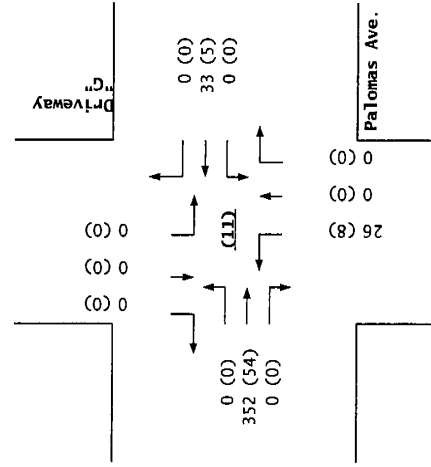
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "G"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "H"

INTERSECTION :

E-W Street: Palomas Ave. (12)

N-S Street: Driveway "H"

Year of Existing Counts
Implementation Year

2016

2021

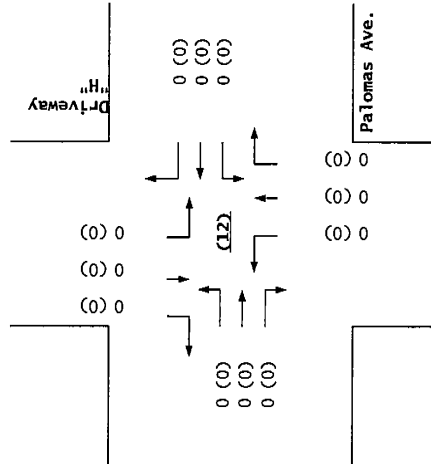
Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "H")			Southbound (Driveway "H")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	0	0	0	0	0	0	0	0	0	0	0	0
Percent Office Trips Generated(Entering)	0.00%	36.00%	7.00%	5.00%	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	294	57	41	268	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	0	294	57	41	268	0	0	0	0	0	0	0

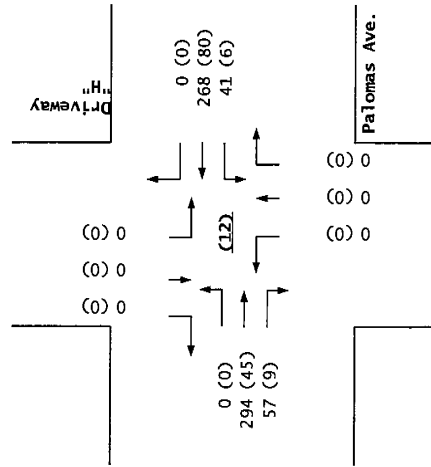
	Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "H")			Southbound (Driveway "H")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	0	0	0	0	0
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	0	0	0	0	0	0	0	0	0	0	0
Percent Office Trips Generated(Entering)	0.00%	36.00%	7.00%	5.00%	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	45	9	6	80	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	0	45	9	6	80	0	0	0	0	0	0	0

Number of Office Trips Generated	Entering	Exiting	A.M.	100% Office Development
	818	523		
	125	166	P.M.	

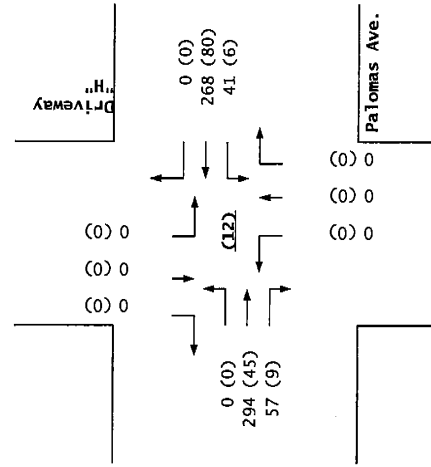
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "H"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "I"**INTERSECTION :**E-W Street: **Palomas Ave.** (13)N-S Street: **Driveway "I"**

Year of Existing Counts

2016

Implementation Year

2021

Growth Rates

1.00%

1.00%

1.00%

1.00%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "I")			Southbound (Driveway "I")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	20.00%	0.00%	0.00%	18.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%
0	164	0	0	147	0	0	0	37	0	0	0
0	164	0	0	147	0	0	0	37	0	0	0

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "I")			Southbound (Driveway "I")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	20.00%	0.00%	0.00%	18.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%
0	25	0	0	23	0	0	0	12	0	0	0
0	25	0	0	23	0	0	0	12	0	0	0

Number of Office Trips Generated

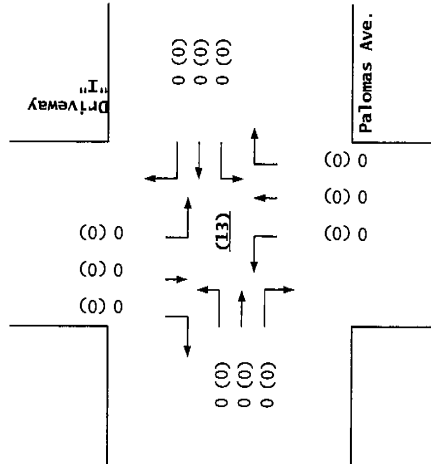
Entering Exiting

818 523 A.M.

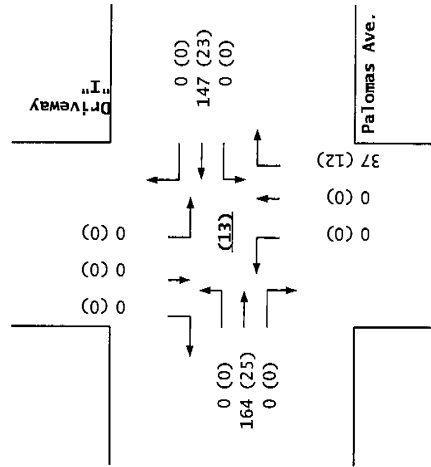
125 166 P.M.

100% Office Development

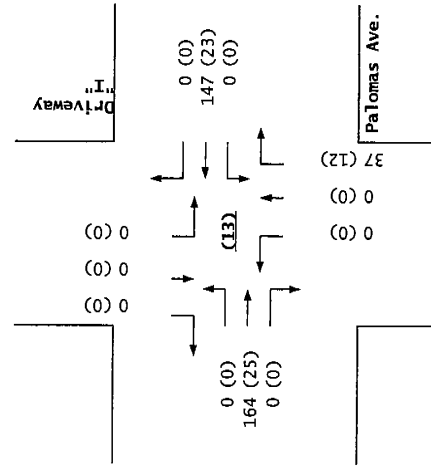
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "I"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Palomas Ave. / Driveway "J"

INTERSECTION:

E-W Street: **Palomas Ave.** (14)

N-S Street: **Driveway "J"**

Year of Existing Counts
Implementation Year

2016

2021

Growth Rates

1.00%

1.00%

1.00%

1.00%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "J")			Southbound (Driveway "J")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	20.00%	0.00%	18.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	37	164	0	147	0	0	0	0	0	0	0
0	37	164	0	147	0	0	0	0	0	0	0

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Palomas Ave.)			Westbound (Palomas Ave.)			Northbound (Driveway "J")			Southbound (Driveway "J")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	20.00%	0.00%	18.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	12	25	0	23	0	0	0	0	0	0	0
0	12	25	0	23	0	0	0	0	0	0	0

Number of Office Trips Generated

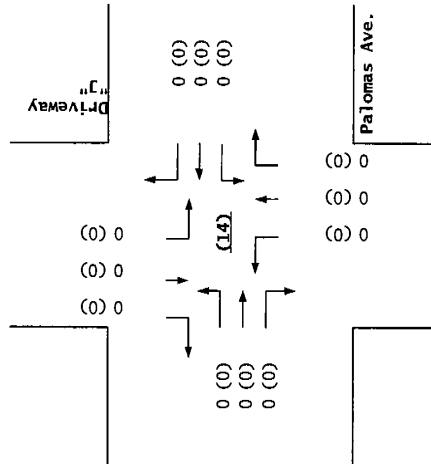
Entering Exiting

818 523 A.M.

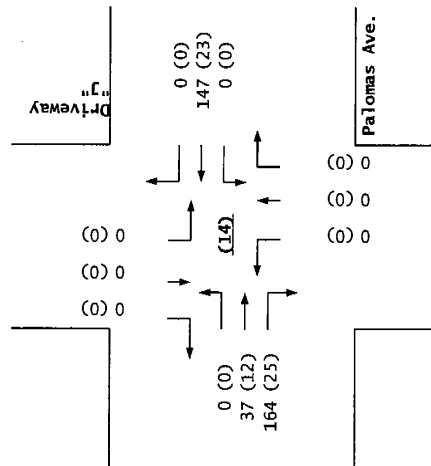
125 166 P.M.

100% Office Development

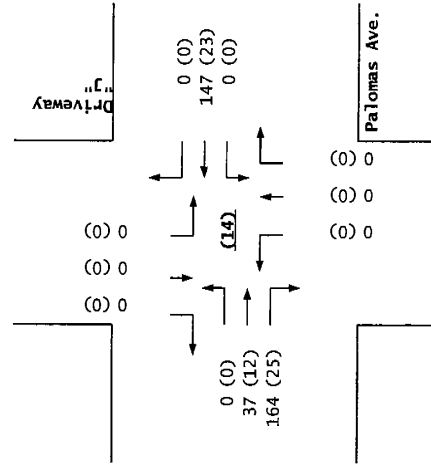
2021
NO BUILD



Trips



2021
BUILD



Palomas Ave. / Driveway "J"

Hope Christian School Masterplan (Palomas Ave. / Louisiana Blvd.)

Projected Turning Movements Worksheet

Driveway "K" / Louisiana Blvd.

INTERSECTION:

E-W Street: **Driveway "K"** (15)

N-S Street: **Louisiana Blvd.**

Year of Existing Counts
Implementation Year

2016

2021

Growth Rates

1.00%

1.00%

1.00%

1.00%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

Eastbound (Driveway "K")			Westbound (Driveway "K")			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	5.00%	0.00%	0.00%	0.00%	10.00%
32.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
167	0	16	0	0	0	41	41	0	0	0	82
167	0	16	0	0	0	41	450	0	0	200	82

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Office Trips Generated(Entering)

Percent Office Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Driveway "K")			Westbound (Driveway "K")			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	5.00%	0.00%	0.00%	0.00%	10.00%
32.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
53	0	5	0	0	0	6	6	0	0	0	13
53	0	5	0	0	0	6	400	0	0	300	13

Number of Office Trips Generated

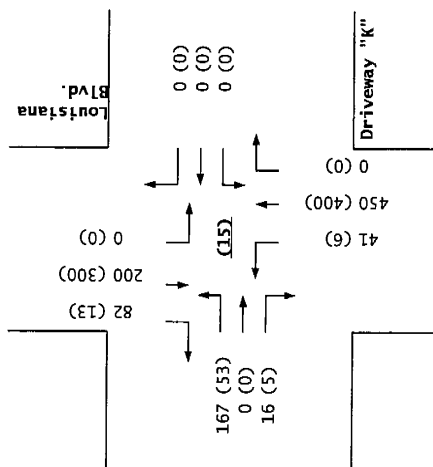
Entering Exiting

818 523 A.M.

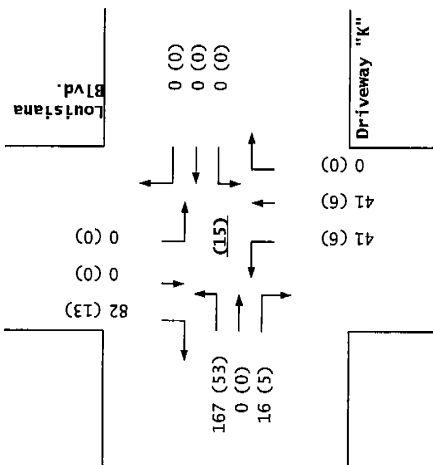
125 166 P.M.

100% Office Development

2021
BUILD

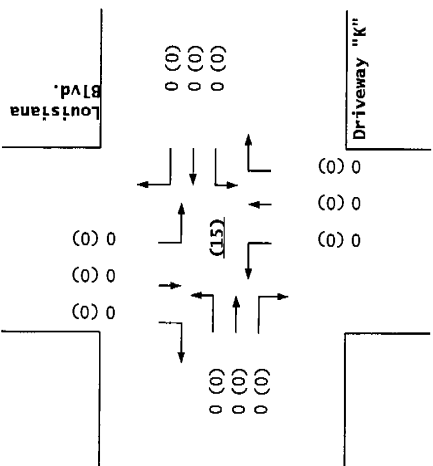


Trips



Driveway "K" / Louisiana Blvd.

2021
NO BUILD



Timings **1: Louisiana Blvd. & Paseo del Norte** **Terry O. Brown, P.E.** **10/21/2016**

Lane Configurations	131	1438	227	192	1975	158	128	154	120	137	230	138
Future Volume (veh)	131	1438	227	192	1975	158	128	154	120	137	230	138
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4	4	3	8	8	2	2	2	6	6	6
Permitted Phases	7	4	4	3	8	8	2	2	2	6	6	6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase	7	4	4	3	8	8	2	2	2	6	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	14.0	60.0	60.0	17.0	63.0	63.0	33.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	12.7%	54.5%	54.5%	15.5%	57.3%	57.3%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead-Lag Optimizer?	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
Act. Eff. Green (s)	9.2	56.2	11.4	58.4	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
Actuated g/C Ratio	0.08	0.51	0.51	0.10	0.53	0.53	0.25	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.50	0.61	0.27	0.60	0.81	0.19	0.55	0.19	0.27	0.50	0.29	0.30
Control Delay	64.5	14.7	5.2	54.1	24.0	2.4	45.9	33.9	7.1	43.1	35.0	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	14.7	5.2	54.1	24.0	2.4	45.9	33.9	7.1	43.1	35.0	6.9
LOS	E	B	A	D	C	A	D	C	A	D	D	A
Approach Delay	17.2	25.0	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.5
Approach LOS	B	C	C	C	C	C	C	C	C	C	C	C
Intersection Summary												
Cycle Length: 110												
Actuated Cycle Length: 110												
Offset: 47 (43%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green												
Natural Cycle: 65												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.81												
Intersection Signal Delay: 23.0												
Intersection Capacity Utilization 72.4%												
Analysis Period (min) 15												
Splits and Phases: 1: Louisiana Blvd. & Paseo del Norte												
02 (R)	03	04	05 (R)	06	07	08	09	10	11	12	13	14
02 (R)	03	04	05 (R)	06	07	08	09	10	11	12	13	14
02 (R)	03	04	05 (R)	06	07	08	09	10	11	12	13	14

2021 AM Peak NO BUILD Conditions
 Existing Geometry
 Synchro 8 Report
 2021ANX.syn

HCM 2010 Signalized Intersection Summary **1: Louisiana Blvd. & Paseo del Norte** **Terry O. Brown, P.E.** **10/21/2016**

Lane Configurations	131	1438	227	192	1975	158	128	154	120	137	230	138
Future Volume (veh)	131	1438	227	192	1975	158	128	154	120	137	230	138
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4	4	3	8	8	2	2	2	6	6	6
Permitted Phases	7	4	4	3	8	8	2	2	2	6	6	6
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	6
Switch Phase	7	4	4	3	8	8	2	2	2	6	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	14.0	60.0	60.0	17.0	63.0	63.0	33.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	12.7%	54.5%	54.5%	15.5%	57.3%	57.3%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead-Lag Optimizer?	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
Act. Eff. Green (s)	9.2	56.2	11.4	58.4	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
Actuated g/C Ratio	0.08	0.51	0.51	0.10	0.53	0.53	0.25	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.50	0.61	0.27	0.60	0.81	0.19	0.55	0.19	0.27	0.50	0.29	0.30
Control Delay	64.5	14.7	5.2	54.1	24.0	2.4	45.9	33.9	7.1	43.1	35.0	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	14.7	5.2	54.1	24.0	2.4	45.9	33.9	7.1	43.1	35.0	6.9
LOS	E	B	A	D	C	A	D	C	A	D	D	A
Approach Delay	17.2	25.0	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.5
Approach LOS	B	C	C	C	C	C	C	C	C	C	C	C
Intersection Summary												
Cycle Length: 110												
Actuated Cycle Length: 110												
Offset: 47 (43%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green												
Natural Cycle: 65												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.81												
Intersection Signal Delay: 23.0												
Intersection Capacity Utilization 72.4%												
Analysis Period (min) 15												
Splits and Phases: 1: Louisiana Blvd. & Paseo del Norte												
02 (R)	03	04	05 (R)	06	07	08	09	10	11	12	13	14
02 (R)	03	04	05 (R)	06	07	08	09	10	11	12	13	14
02 (R)	03	04	05 (R)	06	07	08	09	10	11	12	13	14

2021 AM Peak NO BUILD Conditions
 Existing Geometry
 Synchro 8 Report
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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	30	49	20	1	17	375	270	391
Future Volume (vph)	30	49	20	1	17	375	270	391
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	5	2	1	6
Permitted Phases	4	4	8	8	5	2	1	6
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	21.0	21.0	21.0	21.0	10.0	21.0	21.0	21.0
Minimum Split (s)	25.0	25.0	25.0	25.0	12.0	40.0	36.0	73.0
Total Split (s)	22.7%	22.7%	22.7%	22.7%	10.9%	41.5%	32.7%	66.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead-Lag Optimizer?								
Lead-Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	9.4	9.4	9.4	9.4	68.1	90.2	79.9	79.9
Actuated g/C Ratio	0.09	0.09	0.09	0.09	0.68	0.63	0.82	0.73
v/c Ratio	0.43	0.49	0.21	0.49	0.03	0.33	0.47	0.18
Control Delay	62.6	46.8	44.0	14.4	4.2	8.3	8.2	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	46.8	44.0	14.4	4.2	8.9	8.2	2.9
LOS	E	D	D	B	A	A	A	A
Approach Delay	51.5	19.2	8.8	8.8	4.6	4.6	4.6	4.6
Approach LOS	D	B	A	A	A	A	A	A
Intersection Summary								
Cycle Length: 110								
Actuated Cycle Length: 110								
Offset: 32 (29%), Referenced to phase 2 NBT, and 6 SBT, Start of Green								
Natural Cycle: 60								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.49								
Intersection Signal Delay: 10.4								
Intersection Capacity Utilization 53.8%								
Analysis Period (min): 15								
Spills and Phases: 4: San Pedro Dr. & Palomas Ave.								
01	01	02 (R)	03	04	05	06 (R)	07	08

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	30	49	20	1	104	17	238	270
Future Volume (veh/h)	30	49	20	1	104	17	238	270
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	5	2	1	6
Permitted Phases	4	4	8	8	5	2	1	6
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	21.0	21.0	21.0	21.0	10.0	21.0	21.0	21.0
Minimum Split (s)	25.0	25.0	25.0	25.0	12.0	40.0	36.0	73.0
Total Split (s)	22.7%	22.7%	22.7%	22.7%	10.9%	41.5%	32.7%	66.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead-Lag Optimizer?								
Lead-Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	9.4	9.4	9.4	9.4	68.1	90.2	79.9	79.9
Actuated g/C Ratio	0.09	0.09	0.09	0.09	0.68	0.63	0.82	0.73
v/c Ratio	0.43	0.49	0.21	0.49	0.03	0.33	0.47	0.18
Control Delay	62.6	46.8	44.0	14.4	4.2	8.3	8.2	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	46.8	44.0	14.4	4.2	8.9	8.2	2.9
LOS	E	D	D	B	A	A	A	A
Approach Delay	51.5	19.2	8.8	8.8	4.6	4.6	4.6	4.6
Approach LOS	D	B	A	A	A	A	A	A
Intersection Summary								
Cycle Length: 110								
Actuated Cycle Length: 110								
Offset: 32 (29%), Referenced to phase 2 NBT, and 6 SBT, Start of Green								
Natural Cycle: 60								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.49								
Intersection Signal Delay: 10.4								
Intersection Capacity Utilization 53.8%								
Analysis Period (min): 15								
Spills and Phases: 4: San Pedro Dr. & Palomas Ave.								
01	01	02 (R)	03	04	05	06 (R)	07	08

Lane Group	EBL	EBR	NBL	NBT	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	82	54	128	402	212	371
Future Volume (vph)	82	54	128	402	212	371
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85	0	140			0
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
RT	0.850					0.850
RT Protected	0.950		0.950			
Satd. Flow (prot)	1805	1615	1805	3510	1900	1615
RT Permitted	0.950		0.950			
Satd. Flow (perm)	1805	1615	1805	3510	1900	1615
Link Speed (mph)	25		35			35
Link Distance (ft)	2629		392			592
Travel Time (s)	71.7		7.6			11.5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	96	64	151	473	249	436
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	64	151	473	249	436
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	12		12		12	
Link Offset (ft)	0		0		0	
Crosswalk Width (ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop		Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	36.7%					
Analysis Period (min)	15					
ICU Level of Service	A					

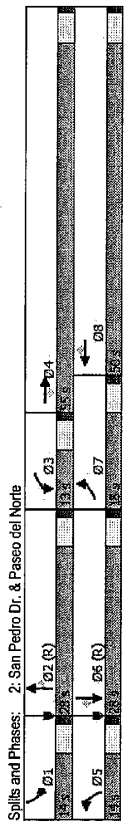
Intersection	EBL	EBR	NBL	NBT	SBL	SBR
Int Delay, s/veh	2.7					
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	82	54	128	402	212	371
Future Vol, veh/h	82	54	128	402	212	371
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	85	0	140			0
Veh in Median Storage, #	0		0			0
Grade, %	0		-			0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	96	64	151	473	249	436
Major/Minor						
Conflicting Flow All	787	249	249	0	0	0
Stage 1	249					
Stage 2	538					
Critical Hdwy	6.6	6.2	4.1			
Critical Hdwy Sig 1	5.4					
Critical Hdwy Sig 2	5.8					
Follow-up Hdwy	3.5	3.3	2.2			
Pot Cap-1 Maneuver	348	795	1328			
Stage 1	797					
Stage 2	555					
Platoon blocked, %						
Mov Cap-1 Maneuver	308	795	1328			
Mov Cap-2 Maneuver	308					
Stage 1	797					
Stage 2	482					
Approach						
EB	EB	NS	NS	NS	NS	NS
HCM Control Delay, s	17.1		1.9			0
HCM LOS	C					
Minor Lane/Minor Mvmt						
NBL	NBL	EBL	EBL	SBL	SBR	
Capacity (veh/h)	1328	308	795			
HCM Lane VC Ratio	0.13	0.313	0.08			
HCM Control Delay (s)	8.1	21.9	9.9			
HCM Lane LOS	A	C	A			
HCM 95th %ile Q(veh)	0.4	1.3	0.3			

Timings **2: San Pedro Dr. & Paseo del Norte**

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 10/21/2016

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Item	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	330	1595	316	126	1901	215	227	214	90	150	305	180
Future Volume (vph)	330	1595	316	126	1901	215	227	214	90	150	305	180
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Permitted Phases	7	4	4	3	8	8	5	2	2	1	6	6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Split (s)	18.0	55.0	55.0	13.0	50.0	50.0	14.0	28.0	28.0	14.0	28.0	28.0
Total Split (%)	16.4%	60.0%	60.0%	11.9%	45.5%	45.5%	12.7%	25.5%	25.5%	12.7%	25.5%	25.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effort Green (s)	13.2	50.9	50.9	7.9	45.5	45.5	9.2	22.5	22.5	8.7	22.0	22.0
Actuated v/c Ratio	0.12	0.46	0.46	0.07	0.41	0.41	0.08	0.20	0.20	0.08	0.20	0.20
v/c Ratio	0.82	0.70	0.36	0.53	0.93	0.28	0.82	0.58	0.22	0.57	0.94	0.43
Control Delay	64.5	25.6	3.1	52.4	38.6	7.9	68.6	48.0	10.9	57.4	62.8	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	25.6	3.1	52.4	38.6	7.9	68.6	48.0	10.9	57.4	62.8	14.0
LOS	E	C	A	D	D	A	E	D	B	E	E	B
Approach Delay	28.1											
Approach LOS	C											
Intersection Summary												
Cycle Length: 110												
Offset: 0 (0%)												
Intersection Signal Delay: 35.7												
Intersection Capacity Utilization 85.3%												
Analysis Period (min) 15												



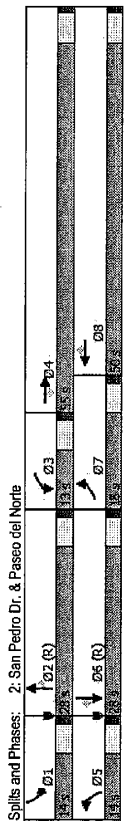
2: San Pedro Dr. & Paseo del Norte

Terry O. Brown, P.E.
 10/21/2016

Intersection Summary **2: San Pedro Dr. & Paseo del Norte**

Terry O. Brown, P.E.
 10/21/2016

Item	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	330	1595	316	126	1901	215	227	214	90	150	305	180
Future Volume (veh/h)	330	1595	316	126	1901	215	227	214	90	150	305	180
Future Volume (veh/h)	330	1595	316	126	1901	215	227	214	90	150	305	180
Number	7	4	4	3	8	8	5	2	2	1	6	6
Initial Q (veh)	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A _{pbt})	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate (veh/h)	347	1679	0	133	2001	0	239	225	0	158	321	0
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh %	0	0	0	0	0	0	0	0	0	0	0	0
Arrive On Green	0.12	0.46	0.00	0.02	0.13	0.00	0.03	0.08	0.00	0.06	0.22	0.00
Sat Flow (veh/h)	3510	5187	1615	3510	5187	1615	3510	1900	1615	3510	1900	1615
Grp Volume (veh/h)	347	1679	0	133	2001	0	239	225	0	158	321	0
Grp Sat Flow (veh/h)	1755	1729	1615	1755	1729	1615	1755	1800	1615	1755	1800	1615
Q Serve (s)	10.7	28.2	0.0	4.1	42.1	0.0	7.5	12.5	0.0	4.9	17.5	0.0
Cycle Q Clear (s)	10.7	28.2	0.0	4.1	42.1	0.0	7.5	12.5	0.0	4.9	17.5	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap (veh/h)	406	2410	750	198	2103	655	287	445	378	222	409	348
v/c Ratio(X)	0.86	0.70	0.00	0.00	0.87	0.95	0.00	0.83	0.51	0.00	0.71	0.78
Avail Cap (veh/h)	415	2410	750	255	2122	661	287	445	378	287	409	348
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.63	0.53	0.00	0.94	0.94	0.00	1.00	1.00	0.00
Uniform Delay (d) (s/veh)	47.7	23.3	0.0	53.0	46.8	0.0	52.8	44.7	0.0	50.5	40.7	0.0
Incr Delay (d2) (s/veh)	15.7	0.9	0.0	2.4	6.3	0.0	17.4	3.8	0.0	5.7	14.0	0.0
Initial Q Delay(d3) (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) (veh/h)	6.0	13.6	0.0	2.1	21.4	0.0	4.3	7.1	0.0	2.5	10.8	0.0
LnGrp Delay(d) (s/veh)	63.4	24.2	0.0	55.4	52.9	0.0	70.2	48.5	0.0	56.2	54.8	0.0
LnGrp LOS	E	C		E	D		E	D		E	D	
Approach Vol (veh/h)	2026			2134			464			479		
Approach Delay (s/veh)	30.9			53.0			59.7			55.2		
Approach LOS	C			D			E			E		
Times	1	2	3	4	5	6	7	8				
Assigned Phis	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R) (s)	11.9	30.7	11.2	58.1	14.0	28.7	17.7	49.8				
Charge Period (Y+R) (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (G _{max}) (s)	9.0	23.0	8.0	50.0	9.0	23.0	13.0	45.0				
Max Q Clear Time (g _{chl}) (s)	6.9	14.5	6.1	30.2	9.5	19.5	12.7	44.1				
Green Ext Time (g _{cl}) (s)	0.1	2.0	0.1	18.5	0.0	1.0	0.0	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				45.1								
HCM 2010 LOS				D								



2: San Pedro Dr. & Paseo del Norte

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Intersection Summary **2: San Pedro Dr. & Paseo del Norte**

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 10/21/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	←	←	←	←	←	←	←	←	←	←	←
Future Volume (veh/h)	330	1595	316	126	1901	215	227	214	90	150	305	180
Future Volume (veh/h)	330	1595	316	126	1901	215	227	214	90	150	305	180
Number	7	4	4	3	8	8	5	2	12	1	6	16
Initial Q (Qb) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A _{pbt})	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	347	1679	0	133	2001	0	239	225	0	158	321	0
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Arrive On Green	0.12	0.46	0.00	0.02	0.13	0.00	0.03	0.08	0.00	0.06	0.22	0.00
Sat Flow, veh/h	3510	5187	1615	3510	5187	1615	3510	1900	1615	3510	1900	1615
Grp Volume(s), veh/h	347	1679	0	133	2001	0	239	225	0	158	321	0
Grp Sat Flow(s), veh/h	1755	1729	1615	1755	1729	1615	1755	1800	1615	1755	1800	1615
Q Serve(s), s	10.7	28.2	0.0	4.1	42.1	0.0	7.5	12.5	0.0	4.9	17.5	0.0
Cycle Q Clear(s), s	10.7	28.2	0.0	4.1	42.1	0.0	7.5	12.5	0.0	4.9	17.5	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(s), veh/h	406	2410	750	198	2103	655	287	445	378	222	409	348
v/c Ratio(X)	0.86	0.70	0.00	0.07	0.95	0.00	0.83	0.51	0.00	0.71	0.78	0.00
Avail Cap(s), veh/h	415	2410	750	255	2122	661	287	445	378	287	409	348
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.53	0.53	0.00	0.94	0.94	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.7	23.3	0.0	53.0	46.6	0.0	52.8	44.7	0.0	50.5	40.7	0.0
Incr Delay (d2), s/veh	15.7	0.9	0.0	2.4	6.3	0.0	17.4	3.8	0.0	5.7	14.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	6.0	13.6	0.0	2.1	21.4	0.0	4.3	7.1	0.0	2.5	10.8	0.0
LnGrp Delay(d), s/veh	63.4	24.2	0.0	55.4	52.9	0.0	70.2	48.5	0.0	56.2	54.8	0.0
LnGrp LOS	E	C		E	D		E	D		E	D	
Approach Vol, veh/h	2026			2134			464			479		
Approach Delay, s/veh	30.9			53.0			59.7			55.2		
Approach LOS	C			D			E			E		
Junct	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	11.9	30.7	11.2	56.1	14.0	28.7	17.7	49.6				
Charge Period (Y+R), s	5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	9.0	23.0	8.0	50.0	9.0	23.0	13.0	45.0				
Max Q Clear Time (g, z+H), s	6.9	14.5	6.1	30.2	9.5	19.5	12.7	44.1				
Green Ext Time (p, z), s	0.1	2.0	0.1	18.5	0.0	1.0	0.0	0.5				
Forecast Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	30	51	40	2	17	375	318	391	73
Traffic Volume (vph)	30	51	40	2	17	375	318	391	73
Future Volume (vph)	30	51	40	2	17	375	318	391	73
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	4	4	8	8	5	2	1	6	6
Permitted Phases	4	4	8	8	5	2	1	6	6
Detector Phase	4	4	8	8	5	2	1	6	6
Switch Phase	4	4	8	8	5	2	1	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	22.7%	22.7%	22.7%	22.7%	22.7%	22.7%	22.7%	22.7%	22.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
Act Effct Green (s)	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Actuated g/c Ratio	0.51	0.46	0.40	0.56	0.03	0.36	0.54	0.18	0.07
v/c Ratio	71.4	46.7	56.0	15.3	5.1	10.3	5.3	4.3	1.6
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Queue Delay	71.4	46.7	56.0	15.3	5.1	10.3	5.3	4.3	1.6
Total Delay	E	D	E	B	A	B	A	A	A
LOS	E	D	E	B	A	B	A	A	A
Approach Delay	54.0	D	23.9	C	B	B	A	A	A
Approach LOS	D	D	C	C	B	B	A	A	A
Intersection Summary									
Cycle Length: 110									
Actuated Cycle Length: 110									
Offset: 80 (73%), Referenced to phase 2 NBT and 6 SBT, Start of Green									
Natural Cycle: 60									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.58									
Intersection Signal Delay: 11.7									
Intersection Capacity Utilization 66.6%									
Analysis Period (min): 15									
Spills and Phases: 4: San Pedro Dr. & Palomas Ave.									
01	02 (R)	03	04	05	06	07 (R)	08	09	10
01	02 (R)	03	04	05	06	07 (R)	08	09	10

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	30	51	40	2	17	375	318	391	73
Traffic Volume (veh/h)	30	51	40	2	17	375	318	391	73
Future Volume (veh/h)	30	51	40	2	17	375	318	391	73
Number	7	4	14	3	8	18	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A _{pbi})	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	60	24	47	2	173	20	441	316
Adj No. of Lanes	1	1	0	1	1	0	1	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0
Cap, veh/h	129	199	80	217	3	247	637	1242	885
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.05	0.62	0.62	0.03
Sat Flow, veh/h	1229	1292	517	1335	18	1599	1810	2016	1436
Grp Volume (v), veh/h	35	0	84	47	0	175	20	395	362
Grp Sat Flow (s), veh/h	1229	0	1809	1335	0	1618	1810	1805	1647
Q Serve (g, s), s	3.1	0.0	4.5	3.6	0.0	11.3	0.4	11.8	11.9
Cycle Q Clear (g, s), s	14.3	0.0	4.5	8.1	0.0	11.3	0.4	11.8	11.9
Prop In Lane	1.00	0.00	0.29	1.00	0.00	0.98	1.00	0.87	1.00
Lane Grp Cap (c), veh/h	129	0	279	217	0	260	637	1112	1015
v/c Ratio (x)	0.27	0.00	0.30	0.22	0.00	0.70	0.03	0.36	0.36
Adj Cap (c), veh/h	163	0	329	253	0	294	637	1112	1015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter (f)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	0.0	41.2	44.8	0.0	44.1	6.5	10.4	10.4
Incr Delay (d2), s/veh	1.1	0.0	0.8	0.5	0.0	5.9	0.0	0.9	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	1.1	0.0	2.3	1.3	0.0	5.5	0.2	6.1	5.6
LnGrp Delay (d), s/veh	52.0	0.0	41.8	45.3	0.0	50.0	6.6	11.3	11.4
LnGrp LOS	D	D	D	D	D	D	A	B	B
Approach Vol, veh/h	119	0	222	490	0	777	0	920	14.5
Approach Delay, s/veh	44.8	0	43.0	49.0	0	11.2	0	14.5	0
Approach LOS	D	D	D	D	D	B	B	B	B
Time	1	2	3	4	5	6	7	8	9
Assigned Phs	1	2	3	4	5	6	7	8	9
Phs Duration (G+Y+R), s	15.2	72.8	22.0	10.0	78.0	22.0	0	22.0	0
Change Period (Y+R), s	5.0	5.0	5.0	5.0	5.0	5.0	0	5.0	0
Max Green Setting (Gmax), s	35.0	40.0	20.0	5.0	20.0	20.0	0	20.0	0
Max Q Clear Time (g _{clear}), s	9.1	13.9	16.3	2.4	13.4	13.3	0	13.3	0
Green Ext Time (p, c), s	1.1	9.2	0.6	0.0	10.8	1.0	0	1.0	0
Intersection Summary									
HCM 2010 Ctrl Delay	16.7								
HCM 2010 LOS	B								

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	0	37	147	164	0	1
Traffic Volume (vph)	0	37	147	164	0	1
Future Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor		0.929				0.865
Flt						
Flt Protected	0	1900	1765	0	0	1644
Flt Permitted	0	1900	1765	0	0	1644
Satd. Flow (perm)	0	1900	1765	0	0	1644
Link Speed (mph)	25	25	25	25	25	25
Link Distance (ft)	96	275	275	275	275	275
Travel Time (s)	2.7	7.5	7.5	7.5	7.5	7.5
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	0	123	490	547	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	123	1037	0	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right
Median Width (ft)	0	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type	Other					
Control Type	Unsignalized					
Intersection Capacity Utilization	27.8%					
Analysis Period (min)	15					
ICU Level of Service A						

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, s/veh	0					
Movement	0	37	147	164	0	1
Lane Configurations	0	37	147	164	0	1
Traffic Vol. veh/h	0	37	147	164	0	1
Future Vol. veh/h	0	37	147	164	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	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	0	0	0
Grade, %	-	0	0	0	0	0
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Minvt Flow	0	123	490	547	0	3
Major/Minor	Major	Minor	Major	Minor	Major	Minor
Conflicting Flow All	0	0	0	0	0	763
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hwy	-	-	-	-	-	-
Critical Hwy Stg 1	-	-	-	-	-	-
Critical Hwy Stg 2	-	-	-	-	-	-
Follow-up Hwy	-	-	-	-	-	-
Ped Cap-1 Maneuver	0	0	0	0	0	408
Stage 1	0	0	0	0	0	0
Stage 2	0	0	0	0	0	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	EBT	WBT	WBR	SBL	SBR
HCM Control Delay, s	0	0	0	0	13.9	13.9
HCM LOS					B	B
Minor Lane/Minor Minvt	EBT	WBT	WBR	SBL	SBR	
Capacity (veh/h)	-	-	-	-	-	408
HCM Lane V/C Ratio	-	-	-	-	-	0.008
HCM Control Delay (s)	-	-	-	-	-	13.9
HCM Lane LOS	-	-	-	-	-	B
HCM 95th %ile Q(veh)	-	-	-	-	-	0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4
Traffic Volume (vph)	131	164	74	74	1	235
Future Volume (vph)	131	164	74	74	1	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
RT	0.832	0.832	0.832	0.832	0.866	0.866
RT Prohibited	0.978	0.978	0.978	0.978	0.978	0.978
Satd Flow (prot)	0	1858	1771	0	1845	0
RT Permitted	0.978	0.978	0.978	0.978	0.978	0.978
Satd Flow (perm)	0	1858	1771	0	1845	0
Link Speed (mph)	25	25	25	25	25	25
Link Distance (ft)	62	62	62	62	62	62
Travel Time (s)	1.7	1.7	1.7	1.7	1.7	1.7
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	437	547	247	247	3	783
Shared Lane Traffic (%)	0	984	494	0	786	0
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Left	Right	Left	Right
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	0	0	0	12	0	0
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	15	15	15	15	15
Turning Speed (mph)	9	9	9	15	9	15
Sign Control	Free	Free	Free	Stop	Stop	Stop
Intersection Summary	ICU Level of Service A					
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.9%					
Analysis Period (min)	15					

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, s/vch	51.5					
Lane Configurations	4	4	4	4	4	4
Traffic Vol, veh/h	131	164	74	74	1	235
Future Vol, veh/h	131	164	74	74	1	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	437	547	247	247	3	783
Major/Minor	Major1	Major2	Major2	Major2	Minor2	Minor2
Conflicting Flow All	493	0	-	0	1790	370
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	1420	-
Critical Hdwy	4.1	-	-	-	8.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Prot Cap-1 Maneuver	1081	-	-	-	90	-880
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	225	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1081	-	-	-	38	-680
Mov Cap-2 Maneuver	-	-	-	-	38	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	94	-
Approach	EB	EB	WB	WB	SB	SB
HCM Control Delay, s	4.7	4.7	0	0	142.2	142.2
HCM LOS	F	F	F	F	F	F
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	1081	-	-	-	635	-
HCM Lane V/C Ratio	0.404	-	-	-	1.239	-
HCM Control Delay (s)	10.6	-	-	-	142.2	-
HCM Lane LOS	B	A	-	-	F	-
HCM 85th %ile Q(veh)	2	-	-	-	29.1	-
Notes	* All major volume in platoon					
Volume exceeds capacity	* Delay exceeds 300s					
Computation Not Defined	* All major volume in platoon					

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4
Traffic Volume (vph)	8	352	287	8	1	10
Future Volume (vph)	8	352	287	8	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.999	0.999	0.996	0.996	0.876	0.996
Flt Protected	0	1898	1892	0	1658	0
Satd. Flow (prot)	0	1898	1892	0	1658	0
Flt Permitted	0	1898	1892	0	1658	0
Satd. Flow (perm)	0	1898	1892	0	1658	0
Link Speed (mph)	25	25	25	25	25	25
Link Distance (ft)	264	59	178	4.9	178	4.9
Travel Time (s)	7.2	1.8	1.8	0.30	0.30	0.30
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	27	1173	957	27	3	33
Shared Lane Traffic (%)	0	1200	984	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	0	0	0	12	0	0
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	15	15	15	15	15
Turning Speed (mph)	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary	ICU Level of Service A					
Area Type	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 35.0%						
Analysis Period (min) 15						

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, shveh	0.5					
Movement	4	4	4	4	4	4
Lane Configurations	8	352	287	8	1	10
Traffic Vol, veh/h	8	352	287	8	1	10
Future Vol, veh/h	8	352	287	8	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	1173	957	27	3	33
Major/Minor	Major					
Conflicting Flow All	983	0	-	0	2197	970
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pd Cap-1 Maneuver	711	-	-	-	30	310
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	711	-	-	-	45	310
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Minor Lane/Minor Movt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	711	-	-	-	202	-
HCM Lane V/C Ratio	0.038	-	-	-	0.162	-
HCM Control Delay (s)	10.3	0	-	-	28.7	-
HCM Lane LOS	B	A	-	-	D	-
HCM 95th %ile Q(veh)	0.1	-	-	-	0.6	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4
Traffic Volume (vph)	8	360	288	8	1	10
Future Volume (vph)	8	360	288	8	1	10
Ideal Flow (vph/p)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.999	0.999	0.996	0.996	0.976	0.976
Flt Protected	0	1898	1892	0	1658	0
Satd. Flow (prot)	0	1898	1892	0	1658	0
Flt Permitted	0	1898	1892	0	1658	0
Satd. Flow (perm)	0	1898	1892	0	1658	0
Link Speed (mph)	25	25	25	25	25	25
Link Distance (ft)	167	264	162	162	162	162
Travel Time (s)	5.1	7.2	4.4	4.4	4.4	4.4
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	27	1200	960	27	3	33
Shared Lane Traffic (%)	0	1227	987	0	38	0
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Left	Right	Left	Right
Lane Alignment	0	0	0	12	0	0
Median Width (ft)	0	0	0	0	0	0
Link Offset (ft)	16	16	16	16	16	16
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	15	15	15	15	15
Turning Speed (mph)	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary	Area Type: Other					
Control Type: Unsignalized	ICU Level of Service A					
Intersection Capacity Utilization 35.4%						
Analysis Period (min) 15						

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, s/veh	0.8					
Lane Configurations	4	4	4	4	4	4
Traffic Vol, veh/h	8	360	288	8	1	10
Future Vol, veh/h	8	360	288	8	1	10
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Yeh in Median Storage, #	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	1200	960	27	3	33
Major/Minor	Major	Minor	Major	Minor	Major	Minor
Conflicting Flow All	987	0	987	0	2226	973
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	1253	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Sig 1	-	-	-	-	5.4	-
Critical Hdwy Sig 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	708	-	-	-	48	309
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	708	-	-	-	43	309
Mov Cap-2 Maneuver	-	-	-	-	43	-
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	241	-
Minor Lane/Minor Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	708	-	-	-	198	-
HCM Lane V/C Ratio	0.038	-	-	-	0.185	-
HCM Control Delay (s)	10.3	-	-	-	27.3	-
HCM Lane LOS	B	A	-	-	D	-
HCM 95th %ile Q(veh)	0.1	-	-	-	0.7	-

Lane Group	EBL	EBT	WBT	WBR	EBL	SBR
Lane Configurations	4	4	4	4	4	4
Traffic Volume (vph)	8	368	290	8	1	10
Future Volume (vph)	8	368	290	8	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
RT						
RT Protected	0.999	0.999	0.999	0.999	0.996	0.996
Satd. Flow (prot)	0	1898	1892	0	1658	0
RT Permitted	0.999	0.999	0.999	0.999	0.996	0.996
Satd. Flow (perm)	0	1898	1892	0	1658	0
Link Speed (mph)	25	25	25	25	30	30
Link Distance (ft)	171	187	187	155	155	155
Travel Time (s)	4.7	5.1	5.1	3.5	3.5	3.5
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	27	1227	987	27	3	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1254	994	0	38	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	0	0	0	0	12	0
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	15	15	15	15	15
Turning Speed (mph)	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	35.8%					
Analysis Period (min)	15					
ICU Level of Service A						

Intersection	EBL	EBT	WBT	WBR	EBL	SBR
Int Delay, s/veh	0.6					
Lane Configurations	4	4	4	4	4	4
Traffic Vol. veh/h	8	368	290	8	1	10
Future Vol. veh/h	8	368	290	8	1	10
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh In Median Storage, #	-	0	0	0	0	0
Grade, %	-	0	0	0	0	0
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Minvt Flow	27	1227	987	27	3	33
Major/Minor	Major1	Minor2	Major2	Minor2	Major1	Minor2
Conflicting Flow All	983	0	-	0	2280	980
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	1280	-
Critical Hwy	4.1	-	-	-	6.4	6.2
Critical Hwy Stg 1	-	-	-	-	5.4	-
Critical Hwy Stg 2	-	-	-	-	5.4	-
Follow-up Hwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	704	-	-	-	48	306
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	284	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	704	-	-	-	40	306
Mov Cap-2 Maneuver	-	-	-	-	40	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	232	-
Approach	EB	EBT	WBT	WBR	EBL	SBR
HCM Control Delay, s	0.2	-	-	-	28.3	D
HCM LOS	D	-	-	-	D	-
Minor Lane/Minor Mvmt	EBL	EBT	WBT	WBR	EBL	SBR
Capacity (veh/h)	704	-	-	-	191	-
HCM Lane V/C Ratio	0.038	-	-	-	0.192	-
HCM Control Delay (s)	10.3	0	-	-	28.3	-
HCM Lane LOS	B	A	-	-	D	-
HCM 95th %ile Q(veh)	0.1	-	-	-	0.7	-

Lanes, Volumes, Timings
10: Palomas Ave. & Dwy "F"

Terry O. Brown, P.E.
10/21/2016

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1			
Traffic Volume (vph)	8	376	293	8	1	10
Future Volume (vph)	8	376	293	8	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
RT			0.996		0.876	
RT Protected		0.999			0.996	
Satd. Flow (prot)	0	1988	1882	0	1658	0
RT Permitted		0.999			0.996	
Satd. Flow (perm)	0	1993	1892	0	1658	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1015	171		168	
Travel Time (s)		27.7	4.7		4.8	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	27	1253	977	27	3	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1280	1004	0	38	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)		16	16		15	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	9	
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	38.2%					
Analysis Period (min)	15					
	ICU Level of Service A					

2021 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2021ABX.syn

HCM 2010 TWSC
10: Palomas Ave. & Dwy "F"

Terry O. Brown, P.E.
10/21/2016

Intersection	0.6					
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	4	1	1	1	1
Traffic Vol, veh/h	8	376	293	8	1	10
Future Vol, veh/h	8	376	293	8	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	1253	977	27	3	33
Major/Minor						
Conflicting Flow All	1003	0	-	0	2297	980
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Prot Cap-1 Maneuver	698	-	-	-	43	302
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	698	-	-	-	38	302
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	EB	WB	WB	SB	SB
HCM Control Delay, s	0.2	0.2	0	0	29.2	29.2
HCM LOS	D	D	D	D	D	D
Minor Lane/Major Mvmt						
Capacity (veh/h)	698	-	-	-	185	-
HCM Lane V/C Ratio	0.038	-	-	-	0.198	-
HCM Control Delay (s)	10.4	0	-	-	29.2	-
HCM Lane LOS	B	A	-	-	D	-
HCM 95th %ile Q(veh)	0.1	-	-	-	0.7	-

2021 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2021ABX.syn

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑			↑			
Traffic Volume (vph)	352	0	0	33	28	1	
Future Volume (vph)	352	0	0	33	28	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Fr					0.985		
Flt Protected					0.954		
Satd. Flow (prot)	1900	0	0	1900	1804	0	
Flt Permitted					0.954		
Satd. Flow (perm)	1900	0	0	1900	1804	0	
Link Speed (mph)	25			25	30		
Link Distance (ft)	59			370	117		
Travel Time (s)	1.8			10.1	2.7		
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30	
Adj. Flow (vph)	1173	0	0	110	87	3	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1173	0	0	110	90	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	0			0	12		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)		9	15		15	9	
Sign Control	Free			Free	Stop		
Intersection Summary							
Area Type:	Other						
Control Type:	Unsignalized						
Intersection Capacity Utilization	28.5%						
Analysis Period (min)	15						
	ICU Level of Service A						

Intersection	EBT	EBR	WBL	WBT	NBL	NBR	
Int Delay, sveh	2.7						
Movement	↑			↑			
Lane Configurations							
Traffic Vol. veh	352	0	0	33	28	1	
Future Vol. veh	352	0	0	33	28	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							
Veh in Median Storage, #	0			0	0	0	
Grade, %	0			0	0	0	
Peak Hour Factor	30	30	30	30	30	30	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	1173	0	0	110	87	3	
Major/Minor	Major1	Major2	Major1	Major2	Minor1	Minor2	
Conflicting Flow All	0	-	-	-	1283	1173	
Stage 1	-	-	-	-	1173	-	
Stage 2	-	-	-	-	110	-	
Critical Hdwy	-	-	-	-	6.4	6.2	
Critical Hdwy Stg 1	-	-	-	-	5.4	-	
Critical Hdwy Stg 2	-	-	-	-	5.4	-	
Follow-up Hdwy	-	-	-	-	3.5	3.3	
Pot Cap-1 Maneuver	-	0	0	0	184	236	
Stage 1	-	0	0	0	297	-	
Stage 2	-	0	0	0	920	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	-	184	236	
Mov Cap-2 Maneuver	-	-	-	-	184	-	
Stage 1	-	-	-	-	297	-	
Stage 2	-	-	-	-	920	-	
Approach	EB	WB	EB	WB	NB	SB	
HCM Control Delay, s	0	0	0	0	41.3	-	
HCM LOS					E		
Minor Lane/Major Mvmt	NBL/m	EBT	WBT				
Capacity (veh/h)	188	-	-	-	-	-	
HCM Lane V/C Ratio	0.464	-	-	-	-	-	
HCM Control Delay (s)	41.3	-	-	-	-	-	
HCM Lane LOS	E	-	-	-	-	-	
HCM 98th %ile Q(veh)	2.4	-	-	-	-	-	

Lanes, Volumes, Timings
13: Dwy "I" & Palomas Ave.

Terry O. Brown, P.E.
10/21/2016

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	164	0	0	147	0	37
Future Volume (vph)	164	0	0	147	0	37
Ideal Flow (vph)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
RT Protected						
Sat'd Flow (prot)	1900	0	0	1900	0	1644
RT Permitted						
Sat'd Flow (perm)	1900	0	0	1900	0	1644
Link Speed (mph)	25			25	25	
Link Distance (ft)	58			70	99	
Travel Time (s)	1.6			1.9	2.7	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	547	0	0	490	0	123
Shared Lane Traffic (%)						
Lane Group Flow (vph)	547	0	0	490	0	123
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	0			0		
Link Offset (ft)	0			0		
Crosswalk Width (ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 18.8%						
Analysis Period (min) 15						

2021 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2021ABX.syn

HCM 2010 TWSC
13: Dwy "I" & Palomas Ave.

Terry O. Brown, P.E.
10/21/2016

Intersection	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↑			↑
Traffic Vol, veh/h	164	0	0	147	0	37
Future Vol, veh/h	164	0	0	147	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length						
Yeh In Median Storage, #	0	-	-	0	0	0
Grade, %	0			0		-
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Wmt Flow	547	0	0	490	0	123
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	-	-	-	-	547
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hwy	-	-	-	-	-	-
Critical Hwy Stg 1	-	-	-	-	-	6.2
Critical Hwy Stg 2	-	-	-	-	-	-
Follow-up Hwy	-	-	-	-	-	-
Pot Cap-1 Maneuver	-	0	0	-	-	3.3
Stage 1	-	0	0	-	0	541
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	541
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Max Cap-1 Maneuver	-	-	-	-	-	-
Max Cap-2 Maneuver	-	-	-	-		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	37	184	0	147	0	1
Traffic Volume (vph)	37	184	0	147	0	1
Future Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.890					0.885
RT Protected	1881	0	0	1900	0	1844
RT Permitted	1881	0	0	1900	0	1844
Satd. Flow (perm)	25			25		25
Link Speed (mph)	70			88		132
Link Distance (ft)	1.9			2.7		3.6
Travel Time (s)	0.30	0.30	0.30	0.30	0.30	0.30
Peak Hour Factor	123	547	0	490	0	3
Adj. Flow (vph)	670	0	0	490	0	3
Shared Lane Traffic (%)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Left	Left	Right
Lane Alignment	0	0	0	0	0	0
Median Width (ft)	0			0		0
Link Offset (ft)	16			16		16
Crosswalk Width (ft)	1.00	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	9	15				15
Headway Factor	Free	Free	Free	Free	Free	Stop
Turning Speed (mph)						
Sign Control						
Intersection Summary						
Area Type	Other					
Control Type	Unsignalized					
Intersection Capacity Utilization	22.1%					
Analysis Period (min)	15					
ICU Level of Service A						

Intersection	EBT	EBR	WBL	WBT	NBL	NBR
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	37	184	0	147	0	1
Traffic Vol, veh/h	37	184	0	147	0	1
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	-	-	0
Grade, %	0	-	-	-	-	0
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	123	547	0	490	0	3
Major/Minor	Major	Major	Major	Major	Minor	Minor
Conflicting Flow All	0	0	-	-	-	397
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Flow	-	-	-	-	-	8.2
Critical Flow Stg 1	-	-	-	-	-	-
Critical Flow Stg 2	-	-	-	-	-	-
Follow-up Hwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	657
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	657
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	EBR	WBL	WBT	NBL	NBR
HCM Control Delay, s	0	0	0	0	10.5	10.5
HCM LOS					B	B
Minor Lane/Minor Mvmt	NBL/N1	EBT	EBR	WBT		
Capacity (veh/h)	657	-	-	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-	-	-
HCM Control Delay (s)	10.5	-	-	-	-	-
HCM Lane LOS	B	-	-	-	-	-
HCM 95th %ile Q(veh)	0	-	-	-	-	-

Lanes, Volumes, Timings
15: Louisiana Blvd. & Dwy "K"

Terry O. Brown, P.E.
10/21/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	SSR
Lane Configurations	Y	Y	4	4	4	4
Traffic Volume (vph)	167	16	41	450	200	82
Future Volume (vph)	167	16	41	450	200	82
Ideal Flow (vphpl)	1800	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr	0.988				0.961	
Fr Protected	0.956			0.996		
Satd. Flow (prot)	1795	0	0	1892	1826	0
Fr Permitted	0.956			0.996		
Satd. Flow (perm)	1795	0	0	1892	1826	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	162			123	298	
Travel Time (s)	3.5			2.4	5.8	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	557	53	137	1500	667	273
Shared Lane Traffic (%)						
Lane Group Flow (vph)	610	0	0	1637	940	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	12			24	24	
Link Offset (ft)	0			0	0	
Crosswalk Width (ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	81.7%					
Analysis Period (min)	15					
	ICU Level of Service B					

2021 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2021ABX.syn

HCM 2010 TWSC
15: Louisiana Blvd. & Dwy "K"

Terry O. Brown, P.E.
10/21/2016

Intersection	57.3					
Int Delay, s/veh	57.3					
Movement	EBL	EBR	NBL	NBT	SBT	SSR
Lane Configurations	Y	Y	4	4	4	4
Traffic Vol, veh/h	167	16	41	450	200	82
Future Vol, veh/h	167	16	41	450	200	82
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	0	None	None	None	None	None
Storage Length	0					
Veh in Median Storage, #	0					
Grade, %	0					
Peak-Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Heavy Vehicles, %	0					
Minor Flow	557	53	137	1500	667	273
Major/Minor						
Conflicting Flow All	2576	803	940	0	0	0
Stage 1	803					
Stage 2	1773					
Critical Hdwy	6.4	6.2	4.1			
Critical Hdwy Stg 1	5.4					
Critical Hdwy Stg 2	5.4					
Follow-up Hdwy	3.5	3.3	2.2			
Pot Cap-1 Maneuver	~28	387	737			
Stage 1	~444					
Stage 2	~151					
Platoon blocked, %						
Mov Cap-1 Maneuver	0	387	737			
Mov Cap-2 Maneuver	0					
Stage 1	~444					
Stage 2	0					
Approach						
EB	EB	NB	SB	SB	SB	SB
HCM Control Delay, s	296.9		0.9			0
HCM LOS	F					
Minor Lane/Major Mnvr						
NBL	NBT	EBL	EBT	SBT	SSR	
Capacity (veh/h)	737	387				
HCM Lane V/C Ratio	0.185	1.576				
HCM Control Delay (s)	11	0	296.9			
HCM Lane LOS	B	A	F			
HCM 85th %ile Q(veh)	0.7	34.5				
Notes						
~ Volume exceeds capacity \$ Delay exceeds 300s ~: Computation Not Defined ~: All major volume in platoon						

2021 AM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2021ABX.syn

Lanes, Volumes, Timings
15: Louisiana Blvd. & Dwy "K"

Terry O. Brown, P.E.
10/21/2016

Lane Group	EBL	EBR	NBL	NBT	SBL	SBR
Lane Configurations	16	16	41	450	200	82
Traffic Volume (vph)	167	167	41	450	200	82
Future Volume (vph)	167	167	41	450	200	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.988				0.981	
Flt Protected	0.956				0.956	
Satd Flow (prot)	1795	0	0	1892	1826	0
Flt Permitted	0.956				0.956	
Satd Flow (perm)	1795	0	0	1892	1826	0
Link Speed (mph)	30				35	
Link Distance (ft)	152				123	
Travel Time (s)	3.5				2.4	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	557	53	137	1500	667	273
Shared Lane Traffic (%)						
Lane Group Flow (vph)	610	0	0	1637	940	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	12				24	
Link Offset (ft)	0				0	
Crosswalk Width (ft)	16				16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 61.7%	ICU Level of Service B					
Analysis Period (min) 15						

2021 AM Peak BUILD Conditions Mit
Mitigated Geometry

Synchro 9 Report
2021ABX_MIT.syn

HCM 2010 TWSC
15: Louisiana Blvd. & Dwy "K"

Terry O. Brown, P.E.
10/21/2016

Intersection		Analysis					
Int Delay, s/veh		57.3					
Movement		EBL	EBR	NBL	NBT	SBL	SBR
Lane Configurations		W		4		1	
Traffic Vol, veh/h		167	16	41	450	200	82
Future Vol, veh/h		167	16	41	450	200	82
Conflicting Peds, #/hr		0	0	0	0	0	0
Sign Control		Stop	Stop	Free	Free	Free	Free
RT Channelized		0	None	None	None	None	None
Storage Length		0	-	-	-	-	-
Veh in Median Storage, #		0	-	-	0	0	-
Grade, %		0	-	-	0	0	-
Peak Hour Factor		30	30	30	30	30	30
Heavy Vehicles, %		0	0	0	0	0	0
Mvmt Flow		557	53	137	1500	667	273
Major/Minor		Minor 2		Major 1		Major 2	
Conflicting Flow All		2576	803	940	0	-	0
Stage 1		803	-	-	-	-	-
Stage 2		1773	-	-	-	-	-
Critical Hdwy		6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1		5.4	-	-	-	-	-
Critical Hdwy Stg 2		5.4	-	-	-	-	-
Follow-up Hdwy		3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver		~29	387	737	-	-	-
Stage 1		~444	-	-	-	-	-
Stage 2		~151	-	-	-	-	-
Platoon blocked, %		-	-	-	-	-	-
Mov Cap-1 Maneuver		0	387	737	-	-	-
Mov Cap-2 Maneuver		-	-	-	-	-	-
Stage 1		~444	-	-	-	-	-
Stage 2		0	-	-	-	-	-
Approach		EB	EB	NB	SB	SB	SB
HCM Control Delay, s		296.9		0.9		0	
HCM LOS		F					
Minor Lane Major Mvmt		NBL	NBL	EBL	EBL	SB	SB
Capacity (veh/h)		737	-	387	-	-	-
HCM Lane V/C Ratio		0.185	-	1.576	-	-	-
HCM Control Delay (s)		11	0	296.9	-	-	-
HCM Lane LOS		B	A	F	-	-	-
HCM 95th Xile Q(veh)		0.7	-	34.5	-	-	-
Notes		~ Volume exceeds capacity ~ Delay exceeds 300s ~ Computation Not Defined ~ All major volume in platoon					

2021 AM Peak BUILD Conditions Mit
Mitigated Geometry

Synchro 9 Report
2021ABX_MIT.syn

HCM 2010 Signalized Intersection Summary
1: Louisiana Blvd. & Paseo del Norte

	↔	→	←	↖	↗	NBL	SBL	SEL	SST	SBR		
Movement	EFL	FBI	EBR	VBL	VFI	HBB	NBL	NBT	RBR	SEL	SST	SBR
Lane Configurations	TTT	TTT	T	TTTT	TTTT	T	T	TT	T	T	↑	↓
Traffic Volume (veh/h)	186	1996	76	79	1590	146	77	165	134	221	153	133
Future Traffic Volume (veh/h)	186	1996	76	79	1590	146	77	166	134	221	153	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Q _b) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A _{pbtt})	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/in	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flt Rate, veh/h	194	2079	0	82	1656	0	80	173	0	230	159	0
No. of Lanes	2	3	1	2	3	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh., %	0	0	0	0	0	0	0	0	0	0	0	0
Carp. veh/h	250	2468	768	146	2315	721	469	1291	577	460	1291	577
Arrive On Green	0.14	0.95	0.00	0.04	0.45	0.00	0.36	0.36	0.00	0.36	0.36	0.06
Sat Flow, veh/h	3510	5187	1615	3510	5187	1615	1247	3610	1615	1231	3610	1615
Gn Volume(v), veh/h	194	2079	0	82	1656	0	80	173	0	230	159	0
Grp Sat Flow(g),veh/hIn	1755	1729	1615	1755	1729	1615	1247	1805	1615	1231	1805	1615
Q Served(s), s	6.4	11.7	0.0	2.8	31.2	0.0	5.5	3.9	0.0	16.6	3.6	0.0
Cycle Q Clearing(c), s	6.4	11.7	0.0	2.8	31.2	0.0	8.1	3.9	0.0	22.5	3.6	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	250	2468	768	146	2315	721	469	1291	577	460	1291	577
A/C Ratio(X)	0.78	0.84	0.00	0.56	0.72	0.00	0.17	0.13	0.00	0.50	0.12	0.00
Avail Capic_a/c, veh/h	322	2594	867	176	2377	740	469	1291	577	460	1291	577
%HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(Upstream Filter)	0.42	0.42	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	1.8	0.0	56.4	27.0	0.0	29.0	28.0	0.0	33.6	25.9	0.0
Incr Delay (D2), s/veh	3.9	1.1	0.0	3.3	1.0	0.0	0.8	0.2	0.0	3.8	0.2	0.0
Initial Q Delay(Q)s/veh	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Xile Bacc/O(50%) veh/hIn	3.2	4.1	0.0	1.4	15.1	0.0	2.0	2.0	0.0	6.8	1.8	0.0
n-Grp Delay(d)s/veh	54.4	2.9	0.0	59.8	28.0	0.0	29.8	26.2	0.0	37.4	28.1	0.0
LnGrp LOS	D	A	A	E	C	C	C	C	D	D	C	C
Approach Vol, veh/h	2773			1738			253		389			
Approach Delay, s/veh	7.73			29.5			27.3		32.8			
Approach LOS	A			C			C		C			
Assigned Phs	1	2	3	4	5	6	7	8				
Timer, s	2	3	4	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	47.9	10.0	62.1			47.9	13.5	58.6				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	39.0	6.0	60.0			39.0	11.0	55.0				
Max Q Clear Time (q_cHt), s	11.1	4.8	13.7	24.5	8.4	33.2						
Green Ext Time (p, c), s	3.2	0.0	40.5			2.7	0.1	20.4				
Intersection Summary												
HCM 2010 On Delay												
HCM 2010 LOS												

Timings
1: Louisiana Blvd. & Paseo del Norte

[illegible]

Timings **2: San Pedro Dr. & Paseo del Norte** **Terry O. Brown, P.E.** **10/21/2016**

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	12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Timings 4: San Pedro Dr. & Palomas Ave.

Terry O. Brown, P.E.
10/21/2016

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SR
Lane Configurations	272	24	5	11	102	500	65	420	278
Traffic Volume (vph)	272	24	5	11	102	500	65	420	278
Future Volume (vph)	272	24	5	11	102	500	65	420	278
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	4	4	8	8	5	2	1	6	6
Permitted Phases	4	4	8	8	2	5	2	1	6
Detector Phase	4	4	8	8	5	2	1	6	6
Switch Phase	4	4	8	8	5	2	1	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	21.0	10.0	10.0	10.0	21.0	21.0
Total Split (s)	61.0	61.0	61.0	61.0	17.0	46.0	13.0	42.0	42.0
Total Split (%)	50.8%	50.8%	50.8%	50.8%	14.2%	38.3%	10.8%	35.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag									
Lead/Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effrd Green (s)	36.7	36.7	36.7	36.7	69.7	69.7	69.7	59.2	59.2
Actuated g/c Ratio	0.31	0.31	0.31	0.31	0.58	0.58	0.58	0.49	0.49
Control Delay	51.5	51.5	51.5	51.5	12.9	12.9	12.9	5.4	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	51.5	51.5	51.5	51.5	12.9	12.9	12.9	5.4	5.4
LOS	D	A	C	B	B	C	A	A	A
Approach Delay	33.2	33.2	33.2	33.2	14.6	14.6	14.6	6.3	6.3
Approach LOS	C	C	C	C	B	B	A	A	A
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 120									
Offset: 40 (33%), Referenced to phase 2:NBT and 6:SBTL Start of Green									
Natural Cycle: 55									
Control Type: Actuated/Coordinated									
Maximum v/c Ratio: 0.79									
Intersection Signal Delay: 17.2									
Intersection Capacity Utilization 52.7%									
Analysis Period (min) 15									
Intersection LOS: B									
ICU Level of Service A									
Spills and Phases: 4: San Pedro Dr. & Palomas Ave.									
01	02 (R)	03	04	05 (R)	06 (R)	07	08	09	10
17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5

2021 PM Peak NO BUILD Conditions
Existing Geometry

Synchro 9 Report
2021PNX.syn

HCM 2010 Signalized Intersection Summary 4: San Pedro Dr. & Palomas Ave.

Terry O. Brown, P.E.
10/21/2016

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SR
Lane Configurations	272	24	5	11	102	500	65	420	278
Traffic Volume (veh/h)	272	24	5	11	102	500	65	420	278
Future Volume (veh/h)	272	24	5	11	102	500	65	420	278
Number	7	4	3	8	18	5	2	12	1
Initial Q (Ob) veh	0	0	0	0	0	0	0	0	0
Ped. Bicy. Adj (A _{pb})	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus. Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	320	28	194	6	13	80	120	588	19
Adj No. of Lanes	1	1	0	1	1	0	1	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh. %	0	0	0	0	0	0	0	0	0
Cap. veh/h	424	66	454	306	73	448	414	1848	60
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1324	208	1439	1177	231	1419	1810	3569	115
Grp Volume (v), veh/h	320	0	222	6	0	93	120	297	310
Grp Sat Flow (s), veh/h	1324	0	1646	1177	0	1650	1810	1805	1805
Q Served (s), s	27.7	0.0	12.8	0.5	0.0	4.9	3.8	11.4	11.4
Cycle Q Clear (g/c), s	32.7	0.0	12.8	13.3	0.0	4.9	3.8	11.4	11.4
Prop In Lane	1.00	0.00	0.87	1.00	0.00	0.86	1.00	0.06	1.00
Lane Grp Cap (v), veh/h	424	0	519	306	0	521	414	935	76
V/C Ratio(X)	0.76	0.00	0.43	0.02	0.00	0.18	0.29	0.32	0.16
Avail Cap (v), veh/h	624	0	768	484	0	770	506	935	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	0.0	32.5	37.7	0.0	29.8	13.5	16.7	13.5
Incr Delay (d2), s/veh	3.0	0.0	0.6	0.0	0.0	0.2	0.4	0.9	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	10.5	0.0	5.9	0.2	0.0	2.3	1.9	5.9	6.2
LnGrp Delay(d), s/veh	44.7	0.0	33.0	37.8	0.0	29.9	13.9	17.6	13.6
LnGrp LOS	D	C	C	D	C	C	B	B	C
Approach Vol, veh/h	542				99				897
Approach Delay, s/veh	38.9				30.4				30.6
Approach LOS	D				C				C
Assigned Phs	1	2	3	4	5	6	7	8	
Phs Duration (G+Y+R), s	10.0	67.1	42.9	10.9	66.2	42.9			
Charge Period (Y+R), s	5.0	5.0	5.0	5.0	5.0	5.0			
Max Green Setting (Gmax), s	8.0	41.0	56.0	12.0	37.0	56.0			
Max Q Clear Time (g_c+1), s	4.4	13.4	34.7	5.8	23.7	15.3			
Green Ext Time (p_c), s	0.0	9.3	3.2	0.1	6.6	3.5			
Intersection Summary									
HCM 2010 Ctrl Delay									
HCM 2010 LOS									

2021 PM Peak NO BUILD Conditions
Existing Geometry

Synchro 9 Report
2021PNX.syn

Lanes, Volumes, Timings
 3: Louisiana Blvd. & Palomas Ave.

Terry O. Brown, P.E.
 10/21/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	107	79	77	377	140	152
Future Volume (vph)	107	79	77	377	140	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	95	0	140			0
Storage Lanes	1	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Ft		0.850				0.850
FLP Prohibited	0.950	0.950				
Satd. Flow (prot)	1805	1615	1805	3610	1900	1615
FLP Permitted	0.950	0.950				
Satd. Flow (perm)	1805	1615	1805	3610	1900	1615
Link Speed (mph)	25		35			35
Link Distance (ft)	2629		421			592
Travel Time (s)	71.7		8.2			11.5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	126	83	91	444	165	179
Shared Lane Traffic (%)						
Lane Group Flow (vph)	126	83	91	444	165	179
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	12		12		12	
Link Offset (ft)	0		0		0	
Crosswalk Width (ft)	16		16		16	
Two Way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop		Free	Free	Free	
Intersection Summary	Other					
Area Type:	Other					
Control Type: Unsignalized	ICU Level of Service A					
Intersection Capacity Utilization 27.6%						
Analysis Period (min) 15						

2021 PM Peak NO BUILD Conditions
 Existing Geometry

Synchro 9 Report
 2021/PNX.syn

HCM 2010 TWSC
 3: Louisiana Blvd. & Palomas Ave.

Terry O. Brown, P.E.
 10/21/2016

Intersection	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/veh	3.3					
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol. veh/h	107	79	77	377	140	152
Future Vol. veh/h	107	79	77	377	140	152
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	140			0
Veh in Median Storage, #	0	-	0			0
Grade, %	0	-	-	0		-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0		0		0	0
Mvmt Flow	126	83	91	444	165	179
Major/Minor	Minor2	Minor2	Major1	Major1	Major2	Major2
Conflicting Flow All	568	165	165	0	-	0
Stage 1	165					
Stage 2	403					
Critical Hwy	6.6	6.2	4.1			
Critical Hwy Sig 1	5.4					
Critical Hwy Sig 2	5.8					
Follow-up Hwy	3.5	3.3	2.2			
Pot Cap-1 Maneuver	472	885	1426			
Stage 1	869					
Stage 2	649					
Platoon blocked, %						
Mov Cap-1 Maneuver	442	865	1426			
Mov Cap-2 Maneuver	442					
Stage 1	869					
Stage 2	608					
Approach	ES	ES	NB	NB	SB	SB
HCM Control Delay, s	13.5		1.3			0
HCM LOS	B					
Minor Lane Major Mvmt	NBL	NBT	EBL	EBT	SBT	SBR
Capacity (veh/h)	1426	-	442	865	-	-
HCM Lane V/C Ratio	0.064	-	0.285	0.105	-	-
HCM Control Delay (s)	7.7	-	16.4	9.5	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %ile Q(veh)	0.2	-	1.2	0.4	-	-

2021 PM Peak NO BUILD Conditions
 Existing Geometry

Synchro 9 Report
 2021/PNX.syn

Timings
1: Louisiana Blvd. & Paseo del Norte

Spills and Phases: 1: Louisiana Blvd. & Paseo del Norte

2021 PM Peak BUILD Conditions
Existing Geometry

Terry O. Brown, P.E.
10/21/2016

Synchro 9 Report
2021PBX.syn

Timings **2: San Pedro Dr. & Paseo del Norte** **Terry O. Brown, P.E.** **10/21/2016**

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	383	1893	242	239	1656	190	386	259	192	229	306	399
Future Volume (vph)	383	1893	242	239	1656	190	386	259	192	229	306	399
Turn Type	Prot.	NA	Perm	Prot.	NA	Perm	Prot.	NA	Perm	Prot.	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases												
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Split (s)	22.0	54.0	54.0	16.0	48.0	48.0	21.0	32.0	32.0	18.0	29.0	29.0
Total Split (%)	18.3%	45.0%	45.0%	13.3%	40.0%	40.0%	17.5%	26.7%	26.7%	15.0%	24.2%	24.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead/Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	16.6	49.1	49.1	11.0	43.5	43.5	15.7	27.8	27.8	12.1	24.2	24.2
Actuated g/C Ratio	0.14	0.41	0.41	0.09	0.36	0.36	0.13	0.23	0.23	0.10	0.20	0.20
W/C Ratio	0.83	0.91	0.91	0.76	0.90	0.90	0.27	0.86	0.86	0.66	0.81	0.81
Control Delay	85.6	41.0	3.8	56.4	45.7	12.0	70.0	50.2	17.1	61.5	63.7	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	41.0	3.8	56.4	45.7	12.0	70.0	50.2	17.1	61.5	63.7	40.5
LOS	E	D	A	E	D	B	E	D	B	E	E	D
Approach Delay	41.3			43.9			51.8			53.3		
Approach LOS	D			D			D			D		

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 112 (93%), Referenced to phase 2:NBT and 6:SBL Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum W/C Ratio: 0.91
 Intersection Signal Delay: 45.3
 Intersection Capacity Utilization: 87.2%
 Analysis Period (min): 15

Splits and Phases: 2: San Pedro Dr. & Paseo del Norte
 01 02 (R) 03 04 05 06 (L) 07 08

Timings **2: San Pedro Dr. & Paseo del Norte** **Terry O. Brown, P.E.** **10/21/2016**

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	383	1893	242	239	1656	190	386	259	192	229	306	399
Future Volume (vph)	383	1893	242	239	1656	190	386	259	192	229	306	399
Turn Type	Prot.	NA	Perm	Prot.	NA	Perm	Prot.	NA	Perm	Prot.	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases												
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Split (s)	22.0	54.0	54.0	16.0	48.0	48.0	21.0	32.0	32.0	18.0	29.0	29.0
Total Split (%)	18.3%	45.0%	45.0%	13.3%	40.0%	40.0%	17.5%	26.7%	26.7%	15.0%	24.2%	24.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead/Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	16.6	49.1	49.1	11.0	43.5	43.5	15.7	27.8	27.8	12.1	24.2	24.2
Actuated g/C Ratio	0.14	0.41	0.41	0.09	0.36	0.36	0.13	0.23	0.23	0.10	0.20	0.20
W/C Ratio	0.83	0.91	0.91	0.76	0.90	0.90	0.27	0.86	0.86	0.66	0.81	0.81
Control Delay	85.6	41.0	3.8	56.4	45.7	12.0	70.0	50.2	17.1	61.5	63.7	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	41.0	3.8	56.4	45.7	12.0	70.0	50.2	17.1	61.5	63.7	40.5
LOS	E	D	A	E	D	B	E	D	B	E	E	D
Approach Delay	41.3			43.9			51.8			53.3		
Approach LOS	D			D			D			D		

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 112 (93%), Referenced to phase 2:NBT and 6:SBL Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum W/C Ratio: 0.91
 Intersection Signal Delay: 45.3
 Intersection Capacity Utilization: 87.2%
 Analysis Period (min): 15

Splits and Phases: 2: San Pedro Dr. & Paseo del Norte
 01 02 (R) 03 04 05 06 (L) 07 08

Timings **2: San Pedro Dr. & Paseo del Norte** **Terry O. Brown, P.E.** **10/21/2016**

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	383	1893	242	239	1656	190	386	259	192	229	306	399
Future Volume (vph)	383	1893	242	239	1656	190	386	259	192	229	306	399
Turn Type	Prot.	NA	Perm	Prot.	NA	Perm	Prot.	NA	Perm	Prot.	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases												
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Split (s)	22.0	54.0	54.0	16.0	48.0	48.0	21.0	32.0	32.0	18.0	29.0	29.0
Total Split (%)	18.3%	45.0%	45.0%	13.3%	40.0%	40.0%	17.5%	26.7%	26.7%	15.0%	24.2%	24.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead/Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	16.6	49.1	49.1	11.0	43.5	43.5	15.7	27.8	27.8	12.1	24.2	24.2
Actuated g/C Ratio	0.14	0.41	0.41	0.09	0.36	0.36	0.13	0.23	0.23	0.10	0.20	0.20
W/C Ratio	0.83	0.91	0.91	0.76	0.90	0.90	0.27	0.86	0.86	0.66	0.81	0.81
Control Delay	85.6	41.0	3.8	56.4	45.7	12.0	70.0	50.2	17.1	61.5	63.7	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	41.0	3.8	56.4	45.7	12.0	70.0	50.2	17.1	61.5	63.7	40.5
LOS	E	D	A	E	D	B	E	D	B	E	E	D
Approach Delay	41.3			43.9			51.8			53.3		
Approach LOS	D			D			D			D		

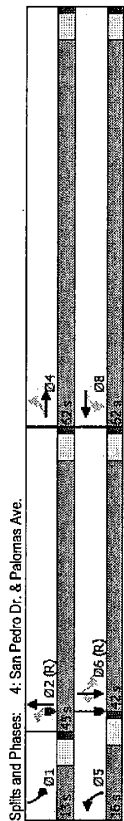
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 112 (93%), Referenced to phase 2:NBT and 6:SBL Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum W/C Ratio: 0.91
 Intersection Signal Delay: 45.3
 Intersection Capacity Utilization: 87.2%
 Analysis Period (min): 15

Splits and Phases: 2: San Pedro Dr. & Paseo del Norte
 01 02 (R) 03 04 05 06 (L) 07 08

Timings **2: San Pedro Dr. & Paseo del Norte** **Terry O. Brown, P.E.** **10/21/2016**

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	383	1893	242	239	1656	190	386	259	192	229	306	399
Future Volume (vph)	383	1893	242	239	1656	190	386	259	192	229	306	399
Turn Type	Prot.	NA	Perm	Prot.	NA	Perm	Prot.	NA	Perm	Prot.	NA	Perm
Protected Phases	7	4	4	3	8	8	5	2	2	1	6	6
Permitted Phases												
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Total Split (s)	22.0	54.0	54.0	16.0	48.0	48.0	21.0	32.0	32.0	18.0	29.0	29.0
Total Split (%)	18.3%	45.0%	45.0%	13.3%	40.0%	40.0%	17.5%	26.7%	26.7%	15.0%	24.2%	24.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead/Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	16.6	49.1	49.1	11.0	43.5	43.5	15.7	27.8	27.8	12.1	24.2	24.2
Actuated g/C Ratio	0.14	0.41	0.41	0.09	0.36	0.36	0.13	0.23	0.23	0.10	0.20	0.20
W/C Ratio	0.83	0.91	0.91	0.76	0.90	0.90	0.27	0.86	0.86	0.66	0.81	0.81

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SR
Lane Configurations	272	24	11	11	102	500	72	420	278
Traffic Volume (vph)	272	24	11	11	102	500	72	420	278
Future Volume (vph)	272	24	11	11	102	500	72	420	278
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	4	4	8	8	5	2	1	6	6
Permitted Phases	4	4	8	8	5	2	1	6	6
Detector Phase	4	4	8	8	5	2	1	6	6
Switch Phase	4	4	8	8	5	2	1	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	21.0	10.0	21.0	21.0	21.0	21.0
Total Split (s)	62.0	62.0	62.0	62.0	18.0	45.0	13.0	42.0	42.0
Total Split (%)	51.7%	51.7%	51.7%	51.7%	13.3%	37.5%	10.8%	35.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	C-Min
Act Eff Green (s)	37.2	37.2	37.2	37.2	68.9	59.7	66.7	58.6	58.6
Act Eff Red (s)	0.31	0.31	0.31	0.31	0.57	0.50	0.56	0.49	0.49
Actuated G/C Ratio	0.80	0.34	0.04	0.19	0.22	0.34	0.18	0.28	0.34
Control Delay	52.0	6.6	24.5	6.8	13.2	20.9	5.6	9.2	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	52.0	6.6	24.5	6.8	13.2	20.9	5.6	9.2	2.2
LOS	D	A	C	A	B	C	A	A	A
Approach Delay	33.4	8.7	19.6	19.6	6.4	6.4	6.4	6.4	6.4
Approach LOS	C	A	B	B	A	A	A	A	A
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 120									
Offset: 39 (33%), Referenced to phase 2(NBTL) and 6(SBTL) Start of Green									
Natural Cycle: 55									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.80									
Intersection Signal Delay: 17.1									
Intersection Capacity Utilization 52.9%									
Analysis Period (min): 15									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SR
Lane Configurations	272	24	165	11	11	82	102	500	21	72	420	278
Traffic Volume (veh/h)	272	24	165	11	11	82	102	500	21	72	420	278
Future Volume (veh/h)	272	24	165	11	11	82	102	500	21	72	420	278
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Obs), veh	0	0	0	0	0	0	0	0	0	0	0	0
Peak-Bike Adj(A_pb1)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	320	28	194	13	13	96	120	588	25	85	494	327
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	424	68	470	321	64	473	406	1787	76	470	1799	805
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.35	0.51	0.51	0.51	0.51	0.16
Sat Flow, veh/h	1305	208	1439	1177	196	1448	1810	3529	150	1810	3610	1615
Grp Volume(v), veh/h	320	0	222	13	0	109	120	300	313	85	494	327
Grp Sat Flow(s), veh/h	1305	0	1648	1177	0	1644	1810	1805	1874	1810	1805	1615
Q Serve(s), s	28.1	0.0	12.8	1.0	0.0	5.7	3.9	11.8	11.9	2.7	14.4	21.8
Cycle Q Clear(g, c), s	33.8	0.0	12.6	13.6	0.0	5.7	3.9	11.8	11.9	2.7	14.4	21.8
Prop In Lane	1.00	1.00	0.87	1.00	0.00	0.88	1.00	0.08	1.00	0.08	1.00	1.00
Lane Grp Cap(c), veh/h	424	0	538	321	0	538	406	914	949	470	1799	805
V/C Ratio(X)	0.75	0.00	0.41	0.04	0.00	0.20	0.30	0.33	0.33	0.18	0.27	0.41
Avail Cap(c), veh/h	617	0	782	496	0	781	482	914	949	516	1799	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Unstream Filter(i)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	41.3	0.0	31.4	36.7	0.0	29.1	14.2	17.5	17.5	14.3	31.1	34.2
Incr Delay (d2), s/veh	3.1	0.0	0.5	0.1	0.0	0.2	0.4	1.0	0.9	0.1	0.3	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/m	10.5	0.0	5.8	0.3	0.0	2.6	1.9	6.1	6.3	1.4	7.3	10.0
LnGrp Delay(d), s/veh	44.4	0.0	31.9	36.8	0.0	29.3	14.6	18.5	18.5	14.4	31.4	35.3
LnGrp LOS	D	C	C	D	C	C	B	B	B	B	C	D
Approach Vol, veh/h	542			122			733			906		
Approach Delay, s/veh	39.3			30.1			17.8			31.2		
Approach LOS	D			C			B			C		
Inter	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	10.0	65.8		44.2	11.0	64.8		44.2				
Change Period (Y+R), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	40.0		57.0	11.0	37.0		57.0				
Max Q Clear Time (g_c+1), s	4.7	13.9		35.8	5.9	23.8		35.8				
Green Ext Time (p_c), s	0.0	9.2		3.4	0.1	6.6		3.7				
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

Lane Group	EBL	EBR	NBL	NBT	SBT	SSR
Lane Configurations						
Traffic Volume (vph)	0	188	78	388	143	161
Future Volume (vph)	0	188	78	388	143	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	95	0	140			0
Storage Lanes	0	1	2			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Fr		0.865				0.850
Flt Protected			0.850			
Satd. Flow (prot)	0	1644	1805	3610	1900	1615
Flt Permitted			0.850			
Satd. Flow (perm)	0	1644	1805	3610	1900	1615
Link Speed (mph)	25		35		35	
Link Distance (ft)	275		298		592	
Travel Time (s)	7.5		5.8		11.5	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	0	221	92	456	168	189
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	221	92	456	168	189
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width (ft)	0		12		12	
Link Offset (ft)	0		0		0	
Crosswalk Width (ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop		Free		Free	
Intersection Summary	Other					
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	25.8%					
Analysis Period (min) / 15	ICU Level of Service A					

Intersection	EBL	EBR	NBL	NBT	SBT	SSR
Int Delay, s/veh	2.7					
Movement						
Lane Configurations						
Traffic Vol, veh/h	0	188	78	388	143	161
Future Vol, veh/h	0	188	78	388	143	161
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	140	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Minor Flow	0	221	92	456	168	189
Major/Minor	Minor2	Minor2	Major2	Major2	Major2	Major2
Conflicting Flow All	-	168	0	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hwy	-	6.2	4.1	-	-	-
Critical Hwy Stg 1	-	-	-	-	-	-
Critical Hwy Stg 2	-	-	-	-	-	-
Follow-up Hwy	-	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	0	881	1422	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	881	1422	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	EB	NB	NB	SB	SB
HCM Control Delay, s	10.5	10.5	1.3	1.3	0	0
HCM LOS	B	B	A	A	B	B
Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	SBL	SBR
Capacity (veh/h)	1422	-	881	-	-	-
HCM Lane V/C Ratio	0.065	-	0.251	-	-	-
HCM Control Delay (s)	7.7	-	10.5	-	-	-
HCM Lane LOS	A	-	B	-	-	-
HCM 85th %ile Q(veh)	0.2	-	1	-	-	-

Lanes, Volumes, Timings
 5: Palomas Ave. & Dwy "A"
 Terry O. Brown, P.E.
 10/21/2016

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑	↑	↑			↑
Traffic Volume (vph)	0	12	23	25	0	1
Future Volume (vph)	0	12	23	25	0	1
Ideal Flow (vphpl)	1800	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr		0.930				0.865
RT Protected	0	1800	1787	0	0	1844
Satd. Flow (prot)						
RT Permitted	0	1900	1787	0	0	1844
Satd. Flow (perm)						
Link Speed (mph)	25	25	25	25	25	25
Link Distance (ft)	98	275	213			
Travel Time (s)	2.7	7.5	5.8			
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	0	40	77	83	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	40	160	0	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	0	0	0	0	0	0
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16			16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	13.3%					
Analysis Period (min)	15					
ICU Level of Service A						

2021 PM Peak BUILD Conditions
 Existing Geometry
 Synchro 9 Report
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HCM 2010 TWSC
 5: Palomas Ave. & Dwy "A"
 Terry O. Brown, P.E.
 10/21/2016

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, s/veh	0.1					
Lane Configurations	0	12	23	25	0	1
Traffic Vol, veh/h	0	12	23	25	0	1
Future Vol, veh/h	0	12	23	25	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	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	0	0	0
Grade, %	-	0	0	0	0	0
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	40	77	83	0	3
Major/Minor						
Conflicting Flow All	-	0	-	0	-	118
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	8.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	3.3
Follow-up Hdwy	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	-	-	-	0	899
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	899
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
EB	0	0	0	0	8.8	A
WBR	0	0	0	0	8.8	A
SB	0	0	0	0	8.8	A
HCM Control Delay, s	0	0	0	0	8.8	A
HCM LOS						
Minor Lane/Major Mvmt						
EBT	WBT	WBR	SBL	SBR		
Capacity (veh/h)	-	-	-	-	939	
HCM Lane V/C Ratio	-	-	-	-	0.004	
HCM Control Delay (s)	-	-	-	-	8.8	
HCM Lane LOS	-	-	-	-	A	
HCM 95th %tile Q(veh)	-	-	-	-	0	

2021 PM Peak BUILD Conditions
 Existing Geometry
 Synchro 9 Report
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Lane Group	EBL	EBT	WBT	WBL	EBL	SSR
Lane Configurations	4	4	4	4	4	4
Traffic Volume (vph)	20	25	11	11	1	75
Future Volume (vph)	20	25	11	11	1	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fd	0.978	0.978	0.932	0.932	0.867	0.867
Flt Protected	0	1653	1771	0	1646	0
Flt Permitted	0.978	0.978	0.932	0.932	0.867	0.867
Satd. Flow (pcum)	0	1853	1771	0	1646	0
Link Speed (mph)	25	25	25	25	25	25
Link Distance (ft)	62	58	58	58	190	190
Travel Time (s)	1.7	1.6	1.6	1.6	5.2	5.2
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	67	83	37	37	3	250
Shared Lane Traffic (%)	0	150	74	0	253	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	0	0	0	0	12	0
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	15	15	15	15	15
Turning Speed (mph)	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization	20.5%					
Analysis Period (min)	15					
ICU Level of Service	A					

Intersection	EBL	EBT	WBT	WBL	EBL	SSR
Int Delay, s/veh	6.2					
Movement	4	4	4	4	4	4
Lane Configurations	20	25	11	11	1	75
Traffic Vol. veh/h	20	25	11	11	1	75
Future Vol. veh/h	20	25	11	11	1	75
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Min/Max Flow	67	83	37	37	3	250
Major/Minor	Major	Minor	Major	Minor	Major	Minor
Conflicting Flow All	73	0	-	0	272	55
Stage 1	-	-	-	-	55	-
Stage 2	-	-	-	-	217	-
Critical Hdwy	4.1	-	-	-	5.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pd Cap-1 Maneuver	1540	-	-	-	722	1018
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1540	-	-	-	889	1018
Mov Cap-2 Maneuver	-	-	-	-	889	-
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	788	-
Approach	EB	EB	WB	WB	EB	EB
HCM Control Delay, s	3.3		0		9.7	
HCM LOS					A	
Minor Lane/Minor Mvmt	EBL	EBT	WBL	WBT	EBL	EBT
Capacity (veh/h)	1540	-	-	-	1012	-
HCM Lane V/C Ratio	0.043	-	-	-	0.25	-
HCM Control Delay (s)	7.4	0	-	-	9.7	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %ile Q(veh)	0.1	-	-	-	1	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SSR
Lane Configurations		4	1		1	
Traffic Volume (vph)	1	54	87	1	1	3
Future Volume (vph)		54	87		1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit			0.989		0.896	
Fit Protected		0.999			0.989	
Sat'd. Flow (prot)	0	1898	1898	0	1684	0
Fit Permitted		0.999			0.989	
Sat'd. Flow (perm)	0	1898	1898	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		264	59		179	
Travel Time (s)		7.2	1.6		4.9	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	3	180	250	3	3	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	183	253	0	13	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control	Free	Free	Free	Stop	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.6%					
Analysis Period (min)	15					
ICU Level of Service A						

Intersection	EBL	EBT	WBT	WBR	SBL	SSR
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SSR
Lane Configurations	1	4	1	1	1	3
Traffic Vol. veh/h	1	54	87	1	1	3
Future Vol. veh/h	1	54	87	1	1	3
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	180	260	3	3	10
Major/Minor						
Conflicting Flow All	283	0	-	0	479	292
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	8.4	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1280	-	-	-	547	752
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1280	-	-	-	547	752
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
ES	EBL	EBT	WBT	WBR	SBL	SSR
HCM Control Delay, s	0.1	-	-	-	-	-
HCM LOS	-	-	-	-	-	-
Minor Lane/Major Mvmt						
Capacity (veh/h)	1280	-	-	-	-	688
HCM Lane V/C Ratio	0.003	-	-	-	-	0.019
HCM Control Delay (s)	7.8	-	-	-	-	10.3
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %ile Q(veh)	0	-	-	-	-	0.1

Lanes, Volumes, Timings
8: Palomas Ave. & Dwy "D"

Terry O. Brown, P.E.
10/21/2016

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	4	1	1	1	3
Traffic Volume (vph)	1	55	89	1	1	3
Future Volume (vph)	1	55	89	1	1	3
Ideal Flow (vphpl)	1800	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt		0.999	0.999		0.886	
Flt Protected		0.999			0.969	
Satd. Flow (prot)	0	1888	1888	0	1684	0
Flt Permitted		0.999			0.989	
Satd. Flow (perm)	0	1898	1898	0	1694	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		187	264		162	
Travel Time (s)		5.1	7.2		4.4	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	3	183	297	3	3	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	186	300	0	13	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)		0	0	0	12	
Link Offset (ft)		0	0		0	
Crosswalk Width (ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.7%					
Analysis Period (min)	15					
	ICU Level of Service A					

2021 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
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HCM 2010 TWSC
8: Palomas Ave. & Dwy "D"

Terry O. Brown, P.E.
10/21/2016

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, shveh	0.3					
Lane Configurations	4	4	1	1	1	3
Traffic Vol, veh/h	1	55	89	1	1	3
Future Vol, veh/h	1	55	89	1	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	0	0	0
Grade, %	-	0	0	0	0	0
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	183	297	3	3	10
Majority						
Conflicting Flow All	300	0	-	0	489	298
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	190	-
Critical Hwy	4.1	-	-	-	7.1	6.2
Critical Hwy Stg 1	-	-	-	-	6.1	-
Critical Hwy Stg 2	-	-	-	-	3.5	3.3
Follow-up Hwy	2.2	-	-	-	493	746
Pd Cap-1 Maneuver	1273	-	-	-	715	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1273	-	-	-	492	746
Mov Cap-2 Maneuver	-	-	-	-	492	-
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	814	-
Approach						
EB	0.1	-	-	-	88	-
HCM Control Delay, s	-	-	-	-	10.6	-
HCM LOS	-	-	-	-	B	-
Minor Lane/Major Mvmt						
EBL	EBT	WBT	WBR	SBL	SBR	
Capacity (veh/h)	1273	-	-	-	861	-
HCM Lane V/C Ratio	0.003	-	-	-	0.02	-
HCM Control Delay (s)	7.8	0	-	-	10.6	-
HCM Lane LOS	A	A	-	-	B	-
HCM 85th %ile Q(veh)	0	-	-	-	0.1	-

2021 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
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Lane Group	EBL	EBT	WBT	WBR	SEB	SEB
Lane Configurations	1	56	91	1	1	3
Traffic Volume (vph)	1	56	91	1	1	3
Future Volume (vph)	1600	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor		0.999	0.999	0.999	0.999	0.999
Flt. Protected	0	1898	1898	0	1894	0
Satd. Flow (prot)	0	1898	1898	0	1894	0
Flt. Permitted	0	1898	1898	0	1894	0
Satd. Flow (perm)	0	1898	1898	0	1894	0
Link Speed (mph)	25	25	25	25	30	30
Link Distance (ft)	171	167	167	155		
Travel Time (s)	4.7	5.1	5.1	3.5		
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	3	187	303	3	3	10
Shared Lane Traffic (%)	0	190	306	0	13	0
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Left	Right	Left	Right
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	0	0	0	12		
Link Offset (ft)	0	0	0	0		
Crosswalk Width (ft)	16	16	16	16		
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	15	15	15	15	9
Turning Speed (mph)						
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.9%					
Analysis Period (min)	15					
	ICU Level of Service A					

Intersection	EBL	EBT	WBT	WBR	SEB	SEB
Int Delay, sveh	0.3					
Movement	EBL	EBT	WBT	WBR	SEB	SEB
Lane Configurations	1	56	91	1	1	3
Traffic Vol. veh/h	1	56	91	1	1	3
Future Vol. veh/h	1	56	91	1	1	3
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	0	0	0
Grade, %	-	0	0	0	0	0
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Minor Flow	3	187	303	3	3	10
Major/Minor	Major	Minor	Major	Minor	Major	Minor
Conflicting Flow All	307	0	-	0	498	305
Stage 1	-	-	-	-	305	-
Stage 2	-	-	-	-	193	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Post Cap-1 Maneuver	1265	-	-	-	533	740
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	845	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1265	-	-	-	533	740
Mov Cap-2 Maneuver	-	-	-	-	533	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	842	-
Approach	EB	EB	WB	WB	SB	SB
HCM Control Delay, s	0.1	0.1	0	0	10.4	10.4
HCM LOS					B	B
Minor Lane/Minor Mvmt	EBL	EBT	WBT	WBR	SEB	SEB
Capacity (veh/h)	1265	-	-	-	675	-
HCM Lane V/C Ratio	0.003	-	-	-	0.02	-
HCM Control Delay (s)	7.9	0	-	-	10.4	-
HCM Lane LOS	A	A	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	0.1	-

Lane Group	EBL	EBT	WBT	WBR	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	1	58	93	1	1	1	1	1	3	3
Traffic Volume (vph)	1	58	93	1	1	1	1	1	3	3
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999
Flt Protected	0	1898	1898	0	1894	0	1894	0	0	0
Satd. Flow (prot)	0	1898	1898	0	1894	0	1894	0	0	0
Flt Permitted	0	1898	1898	0	1894	0	1894	0	0	0
Satd. Flow (perm)	0	1898	1898	0	1894	0	1894	0	0	0
Link Speed (mph)	25	25	25	25	25	25	25	25	25	25
Link Distance (ft)	1015	171	171	168	168	171	171	168	168	168
Travel Time (s)	27.7	4.7	4.7	4.8	4.8	4.7	4.7	4.8	4.8	4.8
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	3	193	310	3	3	3	3	3	10	10
Shared Lane Traffic (%)	0	193	310	0	13	0	13	0	0	0
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Right	Left	Right	Right
Lane Alignment	12	12	12	12	12	12	12	12	12	12
Median Width (ft)	0	0	0	0	0	0	0	0	0	0
Link Offset (ft)	18	18	18	18	18	18	18	18	18	18
Crosswalk Width (ft)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	15	15	15	15	15	15	15	15	15	15
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop
Area Type	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban	Urban
Channel Type	Unsignalized	Unsignalized	Unsignalized	Unsignalized	Unsignalized	Unsignalized	Unsignalized	Unsignalized	Unsignalized	Unsignalized
Intersection Capacity Utilization	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Analysis Period (min)	15	15	15	15	15	15	15	15	15	15

Intersection	0.3									
Int Delay, s/veh	0.3									
Movement	EBL	EBT	WBT	WBR	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4
Traffic Vol. veh/h	1	58	93	1	1	1	1	1	3	3
Future Vol. veh/h	1	58	93	1	1	1	1	1	3	3
Conflicting Peds. #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-	-	-	-	-
Veh In Median Storage, #	-	-	-	-	-	-	-	-	-	-
Grade, %	-	-	-	-	-	-	-	-	-	-
Peak Hour Factor	30	30	30	30	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0
Minor Flow	3	183	310	3	3	3	3	3	10	10
Major Flow	313	0	0	0	0	0	0	0	512	312
Conflicting Flow All	313	0	0	0	0	0	0	0	512	312
Stage 1	-	-	-	-	-	-	-	-	200	-
Stage 2	-	-	-	-	-	-	-	-	-	6.2
Critical Hwy	4.1	-	-	-	-	-	-	-	5.4	-
Critical Hwy Stg 1	-	-	-	-	-	-	-	-	-	5.4
Critical Hwy Stg 2	-	-	-	-	-	-	-	-	-	3.5
Follow-up Hwy	2.2	-	-	-	-	-	-	-	526	733
Plat Cap-1 Maneuver	1259	-	-	-	-	-	-	-	747	-
Stage 1	-	-	-	-	-	-	-	-	835	-
Stage 2	-	-	-	-	-	-	-	-	-	838
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1259	-	-	-	-	-	-	-	523	733
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	523	-
Stage 1	-	-	-	-	-	-	-	-	747	-
Stage 2	-	-	-	-	-	-	-	-	-	835
Approach	EB	EB	WB	WB	EB	EB	WB	WB	SB	SB
HCM Control Delay, s	0.1	0.1	0	0	0.1	0.1	0	0	10.5	10.5
HCM LOS	B	B	A	A	B	B	A	A	B	B
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	1259	-	-	-	-	-	-	-	666	-
HCM Lane V/C Ratio	0.003	-	-	-	-	-	-	-	0.02	-
HCM Control Delay (s)	7.9	0	-	-	-	-	-	-	10.5	-
HCM Lane LOS	A	A	-	-	-	-	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	-	-	-	-	0.1	-



Lane Group	EST	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	54	0	0	0	5	8	1
Future Volume (vph)	54	0	0	0	5	8	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FI							
FI Protected							
Satd. Flow (prot)	1800	0	0	1800	1783	0	0
FI Permitted							
Satd. Flow (perm)	1800	0	0	1800	1783	0	0
Link Speed (mph)	25			25	30		
Link Distance (ft)	59			370	117		
Travel Time (s)	1.6			10.1	2.7		
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	180	0	0	17	27	3	3
Shared Lane Traffic (%)							
Lane Group Flow (vph)	180	0	0	17	30	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right	Right
Median Width (ft)	0			0	12		
Link Offset (ft)	0			0	0		
Crosswalk Width (ft)	16			16	16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9	
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
Intersection Summary							
Area Type	Other						
Control Type: Unsignalized							
Intersection Capacity Utilization 13.3%							
Analysis Period (min) 15							
	ICU Level of Service A						

Intersection	1.3						
Int Delay, s/vph							
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑	↑	↑	↑	↑	↑	
Traffic Vol. veh/h	54	0	0	5	8	1	
Future Vol. veh/h	54	0	0	5	8	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	-	-	-	-	-	-	
Yeh in Median Storage, #	0	-	-	-	0	-	
Grade, %	0	-	-	-	0	-	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30	
Heavy Vehicles, %	0	0	0	0	0	0	
Minor Flow	180	0	0	17	27	3	
Major/Minor	Major	Minor	Major	Minor	Major	Minor	
Conflicting Flow All	0	-	-	-	197	180	
Stage 1	-	-	-	-	180	-	
Stage 2	-	-	-	-	17	-	
Critical Hwy	-	-	-	-	8.4	6.2	
Critical Hwy Stg 1	-	-	-	-	5.4	-	
Critical Hwy Stg 2	-	-	-	-	5.4	-	
Follow-up Hwy	-	-	-	-	3.5	3.3	
Platoon blocked, %	-	-	-	-	798	868	
Stage 1	-	0	0	0	856	-	
Stage 2	-	0	0	0	1011	-	
Platoon blocked, %	-	-	-	-	798	868	
Mov Cap-1 Maneuver	-	-	-	-	798	-	
Mov Cap-2 Maneuver	-	-	-	-	868	-	
Stage 1	-	-	-	-	1011	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	WB	WB	WB	WB	WB	
HCM Control Delay, s	0	0	0	0	9.7	9.7	
HCM LOS					A	A	
Minor Lane/Minor Mvmt	NBL1	EBT	WBT				
Capacity (veh/h)	803	-	-	-	-	-	
HCM Lane V/C Ratio	0.037	-	-	-	-	-	
HCM Control Delay (s)	9.7	-	-	-	-	-	
HCM Lane LOS	A	-	-	-	-	-	
HCM 85th %ile Q(veh)	0.1	-	-	-	-	-	

Lanes, Volumes, Timings
13: Dwy "I" & Palomas Ave.

Terry O. Brown, P.E.
10/21/2016

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	0	23	0	↑
Traffic Volume (vph)	25	0	0	23	0	12
Future Volume (vph)	25	0	0	23	0	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
RT						0.865
RT Protected	1800	0	0	1800	0	1844
RT Permitted	1800	0	0	1800	0	1844
Satd. Flow (perm)	25	0	0	25	25	25
Link Speed (mph)	58			70	99	
Link Distance (ft)	1.6			1.9	2.7	
Travel Time (s)	0.30	0.30	0.30	0.30	0.30	0.30
Peak Hour Factor	83	0	0	77	0	40
Adj. Flow (vph)	83	0	0	77	0	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	83	0	0	77	0	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	0	0	0	0	0	0
Link Offset (ft)	0			0	0	0
Crosswalk Width (ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	g
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary	ICU Level of Service A					
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	13.3%					
Analysis Period (min)	15					

2021 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2021PBX.syn

HCM 2010 TWSC
13: Dwy "I" & Palomas Ave.

Terry O. Brown, P.E.
10/21/2016

Intersection	EBT	EBR	WBL	WBT	NBL	NBR
Int Delay, s/vch	1.8					
Movement	↑	↑	0	23	0	↑
Lane Configurations	↑	↑	0	23	0	↑
Traffic Vol, veh/h	25	0	0	23	0	12
Future Vol, veh/h	25	0	0	23	0	12
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	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Wght Flow	83	0	0	77	0	40
Major/Minor	Major1	Major2	Minor			
Conflicting Flow All	0	-	-	-	-	83
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hwy	-	-	-	-	-	6.2
Critical Hwy Stg 1	-	-	-	-	-	-
Critical Hwy Stg 2	-	-	-	-	-	-
Follow-up Hwy	-	-	-	-	-	3.3
Pd Cap-1 Maneuver	-	0	0	-	0	862
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	882
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	8.8			
HCM LOS			A			
Minor Lane/Minor Wght	NBL1	EBT	WBT			
Capacity (veh/h)	982	-	-			
HCM Lane V/C Ratio	0.041	-	-			
HCM Control Delay (s)	8.8	-	-			
HCM Lane LOS	A	-	-			
HCM 85th %ile Q(veh)	0.1	-	-			

2021 PM Peak BUILD Conditions
Existing Geometry

Synchro 9 Report
2021PBX.syn

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	12	25	0	23	0	1
Traffic Volume (vph)	12	25	0	23	0	1
Future Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.898					0.885
RT Protected	1727	0	0	1900	0	1844
Satd. Flow (prot)	1727	0	0	1900	0	1844
RT Permitted	25	25	0	23	25	
Satd. Flow (perm)	70	88	132			
Link Speed (mph)	1.9	2.7	3.6			
Link Distance (ft)	0.30	0.30	0.30	0.30	0.30	
Travel Time (s)	40	83	0	77	0	3
Peak Hour Factor						
Adj. Flow (vph)	123	0	0	77	0	3
Shared Lane Traffic (%)	No	No	No	No	No	No
Lane Group Flow (vph)	Left	Right	Left	Left	Right	
Enter Blocked Intersection	0	0	0	0	0	
Lane Alignment	0	0	0	0	0	
Median Width(ft)	0	0	0	0	0	
Link Offset(ft)	16	16	16	16	16	
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	
Two way Left Turn Lane	9	15	15	15	15	
Headway Factor	Free	Free	Free	Free	Stop	
Turning Speed (mph)						
Sign Control						
Intersection Summary						
Area Type	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%						
Analysis Period (min) 15						
ICU Level of Service A						

Intersection	EBT	EBR	WBL	WBT	NBL	NBR
Int Delay, sveh	12	25	0	23	0	1
Int Delay, sveh	12	25	0	23	0	1
Lane Configurations	12	25	0	23	0	1
Traffic Vol. veh/h	12	25	0	23	0	1
Future Vol. veh/h	1900	1900	1900	1900	1900	1900
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-
Storage Length	0	0	0	0	0	0
Veh In Median Storage, #	0	0	0	0	0	0
Grade, %	0	0	0	0	0	0
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Minor Flow	40	83	0	77	0	3
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3	Minor4
Conflicting Flow All	0	0	0	0	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	EBR	WBL	WBT	NBL	NBR
HCM Control Delay, s	0	0	0	0	8.7	8.7
HCM LOS					A	A
Minor Lane/Minor Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	983					
HCM Lane V/C Ratio	0.003					
HCM Control Delay (s)	8.7					
HCM Lane LOS	A					
HCM 95th %ile Q(veh)	0					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y	Y	4	4	4	4
Traffic Volume (vph)	53	5	6	400	300	13
Future Volume (vph)	53	5	6	400	300	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr	0.988				0.994	
Flt Probabed	0.956			0.999		
Satd. Flow (prot)	1795	0	0	1899	1889	0
Flt Permitted	0.956			0.999		
Satd. Flow (perm)	1795	0	0	1898	1889	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	152			123	298	
Travel Time (s)	3.5			2.4	5.8	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	177	17	20	1333	1000	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	194	0	0	1353	1043	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 35.8%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/veh	158.1					
Lane Configurations	Y	Y	4	4	4	4
Traffic Vol, veh/h	53	5	6	400	300	13
Future Vol, veh/h	53	5	6	400	300	13
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	0	None	None	None	None	None
Storage Length	0					
Veh in Median Storage, #	0					
Grade, %	0					
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	177	17	20	1333	1000	43
Major/Minor	Minor2 Major1					
Conflicting Flow All	2385	1022	1043	0	0	0
Stage 1	1022					
Stage 2	1373					
Critical Hdwy	6.4	6.2	4.1			
Critical Hdwy Stg 1	5.4					
Critical Hdwy Stg 2	5.4					
Follow-up Hdwy	3.5	3.3	2.2			
Pet Cap-1 Maneuver	-38	289	675			
Stage 1	350					
Stage 2	238					
Platoon blocked, %						
Mov Cap-1 Maneuver	-34	289	675			
Mov Cap-2 Maneuver	-34					
Stage 1	350					
Stage 2	211					
Approach	EB	EB	NB	SB	SB	SB
HCM Control Delay, s	\$ 2117.2		0.2			0
HCM LOS	F					
Minor Lane/Stage Mvmt	NBL	NBT	EBL	EBT	SBT	SBR
Capacity (veh/h)	675	37				
HCM Lane V/C Ratio	0.03	- 5.225				
HCM Control Delay (s)	10.5	\$ 2117.2				
HCM Lane LOS	B	A	F			
HCM 85th %ile Q(veh)	0.1	- 22.7				
Notes						
Volume exceeds capacity	\$ Delay exceeds 300s					
	* Computation Not Defined					
	* All major volume in platoon					

Lanes, Volumes, Timings
15: Louisiana Blvd. & Dwy "K"

Terry O. Brown, P.E.
10/21/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	53	5	6	400	300	13
Traffic Volume (vph)	53	5	6	400	300	13
Future Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.988				0.994	
Flt Protected	0.956				0.999	
Satd. Flow (prot)	1795	0	0	1898	1889	0
Flt Permitted	0.956				0.999	
Satd. Flow (perm)	1795	0	0	1898	1889	0
Link Speed (mph)	30				35	
Link Distance (ft)	152				123	
Travel Time (s)	3.5				2.4	
Peak Hour Factor	0.30	0.30	0.30	0.30	0.30	0.30
Adj. Flow (vph)	177	17	20	1333	1000	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	194	0	0	1353	1043	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width (ft)	12			24	24	
Link Offset (ft)	0			0	0	
Crosswalk Width (ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Release Point Summary						
Area Type	Other					
Control Type	Unsignalized					
Intersection Capacity Utilization	35.8%					
Analysis Period (min)	15					

2021 PM Peak BUILD Conditions Mit
Mitigated Geometry
Synchro 9 Report
2021PBX_MIT.syn

HCM 2010 TWSC
15: Louisiana Blvd. & Dwy "K"

Terry O. Brown, P.E.
10/21/2016

Intersection	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/vph	36.1					
Lane Configurations	53	5	6	400	300	13
Traffic Vol, veh/h	53	5	6	400	300	13
Future Vol, veh/h	53	5	6	400	300	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	0	None	None	None	None	None
Storage Length	0					
Veh in Median Storage, #	0					
Grade, %	0					
Peak Hour Factor	30	30	30	30	30	30
Heavy Vehicles, %	0	0	0	0	0	0
Minor Flow	177	17	20	1333	1000	43
Major/Minor	Minor 2	Major 1	Major 1	Major 2	Major 2	Major 2
Conflicting Flow All	2395	1022	1043	0		0
Stage 1	1022					
Stage 2	1373					
Critical Hwy	7.1	5.2	4.1			
Critical Hwy Stg 1	6.1					
Critical Hwy Stg 2	6.1					
Follow-up Hwy	3.5	3.3	2.2			
Rot Cap-1 Maneuver	~24	288	675			
Stage 1	287					
Stage 2	162					
Platoon blocked, %						
Mov Cap-1 Maneuver	~22	288	675			
Mov Cap-2 Maneuver	~99					
Stage 1	254					
Stage 2	~161					
Approach	EB	EB	NS	NS	SB	SB
HCM Control Delay, s	\$482					
HCM LOS	F		0.2			0
Minor Lane/Minor Min	NBL	NBT	EBL	EBT	SBT	SBR
Capacity (veh/h)	675	105				
HCM Lane V/C Ratio	0.03	1.841				
HCM Control Delay (s)	10.5	0	\$482			
HCM Lane LOS	B	A	F			
HCM 95th %ile Q(veh)	0.1	15.7				
Notes						
Volume exceeds capacity	\$ Delay exceeds 300s	Computation Not Defined				All major volume in platoon

2021 PM Peak BUILD Conditions Mit
Mitigated Geometry
Synchro 9 Report
2021PBX_MIT.syn

Traffic Count Data Sheet

Year Counts Taken: 2016 E-W Street: Paseo del Norte Speed Limit (Paseo del Norte)= 55 MPH
 N-S Street: Louisiana Blvd. Speed Limit (Louisiana Blvd.)= 35 MPH
 9/2/16

SIGNALIZED

Begin Time	End Time	Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	24	270	28	29	394	27	21	21	8	33	40	29
7:15 AM	7:30 AM	21	320	73	86	437	36	39	35	32	32	60	35
7:30 AM	7:45 AM	37	371	67	33	542	41	49	55	44	34	69	27
7:45 AM	8:00 AM	31	351	52	53	520	51	20	36	27	32	54	39
8:00 AM	8:15 AM	39	361	29	15	428	26	17	24	14	30	32	28
8:15 AM	8:30 AM	26	339	43	9	430	22	10	27	18	31	44	30
8:30 AM	8:45 AM	35	293	12	8	376	28	11	24	15	23	32	32
8:45 AM	9:00 AM	37	264	40	8	307	32	9	24	16	35	23	21
AM Peak Hour Volumes		128	1403	221	187	1927	154	125	150	117	128	215	129
% of Total Traffic		2.6%	28.7%	4.5%	3.8%	39.4%	3.2%	2.6%	3.1%	2.4%	2.6%	4.4%	0.1%
% Directional			35.9%			46.4%			8.0%			7.1%	
AM Peak Hour Factor			0.92			0.91			0.66			0.91	
		Intersection			Intersection			Intersection			Intersection		
		0.89			0.89			0.89			0.89		

Begin Time	End Time	Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (Louisiana Blvd.)			Southbound (Louisiana Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	37	438	48	24	424	30	49	28	28	52	32	26
4:15 PM	4:30 PM	27	440	40	24	425	39	46	33	32	64	30	35
4:30 PM	4:45 PM	42	458	20	16	399	35	16	43	31	56	37	34
4:45 PM	5:00 PM	33	505	19	11	375	38	18	42	29	51	25	35
5:00 PM	5:15 PM	49	441	14	24	401	34	26	45	30	65	35	29
5:15 PM	5:30 PM	57	543	21	26	376	35	15	32	41	35	46	26
5:30 PM	5:45 PM	47	415	21	24	370	39	27	29	46	48	45	30
5:45 PM	6:00 PM	39	457	11	17	372	37	31	43	26	54	47	39
PM Peak Hour Volumes		181	1947	74	77	1551	142	75	162	131	207	143	124
% of Total Traffic		3.8%	40.4%	1.5%	1.6%	32.2%	2.9%	1.6%	3.4%	2.7%	4.3%	3.0%	2.6%
% Directional			45.7%			36.7%			7.6%			9.8%	
PM Peak Hour Factor			0.89			0.96			0.91			0.92	
		Intersection			Intersection			Intersection			Intersection		
		0.89			0.96			0.96			0.92		

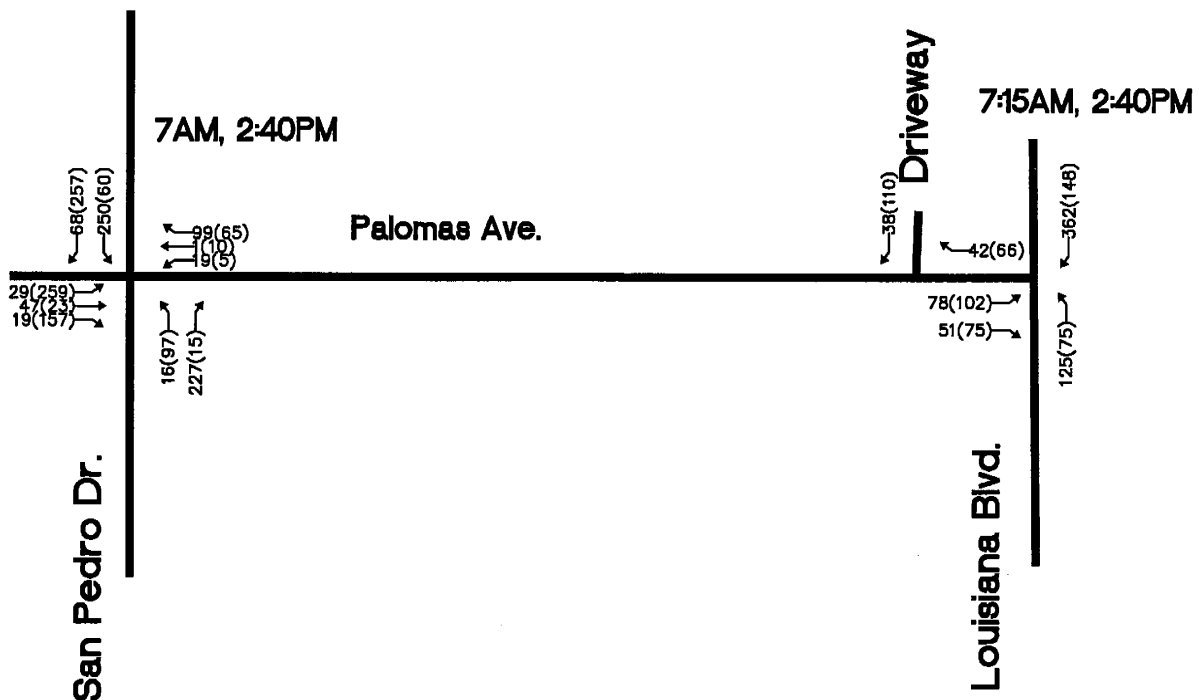
Traffic Count Data Sheet

Year Counts Taken:			2016	E-W Street:			Paseo del Norte			Speed Limit (Paseo del Norte)=			55	MPH			
				N-S Street:			San Pedro Dr.			Speed Limit (San Pedro Dr.)=			35	MPH			
SIGNALIZED																	
		Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)						
Begin Time	End Time	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	52	307	119	0	38	430	46	0	23	26	5	1	20	84	41	0
7:15 AM	7:30 AM	84	438	49	2	19	464	42	0	46	46	19	0	41	46	30	0
7:30 AM	7:45 AM	89	399	55	1	26	444	61	0	69	58	16	0	32	73	43	2
7:45 AM	8:00 AM	97	400	59	1	40	505	54	0	60	56	28	0	23	32	35	0
8:00 AM	8:15 AM	79	333	35	0	23	338	62	0	70	49	20	1	21	53	60	0
8:15 AM	8:30 AM	62	324	26	0	30	408	32	0	28	28	14	0	32	50	53	0
8:30 AM	8:45 AM	74	273	26	1	30	283	46	1	39	39	16	1	38	51	58	1
8:45 AM	9:00 AM	74	260	30	0	28	289	38	0	26	34	26	0	25	60	34	0
AM Peak Hour Volumes		322	1544	282	4	123	1843	203	0	198	186	68	1	116	235	149	2
% of Total Traffic		6.1%	29.3%	5.3%		2.3%	34.9%	3.8%		3.8%	3.5%	1.3%		2.2%	4.5%	0.0%	
% Directional			40.7%				41.1%				8.6%				6.7%		
AM Peak Hour Factor			0.94				0.91				0.78				0.85		
Intersection 0.95															0.85		
		Eastbound (Paseo del Norte)			Westbound (Paseo del Norte)			Northbound (San Pedro Dr.)			Southbound (San Pedro Dr.)						
Begin Time	End Time	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	103	448	67	0	76	377	43	0	87	70	56	0	54	70	91	0
4:15 PM	4:30 PM	105	460	60	0	56	413	38	0	90	66	45	0	49	64	74	0
4:30 PM	4:45 PM	101	490	55	0	49	392	46	0	95	53	37	0	46	71	84	0
4:45 PM	5:00 PM	74	447	50	0	52	430	56	0	82	47	35	0	39	45	81	0
5:00 PM	5:15 PM	68	224	42	0	53	337	62	0	28	47	34	3	49	73	85	1
5:15 PM	5:30 PM	95	492	56	0	54	372	64	0	53	43	35	0	49	47	61	0
5:30 PM	5:45 PM	79	416	50	0	41	306	53	0	60	58	38	0	65	65	66	0
5:45 PM	6:00 PM	69	496	48	0	46	360	41	1	55	32	29	0	55	48	61	2
PM Peak Hour Volumes		383	1845	232	0	233	1612	183	0	354	236	173	0	188	250	330	0
% of Total Traffic		6.4%	30.7%	3.9%		3.9%	26.8%	3.0%		5.9%	3.9%	2.9%		3.1%	4.2%	5.5%	
% Directional			40.9%				33.7%				12.7%				12.8%		
PM Peak Hour Factor			0.95				0.94				0.90				0.89		
Intersection 0.98															0.89		

Hope Christian School

(Palomas Dr. / Louisiana B.vd.)

Peak Hour Turning Trips - AM(PM)



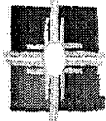
SIGNALIZED INTERSECTION



UNSIGNALIZED INTERSECTION

Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)





New Mexico Department of Transportation
TIMS ROAD SEGMENTS BY POSTED ROUTE/POINT WITH AADT INFO

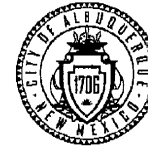
NM-ROUTES

As of: 3/27/2014

Route	Traffic Sec Id	Begin Mont	End Mont	FCLS	County Name	[----- AADT -----]				Year	Terminus	%HC
						2013	2012	2011	2010			
NM-423-P	15669	0.000	0.756	P	PRAR	BERNALILLO	12,856	13,052	13,459	2012	L PASEO DEL NORTE--ALBQ., FROM GOLF COURSE RD.	6
NM-423-M	15669	0.000	0.756	M			11,943	12,127	12,553	2012		6
NM-423-P	15670	0.756	1.094	P			17,365	17,632	18,216	2012	L JCT EAGLE RANCH ROAD.	0
NM-423-M	15670	0.756	1.094	M			16,946	17,204	18,086	2012		0
NM-423-P	15670	1.094	1.194	P			17,365	17,632	18,216	2012	L JCT COORS WEST (SOUTHBOUND) RAMPS ON PASEO DE	0
NM-423-M	15670	1.094	1.194	M			16,946	17,204	18,086	2012		0
NM-423-P	15674	1.194	3.847	P			35,924	36,557	36,540	2013	A JCT COORS EAST (NORTHBOUND) RAMPS ON PASEO DE	4
NM-423-M	15674	1.194	3.847	M			36,958	37,654	37,395	2013		4
NM-423-P	15677	3.847	5.515	P			32,051	32,540	31,142	2012	L JCT 2ND STREET INTERCHANGE ON PASEO DEL NORTE	0
NM-423-M	15677	3.847	5.515	M			32,103	32,597	30,808	2012		0
NM-423-P	15680	5.515	5.991	P			22,955	23,307	23,383	2010	L JCT JEFFERSON STREET.	16
NM-423-M	15680	5.515	5.991	M			30,231	30,694	30,794	2010		16
NM-423-P	15682	5.991	6.134	P			22,092	22,430	22,503	2006	L JCT PAN AMERICAN WEST (FR2537) ON PASEO DEL N	0
NM-423-M	15682	5.991	6.134	M			21,533	21,863	21,934	2006		0
NM-423-P	15688	6.134	6.303	P			18,260	18,540	18,600	2010	L C.L. I-25 EXIT 232 ON PASEO DEL NORTE.	18
NM-423-M	15688	6.134	6.303	M			15,967	16,211	16,264	2010		18
NM-423-P	18629	6.303	6.415	P			20,430	20,743	20,810	2002	L JCT PAN AMERICAN EAST (FR2524) ON PASEO DEL N	0
NM-423-M	18629	6.303	6.415	M			20,187	20,496	20,562	2002		0
NM-423-P	15690	6.415	6.913	P			21,306	21,633	21,703	2004	L JCT SAN PEDRO DRIVE.	0
NM-423-M	15690	6.415	6.913	M			20,760	21,077	21,146	2004		0
NM-423-P	15691	6.913	7.414	P			20,590	21,237	19,996	2013	C JCT LOUISIANA BOULEVARD.	0
NM-423-M	15691	6.913	7.414	M			20,139	23,438	19,196	2013		0
NM-423-P	15692	7.414	7.914	P			17,035	17,296	17,352	2007	L JCT WYOMING BOULEVARD.	0
NM-423-M	15692	7.414	7.914	M			15,259	15,493	15,543	2007		0
NM-423-P	15693	7.914	8.415	P			14,898	15,127	10,780	2012	L JCT BARSTOW STREET.	0
NM-423-M	15693	7.914	8.415	M			15,042	15,273	13,956	2012		0
NM-423-P	15694	8.415	8.913	P			12,253	13,447	11,639	2013	C JCT VENTURA AVENUE.	0
NM-423-M	15694	8.415	8.913	M			12,421	13,841	11,514	2013		0
NM-423-P	15695	8.913	9.411	P			12,187	12,374	12,414	2007	L JCT HOLBROOK STREET.	0
NM-423-M	15695	8.913	9.411	M			12,008	12,192	12,232	2007		0
NM-423-P	15696	9.411	11.019	P			11,764	11,944	11,983	2010	L JCT EUBANK BOULEVARD.	16
NM-423-M	15696	9.411	11.019	M			14,171	14,388	14,435	2010		16
NM-423-P	15696	11.019	17.000	B			25,935	26,332	26,418	2010	L JCT TRAMWAY BLVD. (THIS PORTION OF PASEO DEL	16
NM-427-P	25970	0.000	0.880	B	MNAR	LUNA	2,331	2,342	2,358	2009	L FLORIDA ST.--DEMING, FROM NM 418, EAST & NORT	11

ABQ RIDE System Map

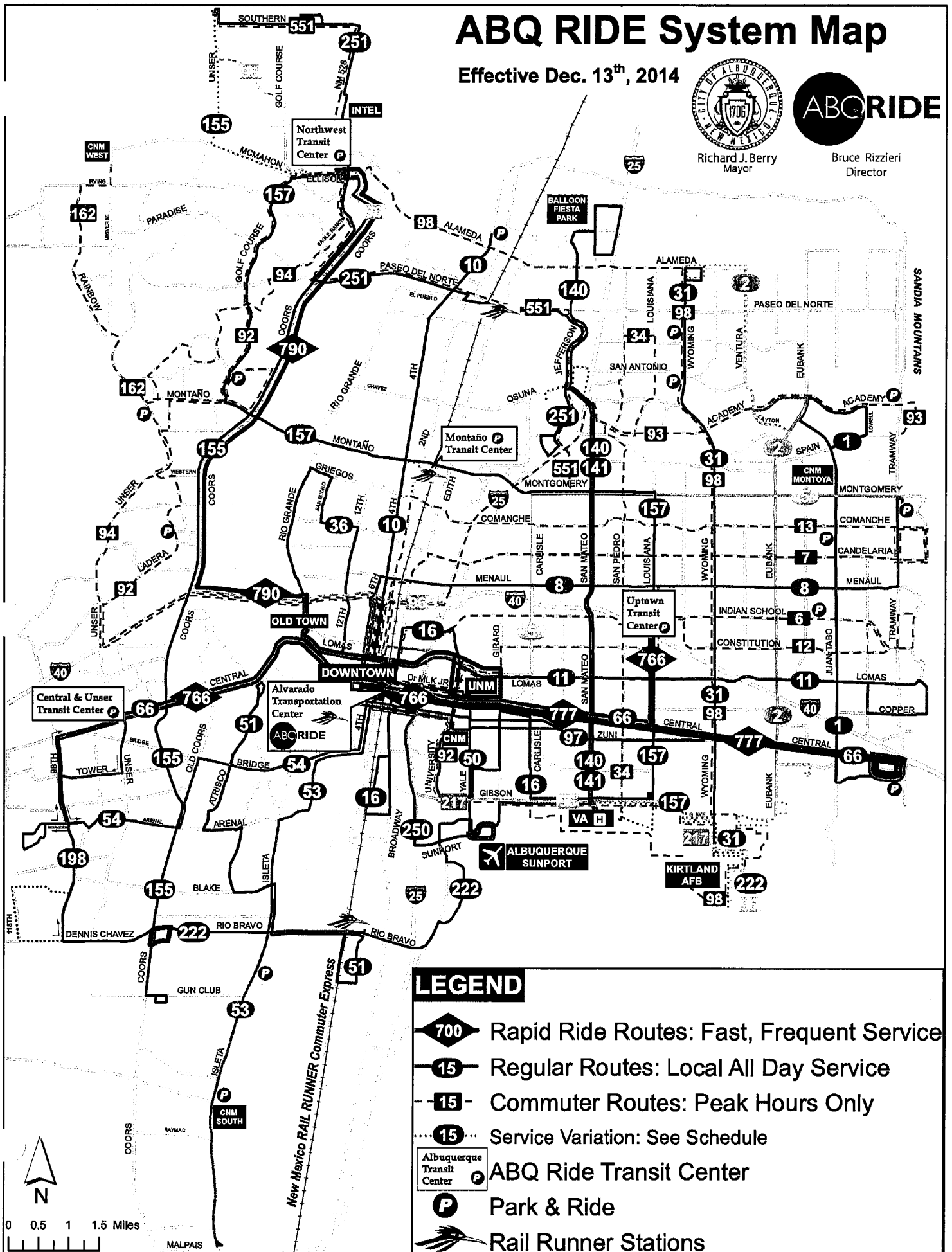
Effective Dec. 13th, 2014



Richard J. Berry
Mayor



Bruce Rizzleri
Director



LEGEND

- 700 Rapid Ride Routes: Fast, Frequent Service
- 15 Regular Routes: Local All Day Service
- 15 Commuter Routes: Peak Hours Only
- 15 Service Variation: See Schedule
- Albuquerque Transit Center
- Park & Ride
- Rail Runner Stations

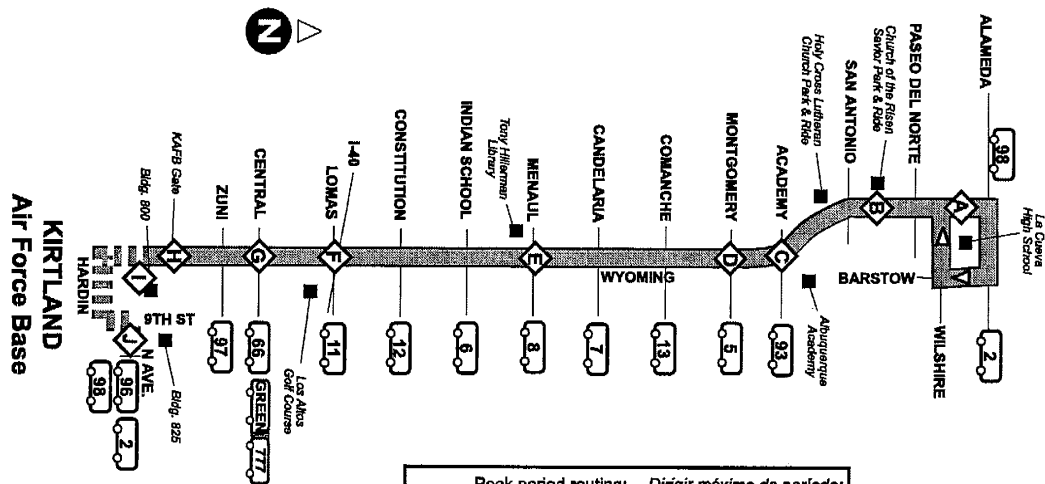
For more detailed information visit www.myabqride.com or call 243-7433 (243-RIDE) A - 98

Route / Ruta 31 Wyoming Blvd.

Effective: January 2015

NOTE:
People without proper military clearance and identification may not be allowed to enter Kirtland Air Force Base.

NOTE:
Personas sin la debida autorización y de identificación militar no pueden ser autorizados a entrar en la Base Aérea Kirtland.



Peak period routing; please see schedule. Dirigir máximo de periodo; vea por favor el horario.



Route 31- Weekday Southbound

WYOMING @ LA CUEVA HS	CHURCH OF THE ROSEN SAVIOR PARK	WYOMING & ACADEMY	WYOMING & MONTGOMERY	WYOMING & MENAUL	WYOMING & LOMAS	WYOMING & CENTRAL	WYOMING GATE	BUILDING 800	BUILDING 825	NEXT TRIP INFO IF NOT ON RT 31 (SEE NOTE BELOW)
A	B	C	D	E	F	G	H	I	J	
30a	5:36a	5:41a	5:45a	5:51a	5:57a	6:00a	.....	.....	6:12a	(Rt 2- 6:19)
03a	6:09a	6:14a	6:18a	6:24a	6:30a	6:33a	.....	.....	6:45a	(Rt 2- 6:49)
6:33a	6:39a	6:44a	6:48a	6:54a	7:00a	7:03a	.....	.....	7:15a	(Rt 2- 7:19)
7:03a	7:09a	7:14a	7:18a	7:24a	7:30a	7:33a	.....	.....	7:45a	(Rt 2- 7:49)
7:33a	7:39a	7:44a	7:48a	7:54a	8:00a	8:03a	.....	.....	8:15a	(Rt 2- 8:19)
8:02a	8:08a	8:13a	8:17a	8:23a	8:29a	8:32a	.....	.....	8:43a	
8:48a	8:54a	8:59a	9:03a	9:09a	9:15a	9:18a	.....	9:25a	.....	
9:31a	9:37a	9:42a	9:46a	9:52a	9:58a	10:01a	.....	10:08a	.....	
10:15a	10:21a	10:26a	10:30a	10:36a	10:42a	10:45a	.....	10:52a	.....	
11:00a	11:06a	11:11a	11:15a	11:21a	11:27a	11:30a	.....	11:37a	.....	
11:45a	11:51a	11:56a	12:00p	12:06p	12:12p	12:15p	.....	12:22p	.....	
12:30p	12:36p	12:41p	12:45p	12:51p	12:57p	1:00p	.....	1:07p	.....	
1:15p	1:21p	1:26p	1:30p	1:36p	1:42p	1:45p	.....	1:52p	.....	
2:00p	2:06p	2:11p	2:15p	2:21p	2:27p	2:30p	.....	2:37p	.....	
2:44p	2:50p	2:55p	2:59p	3:05p	3:11p	3:14p	.....	3:21p	.....	
3:29p	3:36p	3:42p	3:46p	3:51p	3:57p	4:01p	.....	4:15p	(Rt 2- 4:19)	
4:00p	4:07p	4:13p	4:17p	4:22p	4:28p	4:32p	.....	4:48p	(Rt 2- 4:50)	
4:30p	4:37p	4:43p	4:47p	4:52p	4:58p	5:02p	.....	5:16p	(Rt 2- 5:20)	
5:00p	5:07p	5:13p	5:17p	5:22p	5:28p	5:32p	.....	5:46p	(Rt 2- 5:50)	
5:31p	5:38p	5:44p	5:48p	5:53p	5:59p	6:03p	.....	6:17p		
6:12p	6:18p	6:24p	6:28p	6:33p	6:39p	6:43p	.....	.....		
6:54p	7:00p	7:06p	7:10p	7:15p	7:21p	7:25p	7:29p	.....		

(Rt 2 - xxxx) Indicates that this bus will leave Bldg 825 as the Route 2 Eubank at the time shown.

Route 31 - Weekday Northbound

WYOMING @ LA CUEVA HS	CHURCH OF THE ROSEN SAVIOR PARK	WYOMING & ACADEMY	WYOMING & MONTGOMERY	WYOMING & MENAUL	WYOMING & LOMAS	WYOMING & CENTRAL	WYOMING GATE	BUILDING 800	BUILDING 825	NEXT TRIP INFO IF NOT ON RT 31 (SEE NOTE BELOW)
A	B	C	D	E	F	G	H	I	J	
6:44a	6:40a	6:35a	6:31a	6:26a	6:20a	6:16a	.....	6:09a	.....	
7:14a	7:10a	7:05a	7:01a	6:56a	6:49a	6:46a	.....	6:37a	.....	
7:44a	7:40a	7:35a	7:31a	7:26a	7:20a	7:16a	.....	7:09a	.....	
8:14a	8:10a	8:05a	8:01a	7:56a	7:50a	7:46a	.....	7:34a	.....	
8:44a	8:40a	8:35a	8:31a	8:26a	8:20a	8:16a	.....	8:04a	.....	
9:27a	9:23a	9:18a	9:14a	9:09a	9:03a	8:59a	.....	8:47a	.....	
10:09a	10:05a	10:00a	9:56a	9:51a	9:44a	9:41a	.....	9:32a	.....	
10:54a	10:50a	10:45a	10:41a	10:36a	10:29a	10:26a	.....	10:17a	.....	
11:39a	11:35a	11:30a	11:26a	11:21a	11:14a	11:11a	.....	11:02a	.....	
12:24p	12:20p	12:15p	12:11p	12:06p	12:00p	11:56a	.....	11:47a	.....	
1:09p	1:05p	1:00p	12:56p	12:51p	12:44p	12:41p	.....	12:32p	.....	
1:54p	1:50p	1:45p	1:41p	1:36p	1:29p	1:26p	.....	1:17p	.....	
2:39p	2:35p	2:30p	2:26p	2:21p	2:14p	2:11p	.....	2:02p	.....	
3:24p	3:20p	3:15p	3:11p	3:06p	2:59p	2:56p	.....	2:47p	.....	
4:09p	4:04p	4:00p	3:55p	3:49p	3:44p	3:41p	.....	3:34p	.....	
4:50p	4:45p	4:41p	4:36p	4:30p	4:24p	4:20p	.....	4:08p	.....	
5:20p	5:15p	5:11p	5:06p	5:00p	4:54p	4:50p	.....	4:38p	.....	
5:49p	5:44p	5:40p	5:35p	5:29p	5:24p	5:21p	.....	5:09p	.....	
6:19p	6:14p	6:10p	6:05p	5:59p	5:54p	5:51p	.....	5:39p	.....	
6:48p	6:43p	6:39p	6:34p	6:28p	6:23p	6:20p	.....	6:08p	.....	
7:33p	7:28p	7:24p	7:19p	7:13p	7:08p	7:05p	.....	7:03p	.....	
			8:02p		7:57p	7:50p	7:47p	7:45p		

IMPORTANT:

Due to varying military restrictions, access to Kirtland Air Force Base may be changed at any time. If you are traveling to KAFB via ABQ RIDE buses, please call 243-RIDE (243-7433) for current information.

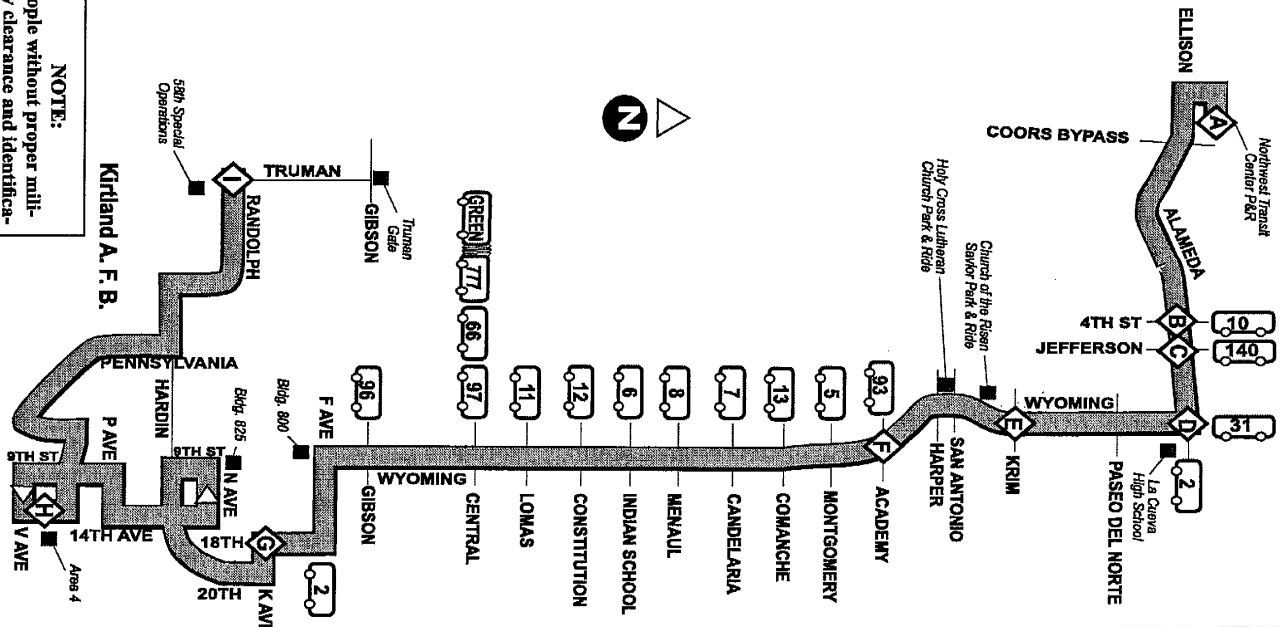
IMPORTANTE:

Debido a diferentes restricciones militares, el acceso a La Base Aerea Kirtland puede cambiar en cualquier momento. Si usted viaja hacia KAFB en autobús, por favor llame al 243-RIDE (243-7433) para obtener información actualizada.

Route 98 / Ruta 98 Wyoming Blvd.

Effective: January 2015

NOTE:
People without proper military clearance and identification may not be allowed to enter Kirtland Air Force Base.



Route 98 - Weekday South

5:53a	6:04a	6:08a	6:14a	6:18a	6:22a	6:48a	6:57a	7:12a
6:38a	6:49a	6:53a	6:59a	7:03a	7:07a	7:33a	7:42a	7:57a

Route 98 - Weekday North

3:57p	4:11p	4:18p	4:43p	4:48p	4:51p	4:56p	5:06p	5:26p
4:32p	4:46p	4:53p	5:18p	5:23p	5:26p	5:31p	5:41p	6:01p

IMPORTANT:

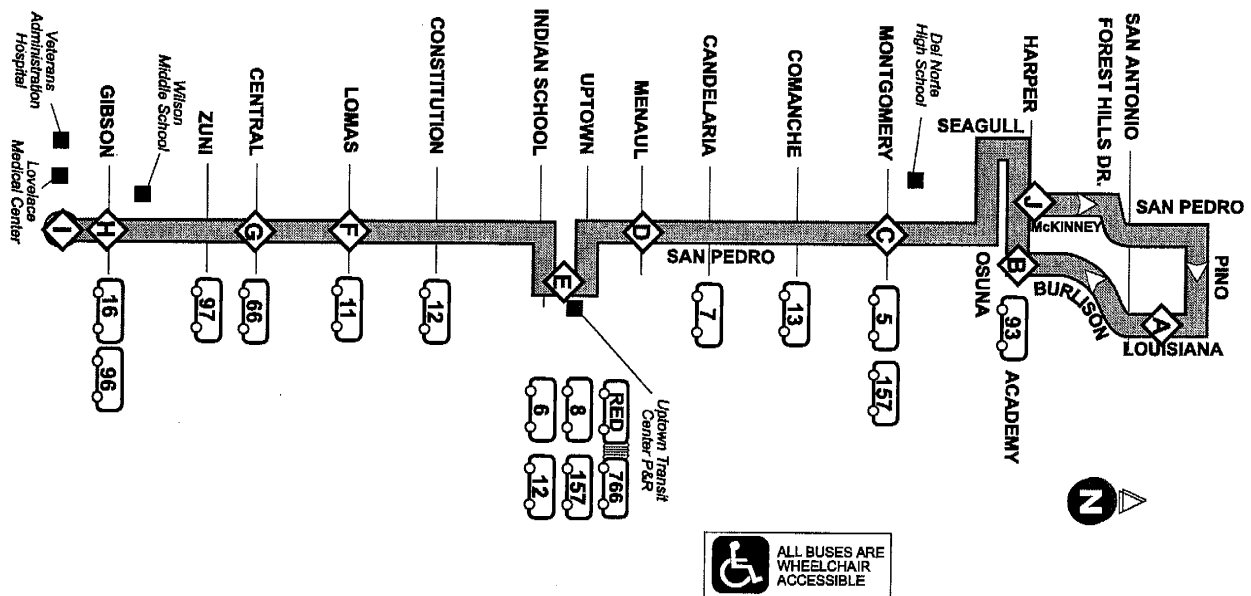
Due to varying military restrictions, access to Kirtland Air Force Base may be changed at any time. If you are traveling to KAFB via please call 243-RIDE (243-7433) 724-3183 tty for current information.

IMPORTANTE:

Debido a diferentes restricciones militares, el acceso a La Base Aerea Kirtland puede cambiar en cualquier momento. Si usted viaja hacia KAFB en autobús, por favor llame al 243-RIDE (243-7433) 724-3183 tty para obtener información actualizada.

Route / Ruta 34 San Pedro Blvd.

Effective: January 2015

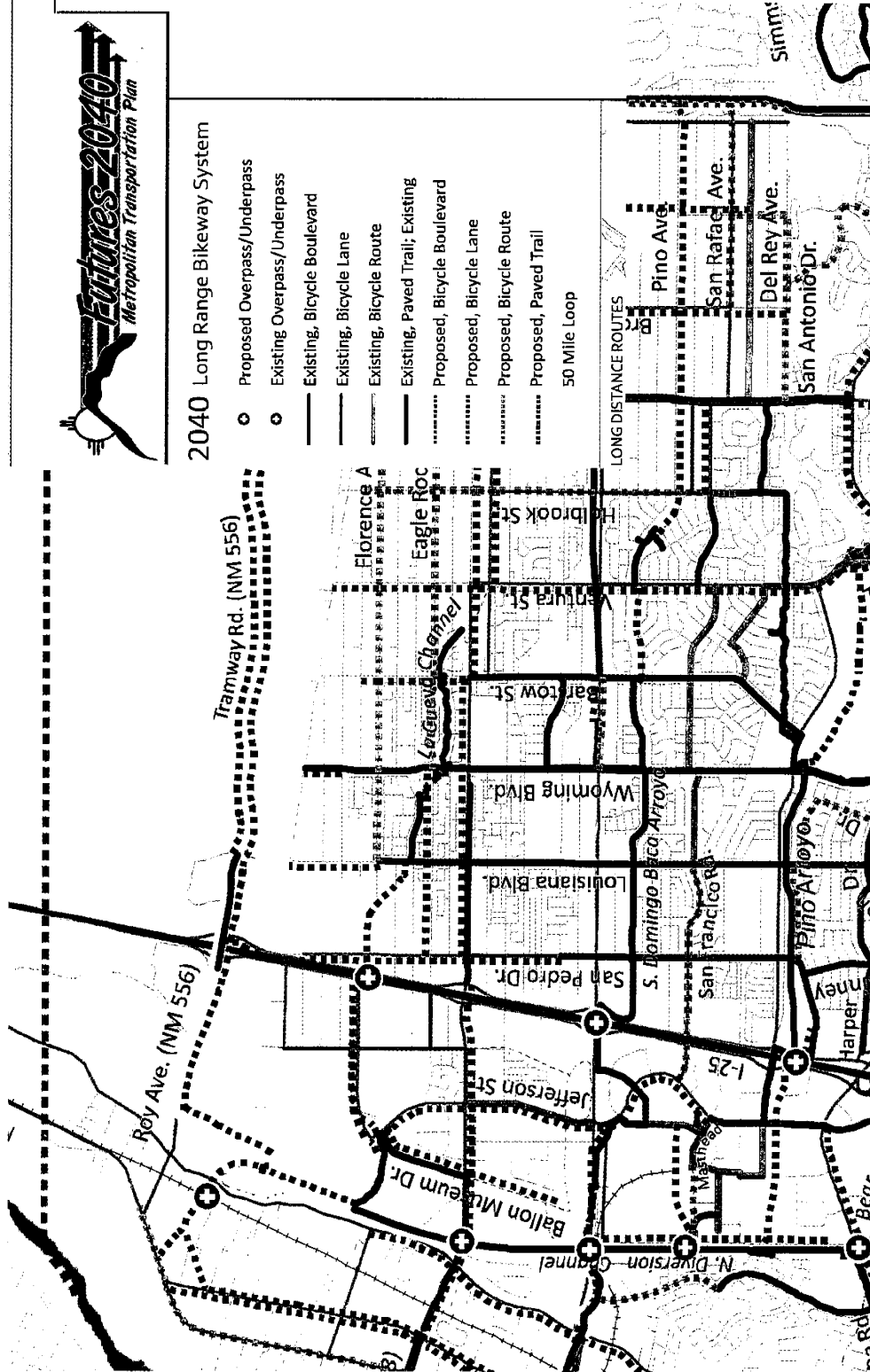


Route 34 - Weekday Southbound

VA HOSPITAL	7:22a
SAN PEDRO & GIBSON	7:20a
SAN PEDRO & CENTRAL	7:15a
SAN PEDRO & LOMAS	7:12a
UPTOWN TRANSIT CENTER PAR	7:08a
SAN PEDRO & MENAUL	7:03a
SAN PEDRO & MONTGOMERY	6:57a
BURLISON & ACADEMY	6:51a
LOUISIANA & PINO	6:48a
	7:16a

Route 34 - Weekday Northbound

LOUISIANA & PINO	5:13p
HARPER & MCKINNEY	5:06p
SAN PEDRO & MONTGOMERY	5:25p
SAN PEDRO & MENAUL	5:22p
UPTOWN TRANSIT CENTER PAR	5:20p
SAN PEDRO & LOMAS	5:14p
SAN PEDRO & CENTRAL	5:11p
SAN PEDRO & GIBSON	5:08p
VA HOSPITAL	5:06p
	4:40p



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