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City of Huntington Beach

BELLA TERRA EXPANSION
Supplemental Traffic Analysis

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BELLA TERRA EXPANSION
Supplemental Traffic Analysis

This report presents a traffic analysis of the proposed Bella Terra Expansion ("The Village at Bella Terra"). It is intended to supplement the information contained in the original traffic study and EIR by addressing an alternative project to that approved in 2008.

BACKGROUND AND SCOPE

The proposed Bella Terra Phase II comprises 468 residential dwelling units, a 154,113 square foot Costco Discount Store with associated 16 pump gas station (available only to Costco members), and 30,000 square feet of general retail uses. The expansion will be located west of the existing Bella Terra shopping complex and will replace the recently vacated Mervyns building plus currently unoccupied buildings and vacant land. These proposed uses are an alternative project to that approved in 2008, which under one option would add 713 residential units plus 138,085 square feet of commercial uses, and under another option would add 538 residential units plus 181,118 square feet of commercial uses plus a 165 room hotel. The trip generation analysis recognizes that The Village will be part of the overall Bella Terra retail center, sharing access roads, and to some extent parking (residential spaces will be specially designated).

This analysis provides a detailed analysis of the trip generation characteristics of the alternative project. That is followed by a focused evaluation of the implications of that trip generation in relation to the future conditions on the surrounding street system.

TRIP GENERATION

For a traffic impact analysis that addresses uses such as proposed here, there are three potential adjustments to the basic trip generation derived from "stand alone" trip generation rates.

1. On-site trip capture
2. Pass-by trips
3. Diverted trips

For the first of these, a special analysis was made in the previous traffic study, addressing residential uses adjacent to a large retail complex. For the proposed retail expansion, the ITE equation based rates account for interaction among retail uses. However, because of the special nature of the Costco, a stand-alone trip generation rate has been used and then an estimated local capture applied.

Pass-by trips represent trips from patrons that are already on roadways adjacent to the site and merely turn off the roadway to access the site, and then return to their normal trip when their visit is completed. Pass-by trips only include those trips from streets with direct access to the site. Going to the particular site is generally not the primary reason the motorist is making the trip. Pass-by trips can be estimated by modeling or by directly incorporating some form of trip reduction into the trip generation using guidelines such as published by ITE. The trip generation reduction (as a percentage) is a function of the size of the project, with larger projects having a lower pass-by percentage (i.e., they tend to be more of a primary destination than smaller entities). The pass-by percentages also vary by time of day, day of week and volume of traffic on the immediately adjacent roadways.

Diverted traffic is similar to a pass-by trip in some respects, except that the patron is traveling on a nearby roadway that does not have direct access to the site. The motorist would make a slight detour on the normal trip in order to visit the site. This detour can vary from a few hundred feet to a mile or more. Diverted traffic is more intangible and is best estimated by modeling. Experience with modeling large generators has demonstrated the validity of diverted trips, although the trip patterns involved tend to be somewhat complex, and will differ for different roadways surrounding the project. In some cases, traffic diversion associated with a project can actually add to rather than reduce an impact (e.g., a diverted trip becomes a turn movement rather than a through movement at an intersection). Simply reducing the trip generation for the project will seldom adequately account for what actually happens on the surrounding roadway network.

The approach used here is the same as that used previously whereby trip generation discounts are given for on-site capture and pass-by trips. Pass-by trips are accounted for in traffic projections at the entrances to the project. The no-project versus with-project trips are derived additively using a “layered” approach. There is no consideration of diverted trips in this approach. It has the advantage that each volume at each study area location can be verified in terms of project versus no project (i.e., the difference is the project volume).

ESTIMATED PROJECT TRIP GENERATION

The trip generation estimates for the alternative project are presented in Table 1 along with the previous GPA trip generation estimates. The following discussion explains the various entries in the table.

Basic Trip Generation

For the existing uses, the trip generation summary from the previous EIR is listed in the first part of the table. It has been used here to derive the estimated reduction in trips due to closure of the Mervyns store. The commercial trip generation less the internal capture and pass-by trip reductions were used to derive the equivalent trip reduction for the store closure.

For the Costco store, the ADT and PM peak hour rates used here are those derived by Kittleson and Associates from nationwide surveys. An independent review carried out as part of this supplemental traffic study examined several data resources and found the Kittleson data to be the apparent best source in most cases, with more conservative (higher) trip generation estimates than other sources. For the AM, the Kittleson observed rate of 22.8 trips per fuel position has been used, and to this has been added a nominal trip generation for employees and deliveries for the store (the store does not open until after the morning peak hour). The derivation is as follows:

16 pumps at 22.8 trips/pump =	365
Less 58 percent pass-by	-211
Net increase =	154
50/50 inbound/outbound =	77 IB, 77 OB
Employees/Deliveries	20 IB, 5 OB
Total Trip Generation =	97 IB, 82 OB

Limited data available from work carried out by Austin-Foust Associates, Inc. (AFA) in southern California indicates that the ADT and PM peak hour rates from the Kittleson data are reasonable and may be conservative (rates used by AFA, albeit over 10 years ago, were lower). By way of comparison, the following are trip generation rates for discount stores from the ITE and SANDAG trip generation manuals.

Table 1

BELLA TERRA TRIP GENERATION

Project Description	Amount	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	ADT
EXISTING DEVELOPMENT (BELLA TERRA PHASE I)								
Existing Commercial	694,422 SF	306	195	501	1,080	1,169	2,249	23,933
Internal Capture		--	--	--	(65)	(70)	(135)	(957)
Pass-by Reduction		--	--	--	(216)	(234)	(450)	(4,787)
	Subtotal	306	195	501	799	865	1,664	18,189
Multiplex Theaters w/ Matinee (4000 seats)	76,740 SF	0	0	0	297	263	560	3,067
Internal Capture		--	--	--	(60)	(53)	(113)	(889)
	Subtotal	0	0	0	237	210	447	2,178
Existing Trip Generation Total		**306**	**195**	**501**	**1,036**	**1,075**	**2,111**	**20,367**
Mervyns Store Closure[4]	**91,153 SF**	**(40)**	**(26)**	**(66)**	**(105)**	**(113)**	**(218)**	**(2,388)**
PREVIOUS GPA (OPTION 2)								
Bella Terra Residential	538 DU	54	221	275	215	118	333	3,615
Bella Terra Hotel	165 Rooms	56	36	92	51	46	97	1,348
Bella Terra Commercial	181,118 SF	45	29	74	178	194	372	3,890
Internal Capture		(11)	(11)	(22)	(43)	(43)	(86)	(1,012)
Local Capture		(4)	(15)	(19)	(9)	(5)	(14)	(145)
Pass-by Reduction		(9)	(6)	(15)	(35)	(39)	(74)	(778)
Option 2 Project Trip Generation Total		**131**	**254**	**385**	**357**	**271**	**628**	**6,918**
ALTERNATIVE PROJECT								
Bella Terra Residential [1]	468 DU	47	192	239	187	103	290	2,991
Bella Terra Commercial [2]	30,000 SF	13	9	22	50	54	104	1,068
Costco Discount Store [3]	154,113 SF	97	82	179	518	558	1,076	11,691
Mervyns Store Closure [4]	91,153 SF	(40)	(26)	(66)	(105)	(113)	(218)	(2,388)
Residential Internal Capture (residential end)[5]		(2)	(8)	(10)	(24)	(14)	(38)	(837)
Residential Internal Capture (commercial end)[5]		(8)	(2)	(10)	(14)	(24)	(38)	(837)
Local Capture (residential)[6]		(3)	(13)	(16)	(7)	(4)	(11)	(120)
Costco Internal Capture (Costco end) [7]		--	-	--	(26)	(28)	(54)	(585)
Costco Internal Capture (Non-Costco end) [7]		--	--	--	(28)	(26)	(54)	(585)
Pass-by Reduction (Commercial) [8]		(3)	(3)	(6)	(12)	(12)	(24)	(246)
Pass-by Reduction (Costco)[9]		--	--	--	(182)	(196)	(378)	(4,092)
Alternative Project Trip Generation Total		**101**	**231**	**332**	**357**	**298**	**655**	**6,060**
ALTERNATIVE PROJECT VERSUS OPTION 2		**(30)**	**(23)**	**(53)**	**0**	**27**	**27**	**(858)**
Percent Increase		-22.9%	-9.1%	-13.8%	0.0%	10.0%	4.3%	-12.4%
TRIP RATES								
Residential (ITE 220)	DU	.100	.410	.510	.400	.220	.620	6.720
Shopping Center (633,269 SF)	SF	.440	.283	.723	1.661	1.799	3.460	35.595

(Cont.)

Table 1 (Continued)
BELLA TERRA TRIP GENERATION

Notes:

[1] Trips based on ITE (8th Ed.) Apartment (220) rates.
[2] Based on ITE (8th Ed.) Shopping Center trip generation equation rates for 633,269 SF.
[3] Daily & PM peak hour trips based on data provided by Kittleson Associates, and AM rates derived as discussed in the text.
[4] Trips based on ITE (7th Ed.) Shopping Center (820) equation using total site commercial of 694,422 SF. Net trips (after internal and pass-by discounts) were then factored for 91,153 SF.
[5] Based on residential trip generation capture of 4 percent for AM Peak Hour, 13 percent for PM Peak Hour and 14 percent for ADT.
[6] Based on residential local trip capture of 7 percent for AM Peak Hour, 4 percent for PM Peak Hour and 4 percent for ADT.
[7] Based on five percent internal capture for PM and ADT (zero for AM).
[8] Based on ITE (8th Ed.) equation for Shopping Center (820) pass-by trips.
[9] Based on 35 percent for PM Peak Hour and ADT. The AM pass-by discount is included in the basic trip generation.

DISCOUNT STORE TRIP GENERATION PER 1,000 SQUARE FEET							
	AM Peak Hour			**PM Peak Hour**			
Source	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**ADT**
ITE (857)	.40	.16	.56	2.12	2.12	4.24	41.80
SANDAG	.42	.18	.60	2.70	2.70	5.40	60.00
Costco	--	--	--	3.35	3.63	6.98	75.86

As can be seen, the Costco rates are substantially higher. However, it should be noted that the Costco rates are for stores with gas stations; a feature typically not associated with the sources used in the ITE and SANDAG data.

On-Site and Local Capture

For the residential and commercial trips, the on-site capture is based on the estimates prepared in the previous traffic study. These can be summarized as follows:

	AM	**PM**	**ADT**
Internal Capture	4%	13%	14%
Local Capture	7%	4%	4%
Total	11%	17%	18%

For the Costco store, a five percent capture rate has been used, this being a conservative estimate (i.e., low end of the range) for the potential on-site interaction that could occur based on information from the Kittleson surveys.

Pass-By Trips

For the 30,000 sf of added commercial, pass-by trips have been estimated from the ITE equation using the full Bella Terra Shopping Center (i.e., 633,269 sf of commercial). For Costco, the Kittleson rate of 35 percent has been used for the PM peak hour and the ADT. The AM trip rates include the 58 percent reduction for the gas pump trips as noted earlier, this reduction directly taken from ITE. The ITE rate for gas stations is substantially lower than the limited data available that the Kittleson study would suggest for a Costco. It was used as a more conservative estimate (lower reduction in trip generation) for the analysis.

Diverted Trips

For Costco, the Kittleson survey results show a sizable proportion of the trips generated are diverted trips, with actual numbers depending on store location in relation to the surrounding roadway system. The trip generation results presented here do not make any adjustments for diverted trips for the reasons discussed earlier.

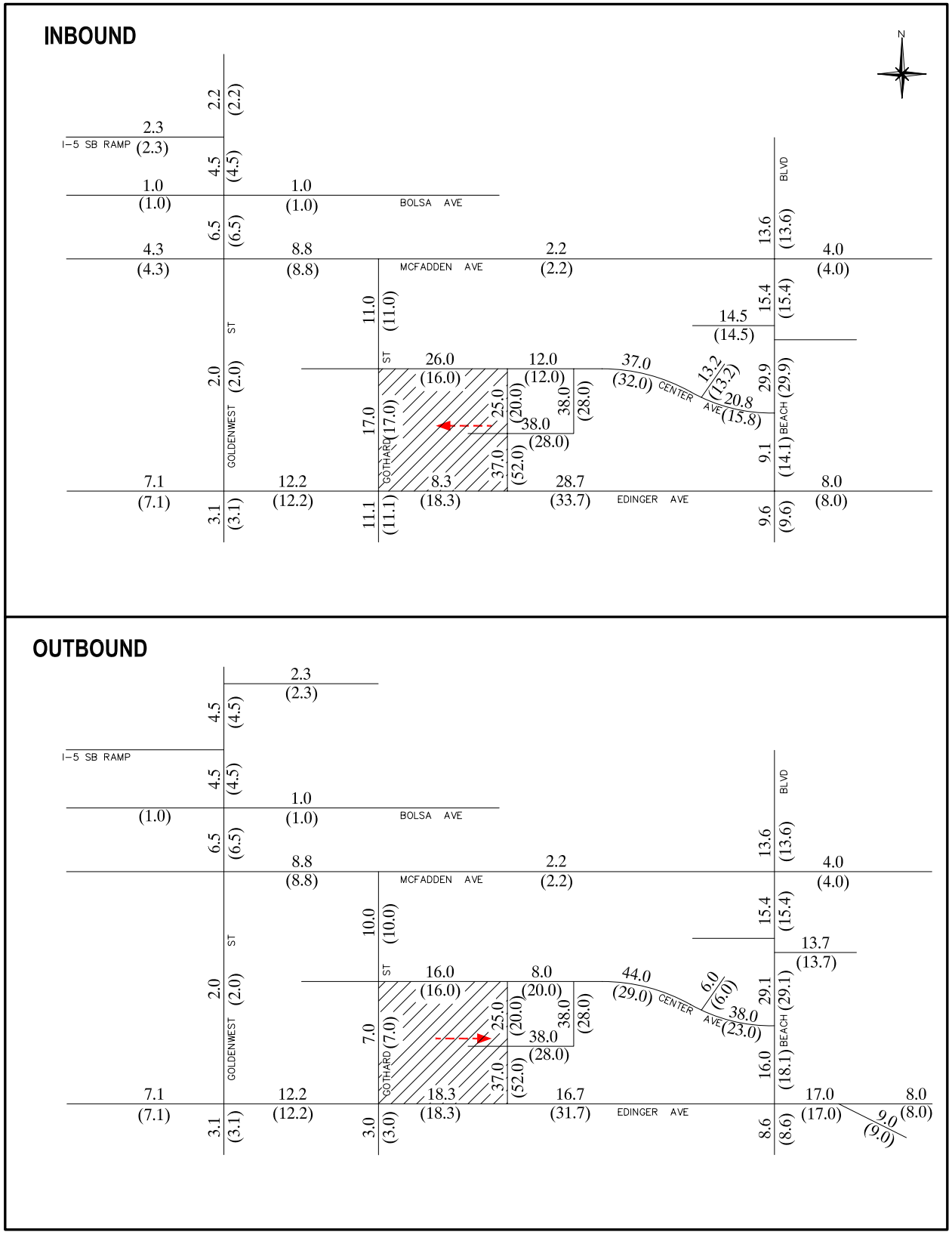
PEAK HOUR INTERSECTION VOLUMES

The trip generation results from the previous section showed that for the proposed alternative project, the PM peak hour is higher than previously, due to higher outbound trips, and the AM peak hour is lower. In addition, some redistribution of trips to the project driveways is estimated to occur under the proposed site plan. Hence, for the immediate area, revised volumes have been prepared for the AM and PM peak hours to show the effect of this redistribution and the change in trip generation. Figure 1 compares the trip distribution for the Alternative Project to that used in the previous analysis. Detailed results are presented in Appendix B.

Table 2 summarizes the 2014 ICU values for the Alternative Project and provides a comparison against the ICU values from the previous EIR. The ICU values are provided for the AM and PM peak hour for the adjacent intersections, and the PM peak hour only for the off-site intersections. For all but two intersections (two adjacent intersections), the change in ICU was found to be less than one percent.

For the intersection of I-405 Southbound Ramps at Center Avenue, the PM ICU shows an increase of .01. However, this is not significant as the intersection is forecast to operate at an acceptable level of service (LOS) “D” (ICU less than .91).

The intersection of Beach Boulevard at Edinger Avenue shows ICU increases of .03 and .01 for the AM and PM peak hours, respectively. This results in LOS “C” for the AM peak hour, and LOS “E” for the PM peak hour. The AM LOS is acceptable, whereas the PM LOS does not satisfy the performance standard. The EIR identified two potential mitigation measures for this intersection: a third westbound through lane or a fourth northbound through lane. The following table summarizes the 2014 PM peak hour ICU values with these mitigation measures:



Legend

X.X	Alternative Project
(Y.Y)	Previous Project

Figure 1

PROJECT TRIP DISTRIBUTION PERCENTAGES

Table 2

2014 ICU SUMMARY

Intersection	Previous Report		Alternative Project		Difference	
	AM ICU	**PM ICU**	**AM ICU**	**PM ICU**	**AM ICU**	**PM ICU**
ADJACENT INTERSECTIONS						
17. Gothard St & Center Ave	.32	.53	.31	.53	-.01	.00
18. I-405 SB Ramps & Center Ave	.45	.80	.45	.81	.00	.01
19. Beach Blvd & Center Ave	.71	.72	.71	.72	.00	.00
27. Gothard St & Edinger Ave	.50	.60	.49	.60	-.01	.00
28. Beach Blvd & Edinger Ave	.74	.95	.77	.96	.03	.01

	Previous Report	Alternative Project	Difference
OFF-SITE INTERSECTIONS (PM PEAK HOUR ONLY)			
8. Goldenwest Ave & Bolsa Ave	.91	.91	.00
15. Goldenwest Ave & McFadden Ave	.76	.76	.00
16. Gothard St & Mcfadden Ave	.55	.55	.00
26. Goldenwest St & Edinger Ave	.65	.65	.00
29. Newland St & Edinger Ave	.70	.70	.00
36. Gothard St & Heil Ave	.68	.68	.00
37. Beach Blvd & Heil Ave	.82	.82	.00
38. Newland St & Heil Ave	.51	.51	.00
46. Gothard St & Warner Ave	.80	.80	.00
47. Beach Blvd & Warner Ave	.92	.92	.00
48. Newland St & Warner Ave	.87	.87	.00
250. Beach Blvd & McFadden Ave	.85	.85	.00
251. Beach Blvd & Bolsa Ave	.87	.87	.00
252. Beach Blvd & Hazard Ave	.74	.74	.00
253. Magnolia St & Edinger Ave	.71	.71	.00

	2014 ICUs (PM Peak Hour)			
	1. Third WB Through Lane		2. Fourth NB Through Lane	
	Alternative Project		Alternative Project	
	ICU	LOS	ICU	LOS
Without Mitigation	.96	E	.96	E
With Mitigation	.91	E	.89	D

As shown, the fourth northbound through lane will reduce the project impact to an acceptable LOS, whereas the mitigation measure with the third westbound through lane does not achieve an acceptable LOS. However, both improvements mitigate the project's impact.

Table 3 summarizes the 2030 ICU values for the Alternative Project and provides a comparison against the ICU values from the previous EIR. For all but one intersection (Beach Blvd at Edinger Ave in the AM peak hour), the change in ICU was found to be less than one percent. This intersection shows an ICU increase of .03 for the AM peak hour. This results in LOS "D" for the AM peak hour, which meets the performance standard (LOS "D").

The findings of this analysis are that the Alternative Project results in an insignificant change to the ICU values, and hence does not result in any additional significant impacts compared to the previous EIR. The resulting changes would also have negligible changes to the HCM results presented in the EIR.

PROJECT FAIR SHARE

The fair share calculation for the intersection of Beach Boulevard at Edinger Avenue is summarized as follows:

	Alternative Project
Existing ICU (Committed Lanes)	.88
Future (2010) With-Alternative Project ICU	1.05
Future (2030) Minus Existing ICU	.17
Project ICU Increment	.0134
Project Share	7.9%

As shown, the Alternative Project would have a 7.9 percent share in the cost of the improvements, the same as that calculated previously in the EIR. The change in trip generation and redistribution of trips due to the Alternative Project is insignificant enough that the result is a negligible difference in the fair share percentage.

Table 3

2030 ICU SUMMARY

Intersection	Previous Report		Alternative Project		Difference	
	AM ICU	**PM ICU**	**AM ICU**	**PM ICU**	**AM ICU**	**PM ICU**
ADJACENT INTERSECTIONS						
17. Gothard St & Center Ave	.36	.57	.36	.57	.00	.00
18. I-405 SB Ramps & Center Ave	.55	.90	.55	.90	.00	.00
19. Beach Blvd & Center Ave	.78	.77	.78	.77	.00	.00
27. Gothard St & Edinger Ave	.55	.64	.55	.64	.00	.00
28. Beach Blvd & Edinger Ave	.86	1.05	.89	1.05	.03	.00

	Previous Report	Alternative Project	Difference
OFF-SITE INTERSECTIONS (PM PEAK HOUR ONLY)			
8. Goldenwest Ave & Bolsa Ave	1.02	1.02	.00
15. Goldenwest Ave & McFadden Ave	.81	.81	.00
16. Gothard St & Mcfadden Ave	.64	.64	.00
26. Goldenwest St & Edinger Ave	.70	.70	.00
29. Newland St & Edinger Ave	.80	.80	.00
36. Gothard St & Heil Ave	.78	.78	.00
37. Beach Blvd & Heil Ave	.95	.95	.00
38. Newland St & Heil Ave	.63	.63	.00
46. Gothard St & Warner Ave	.84	.84	.00
47. Beach Blvd & Warner Ave	.96	.96	.00
48. Newland St & Warner Ave	.92	.92	.00
250. Beach Blvd & McFadden Ave	.95	.95	.00
251. Beach Blvd & Bolsa Ave	1.05	1.05	.00
252. Beach Blvd & Hazard Ave	.83	.83	.00
253. Magnolia St & Edinger Ave	.78	.78	.00

APPENDIX A
TRIP GENERATION ADJUSTMENTS

In the methodology proposed for estimating project trip generation (Option 1 outlined in the report) adjustments are made for on-site capture and pass-by trips, but no adjustment is made for diverted trips. Under Option 2, all adjustments are accounted for the use of the Citywide traffic model (they are accounted for in the trip distribution process), and in Option 3 a hybrid approach is used. This is a description of that Option 3 approach.

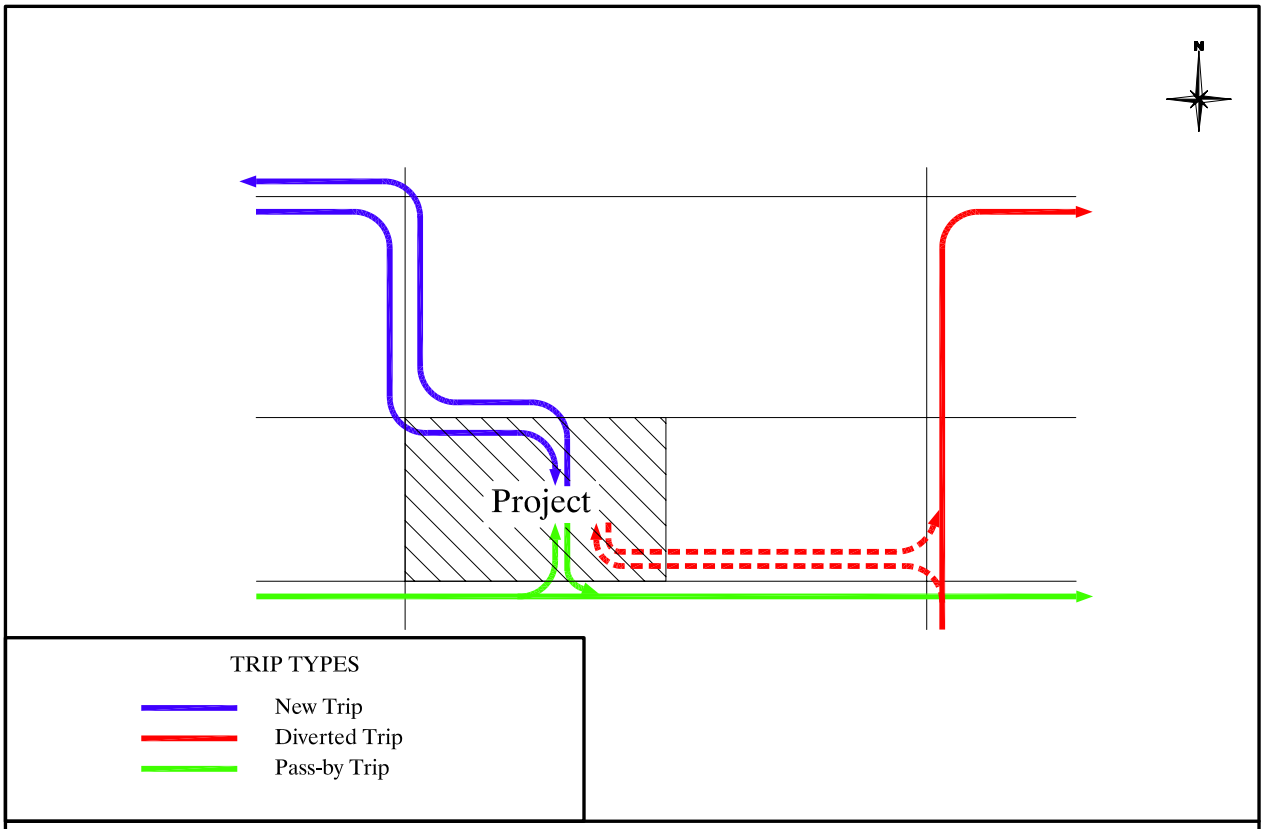
Figure A-1 shows in simple diagrammatic form the three types of trips that are attracted to a retail facility. The most complex are diverted trips since they occur on some but not necessarily all roadways surrounding the project site and can extend some distance from the site. Two examples of link volumes with diverted trips are shown here. One example (the east-west link) has no project volumes on the link but has reduced traffic due to diverted trips. The other example (the north-south link) has project traffic on the link but the difference between the with and without project volume is different than the project volume because of diverted trips. While in both cases the diverted trips cause a reduction, it should be noted that in each of the examples shown here turn movements are added to an intersection, replacing what would otherwise be a through movement.

A procedure to incorporate both pass-by and diverted trips into a layered impact analysis procedure can be developed using traffic model data. Three sets of information for the study area are derived using traffic model forecasts with and without the project:

1. No-project volumes
2. With-project volumes
3. Project-only volumes

In each case, the data comprises average daily traffic (ADT) link volumes and peak hour turn movement volumes. A fourth set of data is then derived from data sets 2 and 3:

4. Subtract project-only volumes from the with-project volumes



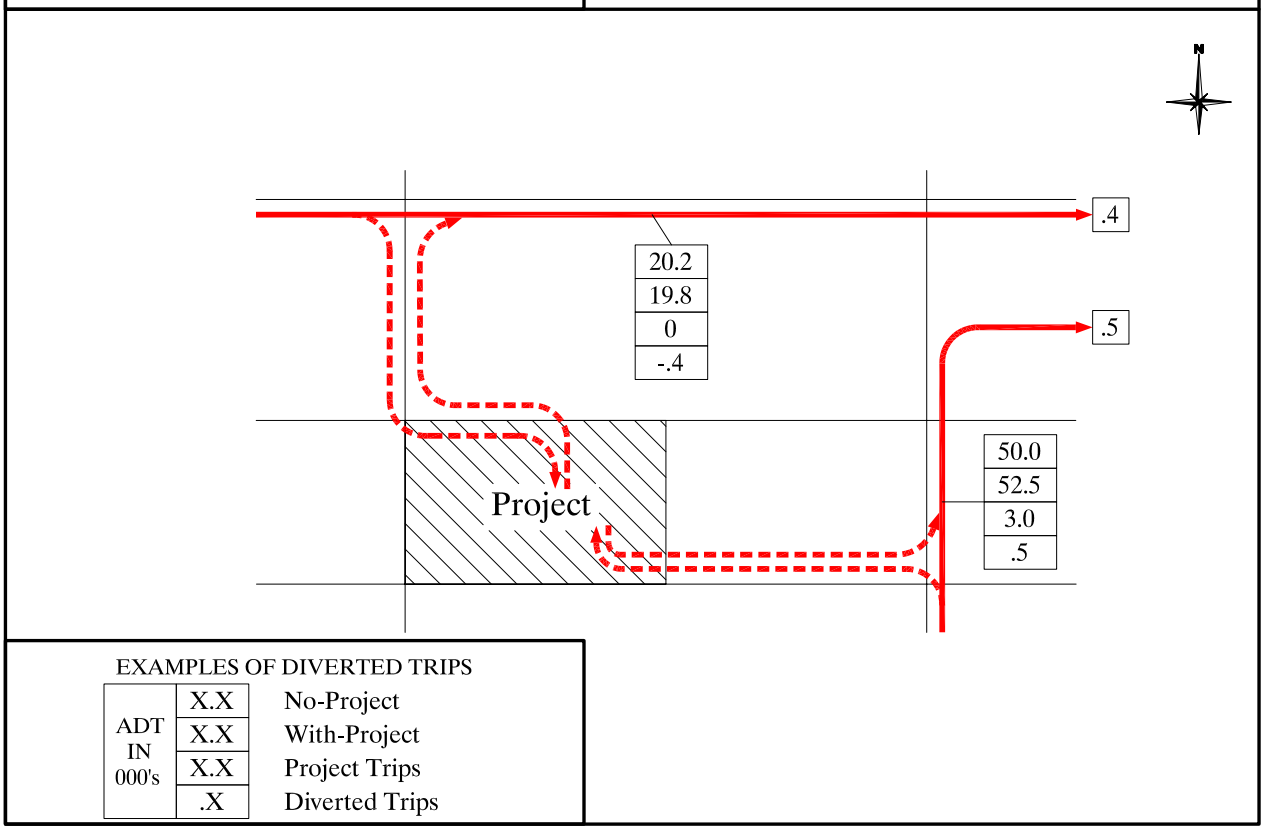


Figure A-1

TRIP TYPES

A comparison between 2 and 4 (i.e., subtracting 2 from 4) gives the pass-by and diverted volumes. The example described earlier shows the type of results that would be obtained on links and the same type of information would be derived for intersection turn movements. These volumes can be formalized into an adjustment data set for use in a layered approach. The additive layers would be as follows:

1. No-project volumes
2. Project only volumes (added)
3. Adjustment for pass-by and diverted volumes (primarily negative numbers)

In most cases, the adjustment for pass-by and diverted trips will involve negative values, but in some cases, such as a turn movement, it may involve a positive value. As noted in the discussion, the advantage of this approach is that each data set, including that used for the adjustments, can be quantitatively summarized in the traffic report.

Appendix B

INTERSECTION DATA

B-1 AM Peak Hour Volumes – Project Only (Alternative Project vs. Previous Report)
B-2 PM Peak Hour Volumes – Project Only (Alternative Project vs. Previous Report)
B-3 2014 With-Project AM Peak Hour Volumes (Alternative Project)
B-4 2014 With-Project PM Peak Hour Volumes (Alternative Project)
B-5 2030 With-Project AM Peak Hour Volumes (Alternative Project)
B-6 2030 With-Project PM Peak Hour Volumes (Alternative Project)

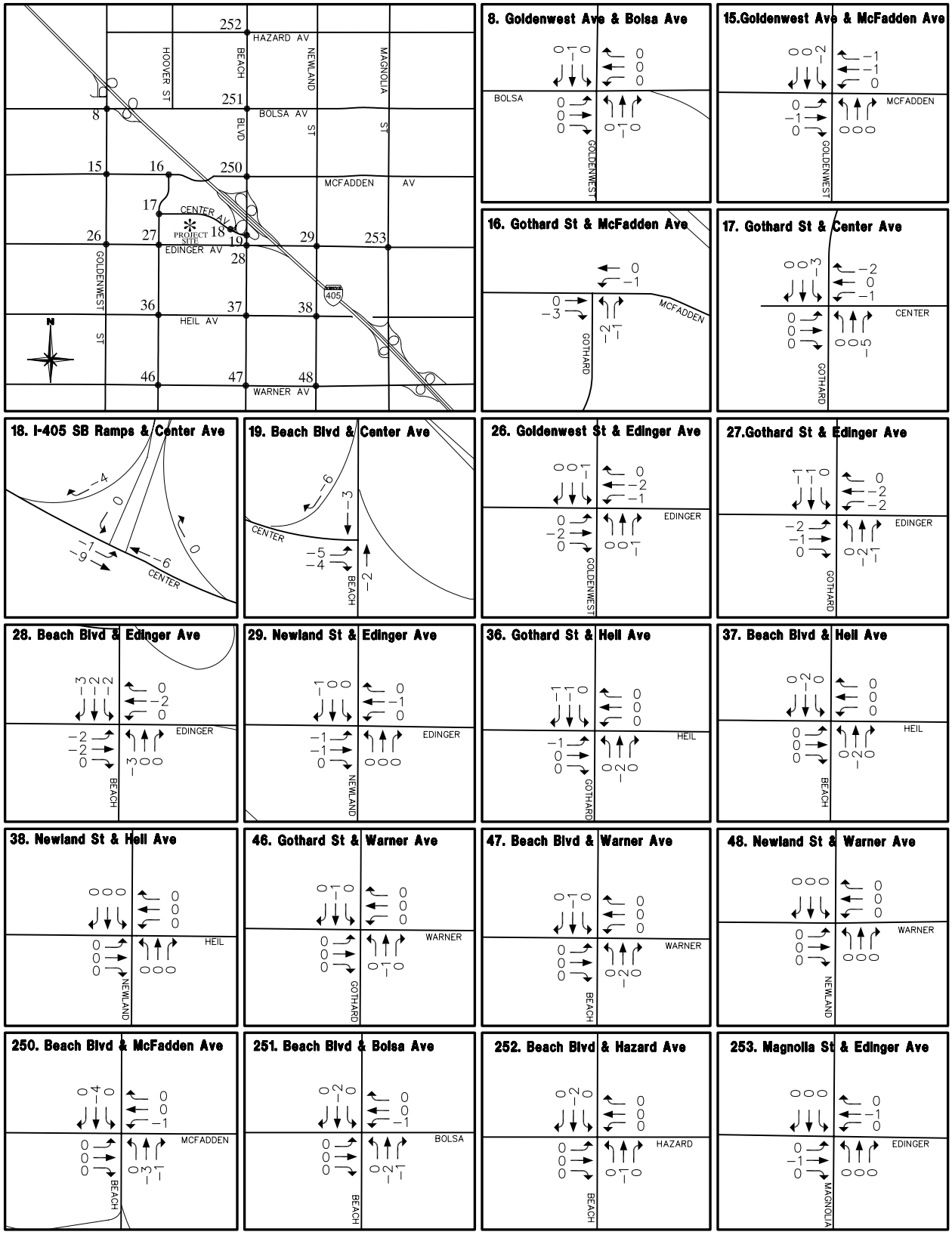


Figure B-1

AM PEAK HOUR VOLUMES
- PROJECT-ONLY
- ALTERNATIVE PROJECT VS PREVIOUS REPORT

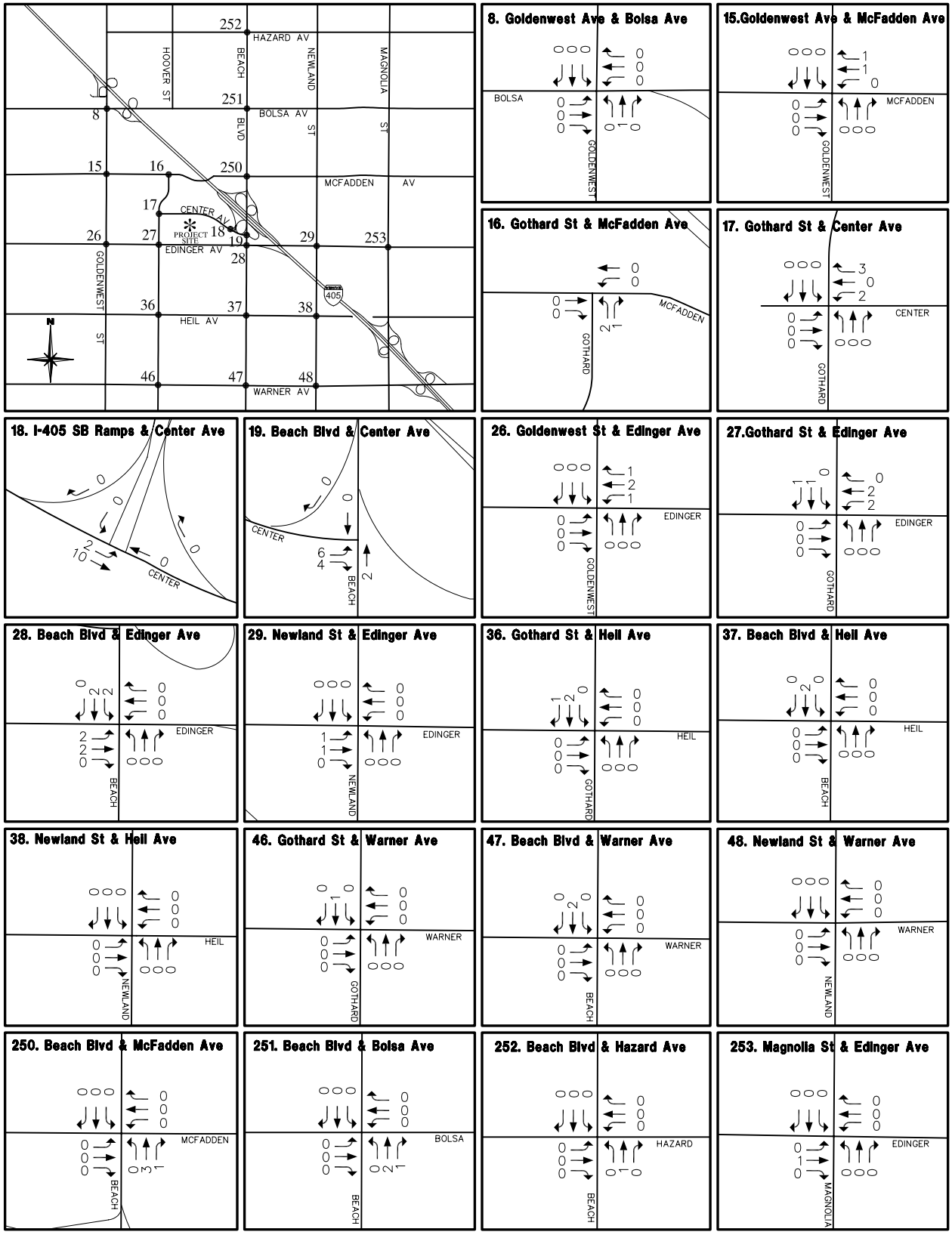


Figure B-2

PM PEAK HOUR VOLUMES
- PROJECT-ONLY
- ALTERNATIVE PROJECT VS PREVIOUS REPORT

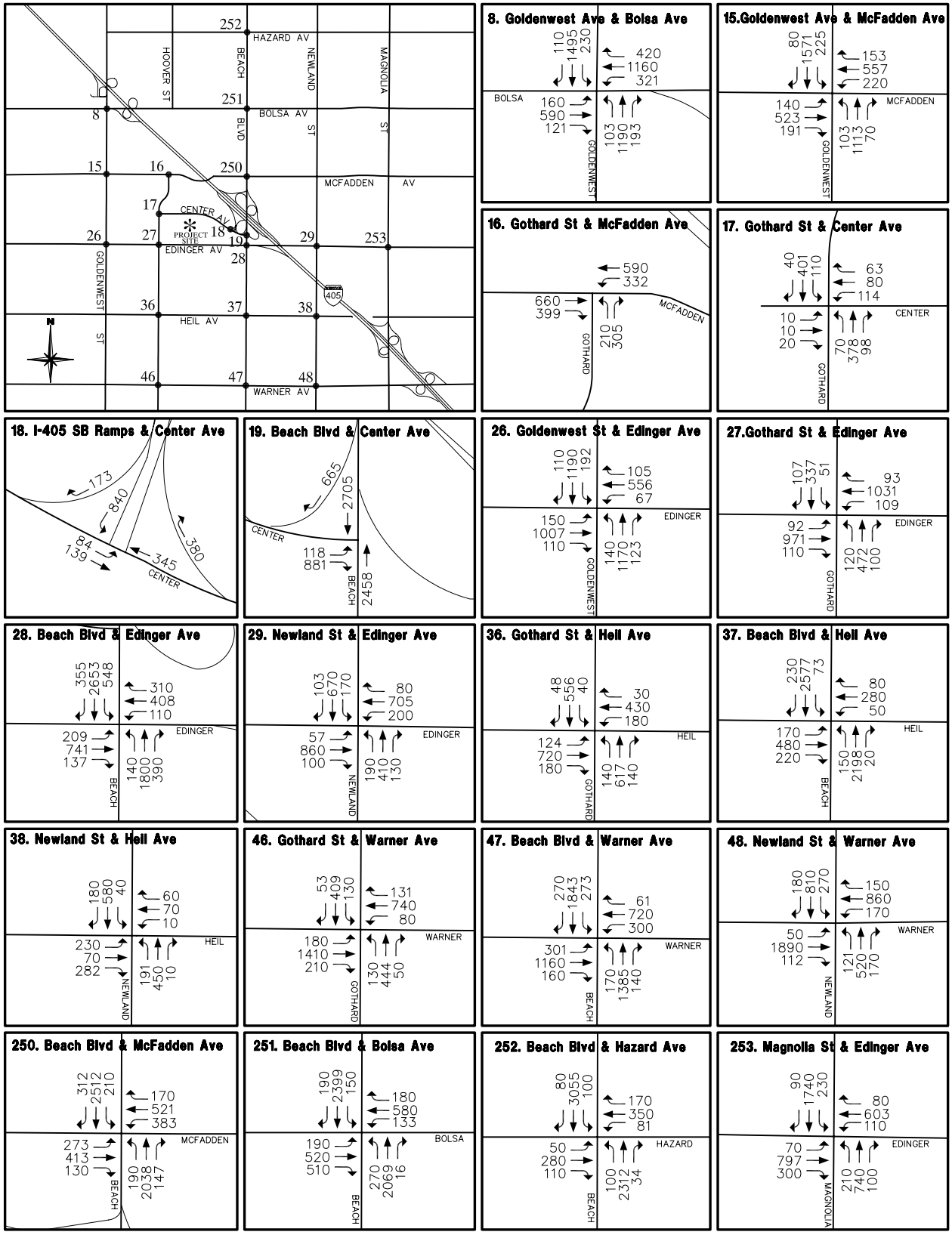


Figure B-3

YEAR 2014 AM PEAK HOUR VOLUMES
- WITH-PROJECT
- ALTERNATIVE PROJECT

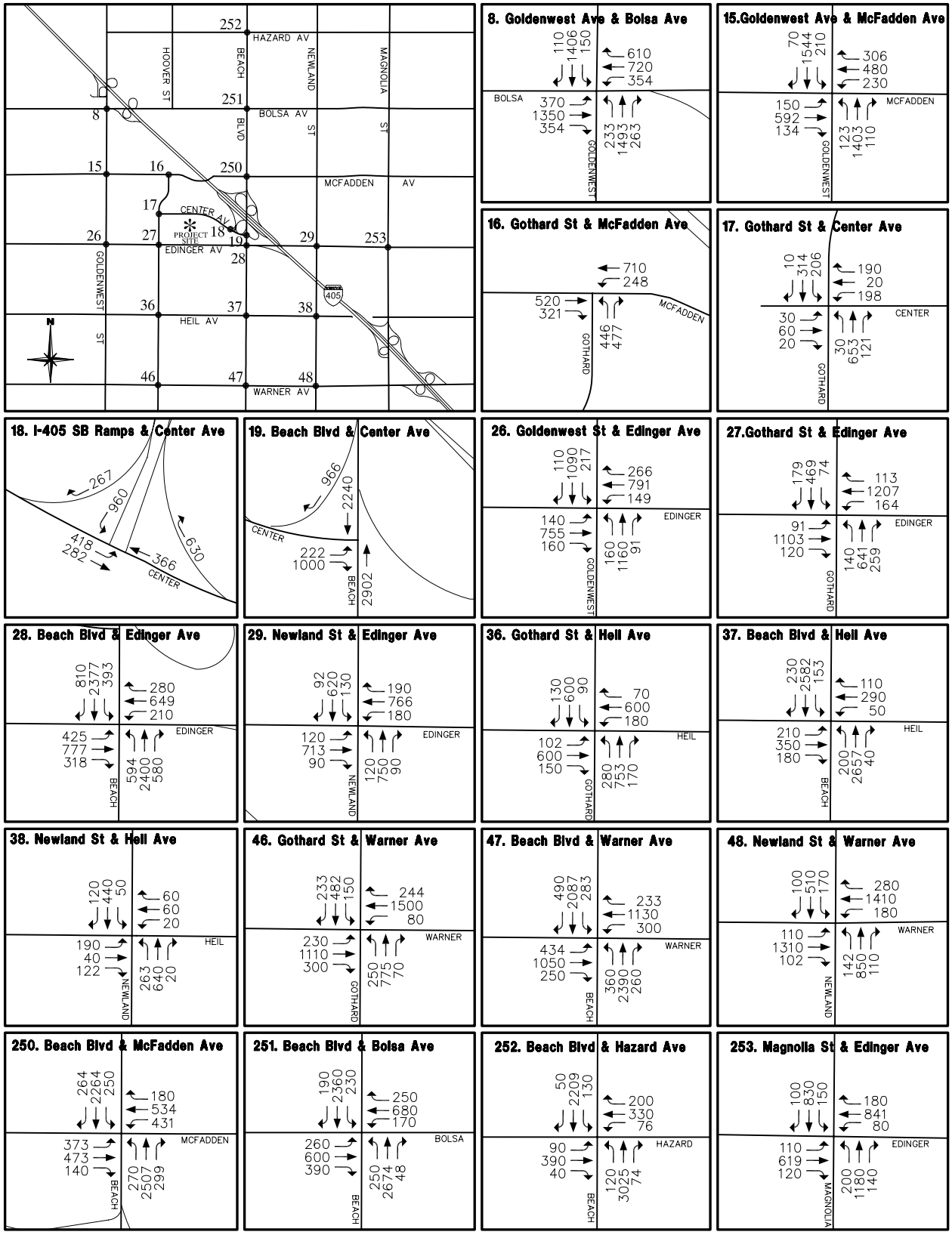


Figure B-4

YEAR 2014 PM PEAK HOUR VOLUMES
- WITH-PROJECT
- ALTERNATIVE PROJECT

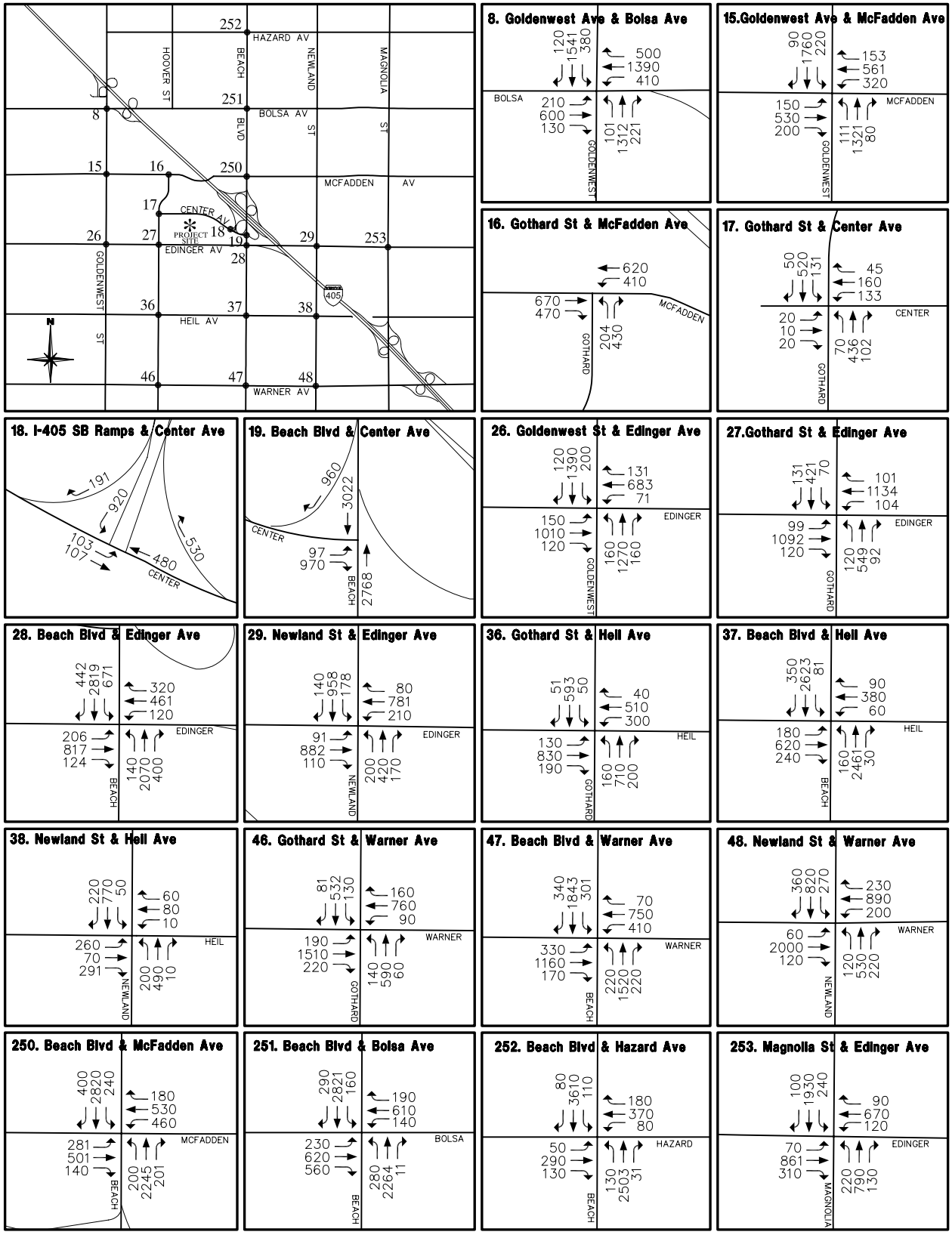


Figure B-5

YEAR 2030 AM PEAK HOUR VOLUMES
- WITH-PROJECT
- ALTERNATIVE PROJECT

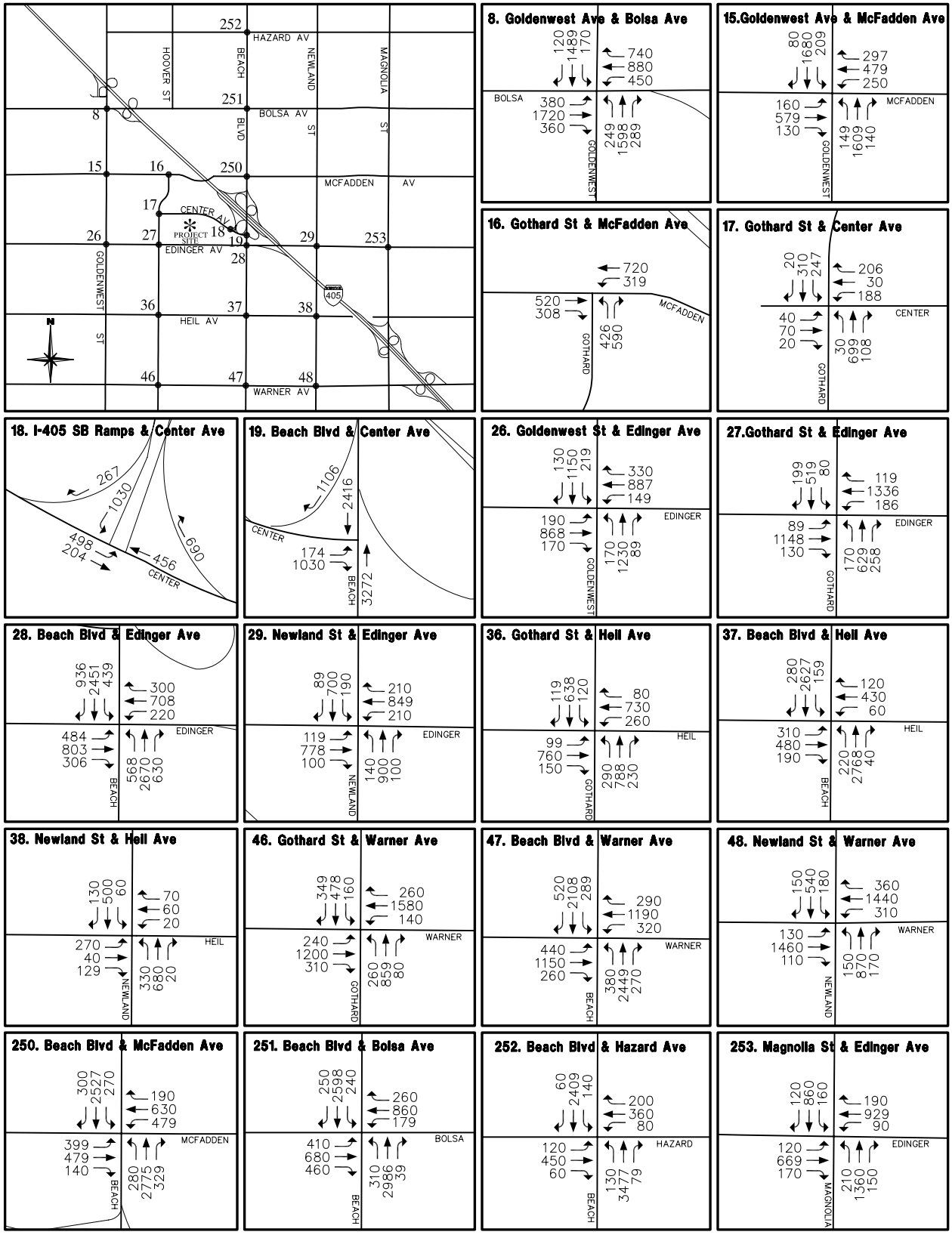


Figure B-6

YEAR 2030 PM PEAK HOUR VOLUMES
- WITH-PROJECT
- ALTERNATIVE PROJECT

Appendix C

INTERSECTION CAPACITY UTILIZATION WORKSHEETS

Peak hour intersection volume/capacity ratios are calculated by means of intersection capacity utilization (ICU) values. ICU calculations were performed for the intersections shown in Figure C-1. For simplicity, signalization is assumed at each intersection. Precise ICU calculations of existing non-signalized intersections would require a more detailed analysis.

The procedure is based on the critical movement methodology, and shows the amount of capacity utilized by each critical move. A capacity of 1700 vehicles per hour (VPH) per lane is assumed together with a .05 clearance interval. A "de-facto" right-turn lane is used in the ICU calculation for cases where a curb lane is wide enough to separately serve both thru and right-turn traffic (typically with a width of 19 feet from curb to outside of thru-lane with parking prohibited during peak periods). Such lanes are treated the same as striped right-turn lanes during the ICU calculations, but they are denoted on the ICU calculation worksheets using the letter "d" in place of a numerical entry for right-turn lanes.

The methodology also incorporates a check for right-turn capacity utilization. Both right-turn-on-green (RTOG) and right-turn-on-red (RTOR) capacity availability are calculated and checked against the total right-turn capacity need. If insufficient capacity is available, then an adjustment is made to the total capacity utilization value. The following example shows how this adjustment is made.

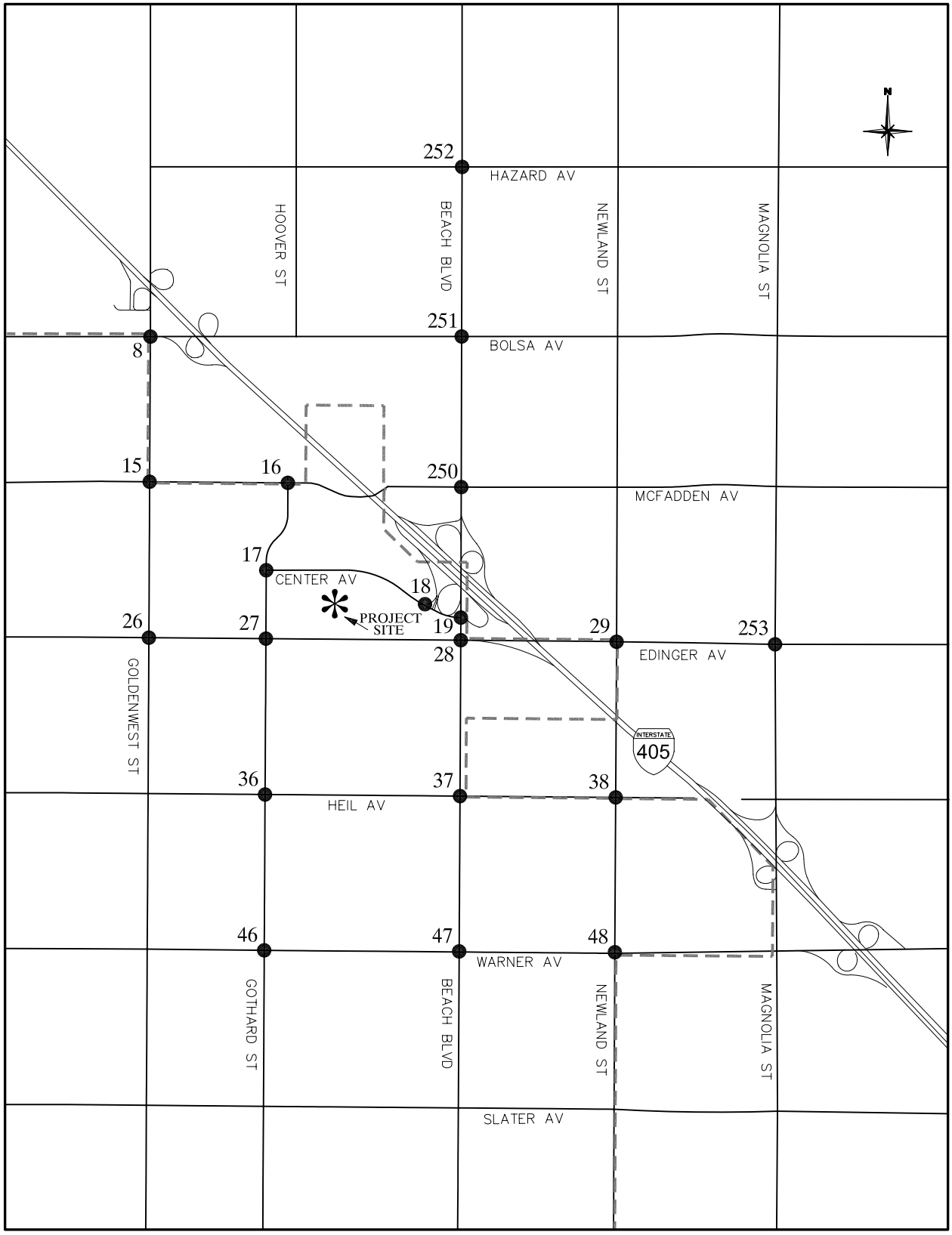
Example For Northbound Right

<u>1. Right-Turn-On-Green (RTOG)</u>

If NBT is critical move, then:
RTOG = V/C (NBT)
Otherwise,
RTOG = V/C (NBL) + V/C (SBT) - V/C (SBL)

<u>2. Right-Turn-On-Red (RTOR)</u>

If WBL is critical move, then:
RTOR = V/C (WBL)
Otherwise,
RTOR = V/C (EBL) + V/C (WBT) - V/C (EBT)



Legend

City Limits

Figure C-1

INTERSECTION LOCATION MAP

3. Right-Turn Overlap Adjustment

If the northbound right is assumed to overlap with the adjacent westbound left, adjustments to the RTOG and RTOR values are made as follows:

RTOG = RTOG + V/C (WBL)
RTOR = RTOR - V/C (WBL)

4. Total Right-Turn Capacity (RTC) Availability For NBR

RTC = RTOG + factor x RTOR
Where factor = RTOR saturation flow factor (75%)

Right-turn adjustment is then as follows: Additional ICU = V/C (NBR) - RTC

A zero or negative value indicates that adequate capacity is available and no adjustment is necessary. A positive value indicates that the available RTOR and RTOG capacity does not adequately accommodate the right-turn V/C, therefore the right-turn is essentially considered to be a critical movement. In such cases, the right-turn adjustment is noted on the ICU worksheet and it is included in the total capacity utilization value. When it is determined that a right-turn adjustment is required for more than one right-turn movement, the word "multi" is printed on the worksheet instead of an actual right-turn movement reference, and the right-turn adjustments are cumulatively added to the total capacity utilization value. In such cases, further operational evaluation is typically carried out to determine if under actual operational conditions, the critical right-turns would operate simultaneously, and therefore a right-turn adjustment credit should be applied.

Shared Lane V/C Methodology

For intersection approaches where shared usage of a lane is permitted by more than one turn movement (e.g., left/thru, thru/right, left/thru/right), the individual turn volumes are evaluated to determine whether dedication of the shared lane is warranted to any one given turn movement. The following example demonstrates how this evaluation is carried out:

Example for Shared Left/Thru Lane

1. Average Lane Volume (ALV)

$$ALV = \frac{\text{Left-Turn Volume + Thru Volume}}{\text{Total Left + Thru Approach Lanes (including shared lane)}}$$

2. ALV for Each Approach

$$\text{ALV (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Lanes (including shared lane)}}$$

$$\text{ALV (Thru)} = \frac{\text{Thru Volume}}{\text{Thru Approach Lanes (including shared lane)}}$$

3. Lane Dedication is Warranted

If ALV (Left) is greater than ALV then full dedication of the shared lane to the left-turn approach is warranted. Left-turn and thru V/C ratios for this case are calculated as follows:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (including shared lane)}}$$

$$\text{V/C (Thru)} = \frac{\text{Thru Volume}}{\text{Thru Approach Capacity (excluding shared lane)}}$$

Similarly, if ALV (Thru) is greater than ALV then full dedication to the thru approach is warranted, and left-turn and thru V/C ratios are calculated as follows:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (excluding shared lane)}}$$

$$\text{V/C (Thru)} = \frac{\text{Thru Volume}}{\text{Thru Approach Capacity (including shared lane)}}$$

4. Lane Dedication is not Warranted

If ALV (Left) and ALV (Thru) are both less than ALV, the left/thru lane is assumed to be truly shared and each left, left/thru or thru approach lane carries an evenly distributed volume of traffic equal to ALV. A combined left/thru V/C ratio is calculated as follows:

$$\text{V/C (Left/Thru)} = \frac{\text{Left-Turn Volume + Thru Volume}}{\text{Total Left + Thru Approach Capacity (including shared lane)}}$$

This V/C (Left/Thru) ratio is assigned as the V/C (Thru) ratio for the critical movement analysis and ICU summary listing.

If split phasing has not been designated for this approach, the relative proportion of V/C (Thru) that is attributed to the left-turn volume is estimated as follows:

If approach has more than one left-turn (including shared lane), then:

V/C (Left) = V/C (Thru)

If approach has only one left-turn lane (shared lane), then:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Single Approach Lane Capacity}}$$

If this left-turn movement is determined to be a critical movement, the V/C (Left) value is posted in brackets on the ICU summary printout.

These same steps are carried out for shared thru/right lanes. If full dedication of a shared thru/right lane to the right-turn movement is warranted, the right-turn V/C value calculated in step three is checked against the RTOR and RTOG capacity availability if the option to include right-turns in the V/C ratio calculations is selected. If the V/C value that is determined using the shared lane methodology described here is reduced due to RTOR and RTOG capacity availability, the V/C value for the thru/right lanes is posted in brackets.

When an approach contains more than one shared lane (e.g., left/thru and thru/right), steps one and two listed above are carried out for the three turn movements combined. Step four is carried out if dedication is not warranted for either of the shared lanes. If dedication of one of the shared lanes is warranted to one movement or another, step three is carried out for the two movements involved, and then steps one through four are repeated for the two movements involved in the other shared lane.

2014

8. Goldenwest Ave & Bolsa Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	103	.03	233	.07
NBT	3	5100	1191	.27*	1492	.34*
NBR	0	0	193		263	
SBL	1	1700	230	.14*	150	.09*
SBT	3	5100	1496	.29	1406	.28
SBR	d	1700	110	.06	110	.06
EBL	2	3400	160	.05*	370	.11
EBT	3	5100	590	.12	1350	.26*
EBR	1	1700	121	.07	354	.21
WBL	2	3400	321	.09	354	.10*
WBT	3	5100	1160	.23*	720	.14
WBR	1	1700	420	.25	610	.36
Right Turn Adjustment					WBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.74**		**.91**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	103	.03	233	.07
NBT	3	5100	1190	.27*	1493	.34*
NBR	0	0	193		263	
SBL	1	1700	230	.14*	150	.09*
SBT	3	5100	1495	.29	1406	.28
SBR	d	1700	110	.06	110	.06
EBL	2	3400	160	.05*	370	.11
EBT	3	5100	590	.12	1350	.26*
EBR	1	1700	121	.07	354	.21
WBL	2	3400	321	.09	354	.10*
WBT	3	5100	1160	.23*	720	.14
WBR	1	1700	420	.25	610	.36
Right Turn Adjustment					WBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.74**		**.91**

15. Goldenwest Ave & McFadden Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	103	.06*	123	.07
NBT	3	5100	1113	.22	1403	.28*
NBR	d	1700	70	.04	110	.06
SBL	1	1700	227	.13	210	.12*
SBT	3	5100	1571	.32*	1544	.32
SBR	0	0	80		70	
EBL	1	1700	140	.08	150	.09
EBT	2	3400	524	.15*	592	.17*
EBR	d	1700	191	.11	134	.08
WBL	1	1700	220	.13*	230	.14*
WBT	2	3400	558	.16	479	.14
WBR	d	1700	154	.09	305	.18
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.71**		**.76**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	103	.06*	123	.07
NBT	3	5100	1113	.22	1403	.28*
NBR	d	1700	70	.04	110	.06
SBL	1	1700	225	.13	210	.12*
SBT	3	5100	1571	.32*	1544	.32
SBR	0	0	80		70	
EBL	1	1700	140	.08	150	.09
EBT	2	3400	523	.15*	592	.17*
EBR	d	1700	191	.11	134	.08
WBL	1	1700	220	.13*	230	.14*
WBT	2	3400	557	.16	480	.14
WBR	d	1700	153	.09	306	.18
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.71**		**.76**

16. Gothard St & Mcfadden Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	212	.06*	444	.13*
NBT	0	0	0		0	
NBR	1	1700	306	.18	476	.28
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	660	.19*	520	.15*
EBR	d	1700	402	.24	321	.19
WBL	1	1700	333	.20*	248	.15*
WBT	2	3400	590	.17	710	.21
WBR	0	0	0		0	
Right Turn Adjustment			Multi	.04*	NBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.54**		**.55**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	210	.06*	446	.13*
NBT	0	0	0		0	
NBR	1	1700	305	.18	477	.28
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	660	.19*	520	.15*
EBR	d	1700	399	.23	321	.19
WBL	1	1700	332	.20*	248	.15*
WBT	2	3400	590	.17	710	.21
WBR	0	0	0		0	
Right Turn Adjustment			Multi	.03*	NBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.53**		**.55**

17. Gothard St & Center Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	70	.04	30	.02
NBT	2	3400	383	.11*	653	.19*
NBR	d	1700	98	.06	121	.07
SBL	1	1700	113	.07*	206	.12*
SBT	2	3400	401	.12	314	.09
SBR	d	1700	40	.02	10	.01
EBL	1	1700	10	.01	30	.02
EBT	1	1700	10	.02*	60	.05*
EBR	0	0	20		20	
WBL	1	1700	115	.07*	196	.12*
WBT	2	3400	80	.04	20	.01
WBR	0	0	65		187	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.32**		**.53**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	70	.04	30	.02
NBT	2	3400	378	.11*	653	.19*
NBR	d	1700	98	.06	121	.07
SBL	1	1700	110	.06*	206	.12*
SBT	2	3400	401	.12	314	.09
SBR	d	1700	40	.02	10	.01
EBL	1	1700	10	.01	30	.02
EBT	1	1700	10	.02*	60	.05*
EBR	0	0	20		20	
WBL	1	1700	114	.07*	198	.12*
WBT	2	3400	80	.04	20	.01
WBR	0	0	63		190	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.31**		**.53**

18. I-405 SB Ramps & Center Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	840	.25*	960	.28*
SBT	0	0	0		0	
SBR	1	1700	177	.10	267	.16
EBL	1	1700	85	.05*	416	.24*
EBT	2	3400	148	.04	272	.08
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	351	.10*	366	.11*
WBR	1	1700	380	.22	630	.37
Right Turn Adjustment					WBR	.12*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.45**		**.80**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	840	.25*	960	.28*
SBT	0	0	0		0	
SBR	1	1700	173	.10	267	.16
EBL	1	1700	84	.05*	418	.25*
EBT	2	3400	139	.04	282	.08
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	345	.10*	366	.11*
WBR	1	1700	380	.22	630	.37
Right Turn Adjustment					WBR	.12*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.45**		**.81**

19. Beach Blvd & Center Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	4	6800	2460	.36	2900	.43*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	4	6800	2708	.40*	2240	.33
SBR	f		671		966	
EBL	2	3400	123	.04*	216	.06*
EBT	0	0	0		0	
EBR	2	3400	885	.26	996	.29
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			EBR	.22*	EBR	.18*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.71**		**.72**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	4	6800	2458	.36	2902	.43*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	4	6800	2705	.40*	2240	.33
SBR	f		665		966	
EBL	2	3400	118	.03*	222	.07*
EBT	0	0	0		0	
EBR	2	3400	881	.26	1000	.29
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			EBR	.23*	EBR	.17*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.71**		**.72**

26. Goldenwest St & Edinger Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	140	.08	160	.09
NBT	3	5100	1170	.23*	1160	.23*
NBR	d	1700	124	.07	91	.05
SBL	1	1700	193	.11*	217	.13*
SBT	3	5100	1190	.23	1090	.21
SBR	d	1700	110	.06	110	.06
EBL	1	1700	150	.09	140	.08
EBT	3	5100	1009	.20*	755	.15*
EBR	d	1700	110	.06	160	.09
WBL	1	1700	68	.04*	148	.09*
WBT	3	5100	558	.11	789	.15
WBR	d	1700	105	.06	265	.16
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.63**		**.65**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	140	.08	160	.09
NBT	3	5100	1170	.23*	1160	.23*
NBR	d	1700	123	.07	91	.05
SBL	1	1700	192	.11*	217	.13*
SBT	3	5100	1190	.23	1090	.21
SBR	d	1700	110	.06	110	.06
EBL	1	1700	150	.09	140	.08
EBT	3	5100	1007	.20*	755	.15*
EBR	d	1700	110	.06	160	.09
WBL	1	1700	67	.04*	149	.09*
WBT	3	5100	556	.11	791	.16
WBR	d	1700	105	.06	266	.16
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.63**		**.65**

27. Gothard St & Edinger Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	120	.07*	140	.08
NBT	2	3400	474	.14	641	.19*
NBR	d	1700	101	.06	259	.15
SBL	1	1700	51	.03	74	.04*
SBT	2	3400	338	.10*	468	.14
SBR	d	1700	108	.06	178	.10
EBL	1	1700	94	.06*	91	.05
EBT	3	5100	972	.19	1103	.22*
EBR	d	1700	110	.06	120	.07
WBL	1	1700	111	.07	162	.10*
WBT	3	5100	1033	.22*	1205	.26
WBR	0	0	93		113	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.50**		**.60**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	120	.07*	140	.08
NBT	2	3400	472	.14	641	.19*
NBR	d	1700	100	.06	259	.15
SBL	1	1700	51	.03	74	.04*
SBT	2	3400	337	.10*	469	.14
SBR	d	1700	107	.06	179	.11
EBL	1	1700	92	.05*	91	.05
EBT	3	5100	971	.19	1103	.22*
EBR	d	1700	110	.06	120	.07
WBL	1	1700	109	.06	164	.10*
WBT	3	5100	1031	.22*	1207	.26
WBR	0	0	93		113	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.49**		**.60**

28. Beach Blvd & Edinger Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	143	.04	594	.17
NBT	3	5100	1800	.35*	2400	.47*
NBR	1	1700	390	.23	580	.34
SBL	2	3400	550	.16*	391	.12*
SBT	4	6800	2655	.39	2375	.35
SBR	2	3400	358	.11	810	.24
EBL	2	3400	211	.06	423	.12*
EBT	3	5100	743	.15*	775	.15
EBR	1	1700	137	.08	318	.19
WBL	2	3400	110	.03*	210	.06
WBT	2	3400	410	.12	649	.19*
WBR	1	1700	310	.18	280	.16
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.74**		**.95**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	140	.04	594	.17
NBT	3	5100	1800	.35*	2400	.47*
NBR	1	1700	390	.23	580	.34
SBL	2	3400	548	.16*	393	.12*
SBT	4	6800	2653	.39	2377	.35
SBR	2	3400	355	.10	810	.24
EBL	2	3400	209	.06	425	.13*
EBT	3	5100	741	.15*	777	.15
EBR	1	1700	137	.08	318	.19
WBL	1	1700	110	.06*	210	.12
WBT	2	3400	408	.12	649	.19*
WBR	1	1700	310	.18	280	.16
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.77**		**.96**

29. Newland St & Edinger Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	190	.11*	120	.07
NBT	2	3400	410	.16	750	.25*
NBR	0	0	130		90	
SBL	1	1700	170	.10	130	.08*
SBT	2	3400	670	.23*	620	.21
SBR	0	0	104		92	
EBL	1	1700	58	.03	119	.07
EBT	2	3400	861	.25*	712	.21*
EBR	d	1700	100	.06	90	.05
WBL	1	1700	200	.12*	180	.11*
WBT	2	3400	706	.21	766	.23
WBR	d	1700	80	.05	190	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.76**		**.70**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	190	.11*	120	.07
NBT	2	3400	410	.16	750	.25*
NBR	0	0	130		90	
SBL	1	1700	170	.10	130	.08*
SBT	2	3400	670	.23*	620	.21
SBR	0	0	103		92	
EBL	1	1700	57	.03	120	.07
EBT	2	3400	860	.25*	713	.21*
EBR	d	1700	100	.06	90	.05
WBL	1	1700	200	.12*	180	.11*
WBT	2	3400	705	.21	766	.23
WBR	d	1700	80	.05	190	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.76**		**.70**

36. Gothard St & Heil Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	140	.08*	280	.16*
NBT	2	3400	619	.18	753	.22
NBR	d	1700	140	.08	170	.10
SBL	1	1700	40	.02	90	.05
SBT	2	3400	557	.16*	598	.18*
SBR	d	1700	49	.03	129	.08
EBL	1	1700	125	.07	102	.06
EBT	2	3400	720	.21*	600	.18*
EBR	d	1700	180	.11	150	.09
WBL	1	1700	180	.11*	180	.11*
WBT	2	3400	430	.13	600	.18
WBR	d	1700	30	.02	70	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.61**		**.68**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	140	.08*	280	.16*
NBT	2	3400	617	.18	753	.22
NBR	d	1700	140	.08	170	.10
SBL	1	1700	40	.02	90	.05
SBT	2	3400	556	.16*	600	.18*
SBR	d	1700	48	.03	130	.08
EBL	1	1700	124	.07	102	.06
EBT	2	3400	720	.21*	600	.18*
EBR	d	1700	180	.11	150	.09
WBL	1	1700	180	.11*	180	.11*
WBT	2	3400	430	.13	600	.18
WBR	d	1700	30	.02	70	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.61**		**.68**

37. Beach Blvd & Heil Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	150	.09*	200	.12*
NBT	4	6800	2200	.33	2657	.40
NBR	0	0	20		40	
SBL	1	1700	73	.04	153	.09
SBT	4	6800	2579	.41*	2580	.41*
SBR	0	0	230		230	
EBL	1	1700	170	.10*	210	.12*
EBT	2	3400	480	.14	350	.10
EBR	d	1700	220	.13	180	.11
WBL	1	1700	50	.03	50	.03
WBT	2	3400	280	.11*	290	.12*
WBR	0	0	80		110	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.76**		**.82**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	150	.09*	200	.12*
NBT	4	6800	2198	.33	2657	.40
NBR	0	0	20		40	
SBL	1	1700	73	.04	153	.09
SBT	4	6800	2577	.41*	2582	.41*
SBR	0	0	230		230	
EBL	1	1700	170	.10	210	.12*
EBT	2	3400	480	.21*	350	.16
EBR	0	0	220		180	
WBL	1	1700	50	.03*	50	.03
WBT	2	3400	280	.11	290	.12*
WBR	0	0	80		110	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.79**		**.82**

38. Newland St & Heil Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	191	.11*	263	.15*
NBT	2	3400	450	.13	640	.19
NBR	d	1700	10	.01	20	.01
SBL	1	1700	40	.02	50	.03
SBT	2	3400	580	.17*	440	.13*
SBR	d	1700	180	.11	120	.07
EBL	1	1700	230	.14*	190	.11*
EBT	1	1700	70	.04	40	.02
EBR	1	1700	282	.17	122	.07
WBL	1	1700	10	.01	20	.01
WBT	1	1700	70	.08*	60	.07*
WBR	0	0	60		60	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .55 .51

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	191	.11*	263	.15*
NBT	2	3400	450	.13	640	.19
NBR	d	1700	10	.01	20	.01
SBL	1	1700	40	.02	50	.03
SBT	2	3400	580	.17*	440	.13*
SBR	d	1700	180	.11	120	.07
EBL	1	1700	230	.14*	190	.11*
EBT	1	1700	70	.04	40	.02
EBR	1	1700	282	.17	122	.07
WBL	1	1700	10	.01	20	.01
WBT	1	1700	70	.08*	60	.07*
WBR	0	0	60		60	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .55 .51

46. Gothard St & Warner Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	130	.08	250	.15
NBT	2	3400	445	.13*	775	.23*
NBR	d	1700	50	.03	70	.04
SBL	1	1700	130	.08*	150	.09*
SBT	2	3400	410	.12	481	.14
SBR	d	1700	53	.03	233	.14
EBL	1	1700	180	.11	230	.14*
EBT	3	5100	1410	.28*	1110	.22
EBR	1	1700	210	.12	300	.18
WBL	1	1700	80	.05*	80	.05
WBT	3	5100	740	.15	1500	.29*
WBR	d	1700	131	.08	244	.14
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .59 .80

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	130	.08	250	.15
NBT	2	3400	444	.13*	775	.23*
NBR	d	1700	50	.03	70	.04
SBL	1	1700	130	.08*	150	.09*
SBT	2	3400	409	.12	482	.14
SBR	d	1700	53	.03	233	.14
EBL	1	1700	180	.11	230	.14*
EBT	3	5100	1410	.28*	1110	.22
EBR	1	1700	210	.12	300	.18
WBL	1	1700	80	.05*	80	.05
WBT	3	5100	740	.15	1500	.29*
WBR	d	1700	131	.08	244	.14
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .59 .80

47. Beach Blvd & Warner Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	170	.05*	360	.11
NBT	4	6800	1387	.22	2390	.39*
NBR	0	0	140		260	
SBL	2	3400	273	.08	283	.08*
SBT	4	6800	1844	.27*	2085	.31
SBR	1	1700	270	.16	490	.29
EBL	2	3400	301	.09	434	.13*
EBT	3	5100	1160	.26*	1050	.25
EBR	0	0	160		250	
WBL	2	3400	300	.09*	300	.09
WBT	3	5100	720	.15	1130	.27*
WBR	0	0	61		233	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.72**		**.92**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	170	.05*	360	.11
NBT	4	6800	1385	.22	2390	.39*
NBR	0	0	140		260	
SBL	2	3400	273	.08	283	.08*
SBT	4	6800	1843	.27*	2087	.31
SBR	1	1700	270	.16	490	.29
EBL	2	3400	301	.09	434	.13*
EBT	3	5100	1160	.26*	1050	.25
EBR	0	0	160		250	
WBL	2	3400	300	.09*	300	.09
WBT	3	5100	720	.15	1130	.27*
WBR	0	0	61		233	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.72**		**.92**

48. Newland St & Warner Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	121	.07	142	.08
NBT	2	3400	520	.15*	850	.25*
NBR	d	1700	170	.10	110	.06
SBL	1	1700	270	.16*	170	.10*
SBT	2	3400	810	.24	510	.15
SBR	d	1700	180	.11	100	.06
EBL	1	1700	50	.03	110	.06*
EBT	3	5100	1890	.37*	1310	.26
EBR	d	1700	112	.07	102	.06
WBL	1	1700	170	.10*	180	.11
WBT	2	3400	860	.25	1410	.41*
WBR	1	1700	150	.09	280	.16
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.83**		**.87**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	121	.07	142	.08
NBT	2	3400	520	.15*	850	.25*
NBR	d	1700	170	.10	110	.06
SBL	1	1700	270	.16*	170	.10*
SBT	2	3400	810	.24	510	.15
SBR	d	1700	180	.11	100	.06
EBL	1	1700	50	.03	110	.06*
EBT	3	5100	1890	.37*	1310	.26
EBR	d	1700	112	.07	102	.06
WBL	1	1700	170	.10*	180	.11
WBT	2	3400	860	.25	1410	.41*
WBR	1	1700	150	.09	280	.16
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.83**		**.87**

250. Beach Blvd & McFadden Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	190	.06*	270	.08
NBT	4	6800	2041	.32	2504	.41*
NBR	0	0	148		298	
SBL	2	3400	210	.06	250	.07*
SBT	4	6800	2516	.42*	2264	.37
SBR	0	0	312		264	
EBL	2	3400	273	.08*	373	.11*
EBT	2	3400	413	.16	473	.18
EBR	0	0	130		140	
WBL	2	3400	384	.11	431	.13
WBT	2	3400	521	.20*	534	.21*
WBR	0	0	170		180	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.81**		**.85**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	190	.06*	270	.08
NBT	4	6800	2038	.32	2507	.41*
NBR	0	0	147		299	
SBL	2	3400	210	.06	250	.07*
SBT	4	6800	2512	.42*	2264	.37
SBR	0	0	312		264	
EBL	2	3400	273	.08*	373	.11*
EBT	2	3400	413	.16	473	.18
EBR	0	0	130		140	
WBL	2	3400	383	.11	431	.13
WBT	2	3400	521	.20*	534	.21*
WBR	0	0	170		180	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.81**		**.85**

251. Beach Blvd & Bolsa Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	270	.08*	250	.07
NBT	4	6800	2071	.31	2672	.40*
NBR	0	0	17		47	
SBL	2	3400	150	.04	230	.07*
SBT	4	6800	2401	.38*	2360	.38
SBR	0	0	190		190	
EBL	1	1700	190	.11*	260	.15*
EBT	2	3400	520	.15	600	.18
EBR	1	1700	510	.30	390	.23
WBL	1	1700	134	.08	170	.10
WBT	2	3400	580	.17*	680	.20*
WBR	1	1700	180	.11	250	.15
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.85**		**.87**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	270	.08*	250	.07
NBT	4	6800	2069	.31	2674	.40*
NBR	0	0	16		48	
SBL	2	3400	150	.04	230	.07*
SBT	4	6800	2399	.38*	2360	.38
SBR	0	0	190		190	
EBL	1	1700	190	.11*	260	.15*
EBT	2	3400	520	.15	600	.18
EBR	1	1700	510	.30	390	.23
WBL	1	1700	133	.08	170	.10
WBT	2	3400	580	.17*	680	.20*
WBR	1	1700	180	.11	250	.15
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.85**		**.87**

252. Beach Blvd & Hazard Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	100	.06*	120	.07
NBT	4	6800	2313	.35	3024	.46*
NBR	0	0	34		74	
SBL	1	1700	100	.06	130	.08*
SBT	4	6800	3057	.45*	2209	.32
SBR	d	1700	80	.05	50	.03
EBL	1	1700	50	.03*	90	.05*
EBT	2	3400	280	.08	390	.11
EBR	1	1700	110	.06	40	.02
WBL	1	1700	82	.05	76	.04
WBT	2	3400	350	.10*	330	.10*
WBR	d	1700	170	.10	200	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.69**		**.74**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	100	.06*	120	.07
NBT	4	6800	2312	.35	3025	.46*
NBR	0	0	34		74	
SBL	1	1700	100	.06	130	.08*
SBT	4	6800	3055	.45*	2209	.32
SBR	d	1700	80	.05	50	.03
EBL	1	1700	50	.03*	90	.05*
EBT	2	3400	280	.08	390	.11
EBR	1	1700	110	.06	40	.02
WBL	1	1700	81	.05	76	.04
WBT	2	3400	350	.10*	330	.10*
WBR	d	1700	170	.10	200	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.69**		**.74**

253. Magnolia St & Edinger Ave

2014 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	210	.12*	200	.12
NBT	3	5100	740	.16	1180	.26*
NBR	0	0	100		140	
SBL	1	1700	230	.14	150	.09*
SBT	3	5100	1740	.34*	830	.16
SBR	d	1700	90	.05	100	.06
EBL	1	1700	70	.04	110	.06*
EBT	2	3400	798	.23*	618	.18
EBR	d	1700	300	.18	120	.07
WBL	1	1700	110	.06*	80	.05
WBT	2	3400	604	.18	841	.25*
WBR	d	1700	80	.05	180	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.80**		**.71**

2014 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	210	.12*	200	.12
NBT	3	5100	740	.16	1180	.26*
NBR	0	0	100		140	
SBL	1	1700	230	.14	150	.09*
SBT	3	5100	1740	.34*	830	.16
SBR	d	1700	90	.05	100	.06
EBL	1	1700	70	.04	110	.06*
EBT	2	3400	797	.23*	619	.18
EBR	d	1700	300	.18	120	.07
WBL	1	1700	110	.06*	80	.05
WBT	2	3400	603	.18	841	.25*
WBR	d	1700	80	.05	180	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.80**		**.71**

2030

8. Goldenwest Ave & Bolsa Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	101	.03	249	.07
NBT	3	5100	1313	.30*	1597	.37*
NBR	0	0	221		289	
SBL	1	1700	380	.22*	170	.10*
SBT	3	5100	1542	.30	1489	.29
SBR	d	1700	120	.07	120	.07
EBL	2	3400	210	.06*	380	.11
EBT	3	5100	600	.12	1720	.34*
EBR	1	1700	130	.08	360	.21
WBL	2	3400	410	.12	450	.13*
WBT	3	5100	1390	.27*	880	.17
WBR	1	1700	500	.29	740	.44
Right Turn Adjustment					WBR	.03*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .90 1.02

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	101	.03	249	.07
NBT	3	5100	1312	.30*	1598	.37*
NBR	0	0	221		289	
SBL	1	1700	380	.22*	170	.10*
SBT	3	5100	1541	.30	1489	.29
SBR	d	1700	120	.07	120	.07
EBL	2	3400	210	.06*	380	.11
EBT	3	5100	600	.12	1720	.34*
EBR	1	1700	130	.08	360	.21
WBL	2	3400	410	.12	450	.13*
WBT	3	5100	1390	.27*	880	.17
WBR	1	1700	500	.29	740	.44
Right Turn Adjustment					WBR	.03*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .90 1.02

15. Goldenwest Ave & McFadden Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	111	.07*	149	.09*
NBT	3	5100	1321	.26	1609	.32
NBR	d	1700	80	.05	140	.08
SBL	1	1700	222	.13	209	.12
SBT	3	5100	1760	.36*	1680	.35*
SBR	0	0	90		80	
EBL	1	1700	150	.09	160	.09
EBT	2	3400	531	.16*	579	.17*
EBR	d	1700	200	.12	130	.08
WBL	1	1700	320	.19*	250	.15*
WBT	2	3400	562	.17	478	.14
WBR	d	1700	154	.09	296	.17
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .83 .81

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	111	.07*	149	.09*
NBT	3	5100	1321	.26	1609	.32
NBR	d	1700	80	.05	140	.08
SBL	1	1700	220	.13	209	.12
SBT	3	5100	1760	.36*	1680	.35*
SBR	0	0	90		80	
EBL	1	1700	150	.09	160	.09
EBT	2	3400	530	.16*	579	.17*
EBR	d	1700	200	.12	130	.08
WBL	1	1700	320	.19*	250	.15*
WBT	2	3400	561	.17	479	.14
WBR	d	1700	153	.09	297	.17
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .83 .81

16. Gothard St & Mcfadden Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	206	.06*	424	.12*
NBT	0	0	0		0	
NBR	1	1700	431	.25	589	.35
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	670	.20*	520	.15*
EBR	d	1700	473	.28	308	.18
WBL	1	1700	411	.24*	319	.19*
WBT	2	3400	620	.18	720	.21
WBR	0	0	0		0	
Right Turn Adjustment			Multi	.12*	NBR	.13*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.67**		**.64**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	204	.06*	426	.13*
NBT	0	0	0		0	
NBR	1	1700	430	.25	590	.35
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	670	.20*	520	.15*
EBR	d	1700	470	.28	308	.18
WBL	1	1700	410	.24*	319	.19*
WBT	2	3400	620	.18	720	.21
WBR	0	0	0		0	
Right Turn Adjustment			Multi	.12*	NBR	.12*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.67**		**.64**

17. Gothard St & Center Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	70	.04	30	.02
NBT	2	3400	441	.13*	699	.21*
NBR	d	1700	102	.06	108	.06
SBL	1	1700	134	.08*	247	.15*
SBT	2	3400	520	.15	310	.09
SBR	d	1700	50	.03	20	.01
EBL	1	1700	20	.01	40	.02
EBT	1	1700	10	.02*	70	.05*
EBR	0	0	20		20	
WBL	1	1700	134	.08*	186	.11*
WBT	2	3400	160	.06	30	.02
WBR	0	0	47		203	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.36**		**.57**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	70	.04	30	.02
NBT	2	3400	436	.13*	699	.21*
NBR	d	1700	102	.06	108	.06
SBL	1	1700	131	.08*	247	.15*
SBT	2	3400	520	.15	310	.09
SBR	d	1700	50	.03	20	.01
EBL	1	1700	20	.01	40	.02
EBT	1	1700	10	.02*	70	.05*
EBR	0	0	20		20	
WBL	1	1700	133	.08*	188	.11*
WBT	2	3400	160	.06	30	.02
WBR	0	0	45		206	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.36**		**.57**

18. I-405 SB Ramps & Center Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	920	.27*	1030	.30*
SBT	0	0	0		0	
SBR	1	1700	195	.11	267	.16
EBL	1	1700	104	.06*	496	.29*
EBT	2	3400	116	.03	194	.06
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	486	.14*	456	.13*
WBR	1	1700	530	.31	690	.41
Right Turn Adjustment			WBR	.03*	WBR	.13*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .55 .90

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	920	.27*	1030	.30*
SBT	0	0	0		0	
SBR	1	1700	191	.11	267	.16
EBL	1	1700	103	.06*	498	.29*
EBT	2	3400	107	.03	204	.06
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	480	.14*	456	.13*
WBR	1	1700	530	.31	690	.41
Right Turn Adjustment			WBR	.03*	WBR	.13*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .55 .90

19. Beach Blvd & Center Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	4	6800	2770	.41	3270	.48*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	4	6800	3025	.44*	2416	.36
SBR	f		966		1106	
EBL	2	3400	102	.03*	168	.05*
EBT	0	0	0		0	
EBR	2	3400	974	.29	1026	.30
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			EBR	.26*	EBR	.19*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .78 .77

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	4	6800	2768	.41	3272	.48*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	4	6800	3022	.44*	2416	.36
SBR	f		960		1106	
EBL	2	3400	97	.03*	174	.05*
EBT	0	0	0		0	
EBR	2	3400	970	.29	1030	.30
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			EBR	.26*	EBR	.19*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .78 .77

26. Goldenwest St & Edinger Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	160	.09	170	.10
NBT	3	5100	1270	.25*	1230	.24*
NBR	d	1700	161	.09	89	.05
SBL	1	1700	201	.12*	219	.13*
SBT	3	5100	1390	.27	1150	.23
SBR	d	1700	120	.07	130	.08
EBL	1	1700	150	.09	190	.11*
EBT	3	5100	1012	.20*	868	.17
EBR	d	1700	120	.07	170	.10
WBL	1	1700	72	.04*	148	.09
WBT	3	5100	685	.13	885	.17*
WBR	d	1700	131	.08	329	.19
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .66 .70

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	160	.09	170	.10
NBT	3	5100	1270	.25*	1230	.24*
NBR	d	1700	160	.09	89	.05
SBL	1	1700	200	.12*	219	.13*
SBT	3	5100	1390	.27	1150	.23
SBR	d	1700	120	.07	130	.08
EBL	1	1700	150	.09	190	.11*
EBT	3	5100	1010	.20*	868	.17
EBR	d	1700	120	.07	170	.10
WBL	1	1700	71	.04*	149	.09
WBT	3	5100	683	.13	887	.17*
WBR	d	1700	131	.08	330	.19
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .66 .70

27. Gothard St & Edinger Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	120	.07	170	.10*
NBT	2	3400	551	.16*	629	.19
NBR	d	1700	93	.05	258	.15
SBL	1	1700	70	.04*	80	.05
SBT	2	3400	422	.12	518	.15*
SBR	d	1700	132	.08	198	.12
EBL	1	1700	101	.06*	89	.05
EBT	3	5100	1093	.21	1148	.23*
EBR	d	1700	120	.07	130	.08
WBL	1	1700	106	.06	184	.11*
WBT	3	5100	1136	.24*	1334	.28
WBR	0	0	101		119	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .55 .64

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	120	.07	170	.10*
NBT	2	3400	549	.16*	629	.19
NBR	d	1700	92	.05	258	.15
SBL	1	1700	70	.04*	80	.05
SBT	2	3400	421	.12	519	.15*
SBR	d	1700	131	.08	199	.12
EBL	1	1700	99	.06*	89	.05
EBT	3	5100	1092	.21	1148	.23*
EBR	d	1700	120	.07	130	.08
WBL	1	1700	104	.06	186	.11*
WBT	3	5100	1134	.24*	1336	.29
WBR	0	0	101		119	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .55 .64

28. Beach Blvd & Edinger Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	143	.04	568	.17
NBT	3	5100	2070	.41*	2670	.52*
NBR	1	1700	400	.24	630	.37
SBL	2	3400	673	.20*	437	.13*
SBT	4	6800	2821	.41	2449	.36
SBR	2	3400	445	.13	936	.28
EBL	2	3400	208	.06*	482	.14*
EBT	3	5100	819	.16	801	.16
EBR	1	1700	124	.07	306	.18
WBL	2	3400	120	.04	220	.06
WBT	2	3400	463	.14*	708	.21*
WBR	1	1700	320	.19	300	.18
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.86**		**1.05**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	140	.04	568	.17
NBT	3	5100	2070	.41*	2670	.52*
NBR	1	1700	400	.24	630	.37
SBL	2	3400	671	.20*	439	.13*
SBT	4	6800	2819	.41	2451	.36
SBR	2	3400	442	.13	936	.28
EBL	2	3400	206	.06	484	.14*
EBT	3	5100	817	.16*	803	.16
EBR	1	1700	124	.07	306	.18
WBL	1	1700	120	.07*	220	.13
WBT	2	3400	461	.14	708	.21*
WBR	1	1700	320	.19	300	.18
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.89**		**1.05**

29. Newland St & Edinger Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	200	.12*	140	.08
NBT	2	3400	420	.17	900	.29*
NBR	0	0	170		100	
SBL	1	1700	180	.11	190	.11*
SBT	2	3400	960	.32*	700	.23
SBR	0	0	141		89	
EBL	1	1700	92	.05	118	.07
EBT	2	3400	883	.26*	777	.23*
EBR	d	1700	110	.06	100	.06
WBL	1	1700	210	.12*	210	.12*
WBT	2	3400	782	.23	849	.25
WBR	d	1700	80	.05	210	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.87**		**.80**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	200	.12*	140	.08
NBT	2	3400	420	.17	900	.29*
NBR	0	0	170		100	
SBL	1	1700	178	.10	190	.11*
SBT	2	3400	958	.32*	700	.23
SBR	0	0	140		89	
EBL	1	1700	91	.05	119	.07
EBT	2	3400	882	.26*	778	.23*
EBR	d	1700	110	.06	100	.06
WBL	1	1700	210	.12*	210	.12*
WBT	2	3400	781	.23	849	.25
WBR	d	1700	80	.05	210	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.87**		**.80**

36. Gothard St & Heil Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	160	.09*	290	.17*
NBT	2	3400	712	.21	788	.23
NBR	d	1700	200	.12	230	.14
SBL	1	1700	50	.03	120	.07
SBT	2	3400	594	.17*	636	.19*
SBR	d	1700	52	.03	118	.07
EBL	1	1700	131	.08	99	.06
EBT	2	3400	830	.24*	760	.22*
EBR	d	1700	190	.11	150	.09
WBL	1	1700	300	.18*	260	.15*
WBT	2	3400	510	.15	730	.21
WBR	d	1700	40	.02	80	.05
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .73 .78

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	160	.09*	290	.17*
NBT	2	3400	710	.21	788	.23
NBR	d	1700	200	.12	230	.14
SBL	1	1700	50	.03	120	.07
SBT	2	3400	593	.17*	638	.19*
SBR	d	1700	51	.03	119	.07
EBL	1	1700	130	.08	99	.06
EBT	2	3400	830	.24*	760	.22*
EBR	d	1700	190	.11	150	.09
WBL	1	1700	300	.18*	260	.15*
WBT	2	3400	510	.15	730	.21
WBR	d	1700	40	.02	80	.05
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .73 .78

37. Beach Blvd & Heil Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	160	.09*	220	.13*
NBT	4	6800	2463	.37	2768	.41
NBR	0	0	30		40	
SBL	1	1700	81	.05	159	.09
SBT	4	6800	2625	.44*	2625	.43*
SBR	0	0	350		280	
EBL	1	1700	180	.11*	310	.18*
EBT	2	3400	620	.18	480	.14
EBR	d	1700	240	.14	190	.11
WBL	1	1700	60	.04	60	.04
WBT	2	3400	380	.14*	430	.16*
WBR	0	0	90		120	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .83 .95

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	160	.09*	220	.13*
NBT	4	6800	2461	.37	2768	.41
NBR	0	0	30		40	
SBL	1	1700	81	.05	159	.09
SBT	4	6800	2623	.44*	2627	.43*
SBR	0	0	350		280	
EBL	1	1700	180	.11*	310	.18*
EBT	2	3400	620	.18	480	.14
EBR	d	1700	240	.14	190	.11
WBL	1	1700	60	.04	60	.04
WBT	2	3400	380	.14*	430	.16*
WBR	0	0	90		120	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .83 .95

38. Newland St & Heil Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	200	.12*	330	.19*
NBT	2	3400	490	.14	680	.20
NBR	d	1700	10	.01	20	.01
SBL	1	1700	50	.03	60	.04
SBT	2	3400	770	.23*	500	.15*
SBR	d	1700	220	.13	130	.08
EBL	1	1700	260	.15*	270	.16*
EBT	1	1700	70	.04	40	.02
EBR	1	1700	291	.17	129	.08
WBL	1	1700	10	.01	20	.01
WBT	1	1700	80	.08*	60	.08*
WBR	0	0	60		70	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.63**		**.63**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	200	.12*	330	.19*
NBT	2	3400	490	.14	680	.20
NBR	d	1700	10	.01	20	.01
SBL	1	1700	50	.03	60	.04
SBT	2	3400	770	.23*	500	.15*
SBR	d	1700	220	.13	130	.08
EBL	1	1700	260	.15*	270	.16*
EBT	1	1700	70	.04	40	.02
EBR	1	1700	291	.17	129	.08
WBL	1	1700	10	.01	20	.01
WBT	1	1700	80	.08*	60	.08*
WBR	0	0	60		70	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.63**		**.63**

46. Gothard St & Warner Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	140	.08	260	.15
NBT	2	3400	591	.17*	859	.25*
NBR	d	1700	60	.04	80	.05
SBL	1	1700	130	.08*	160	.09*
SBT	2	3400	533	.16	477	.14
SBR	d	1700	81	.05	349	.21
EBL	1	1700	190	.11	240	.14*
EBT	3	5100	1510	.30*	1200	.24
EBR	1	1700	220	.13	310	.18
WBL	1	1700	90	.05*	140	.08
WBT	3	5100	760	.15	1580	.31*
WBR	d	1700	160	.09	260	.15
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.65**		**.84**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	140	.08	260	.15
NBT	2	3400	590	.17*	859	.25*
NBR	d	1700	60	.04	80	.05
SBL	1	1700	130	.08*	160	.09*
SBT	2	3400	532	.16	478	.14
SBR	d	1700	81	.05	349	.21
EBL	1	1700	190	.11	240	.14*
EBT	3	5100	1510	.30*	1200	.24
EBR	1	1700	220	.13	310	.18
WBL	1	1700	90	.05*	140	.08
WBT	3	5100	760	.15	1580	.31*
WBR	d	1700	160	.09	260	.15
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.65**		**.84**

47. Beach Blvd & Warner Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	220	.06	380	.11
NBT	4	6800	1522	.26*	2449	.40*
NBR	0	0	220		270	
SBL	2	3400	301	.09*	289	.09*
SBT	4	6800	1844	.27	2106	.31
SBR	1	1700	340	.20	520	.31
EBL	2	3400	330	.10	440	.13*
EBT	3	5100	1160	.26*	1150	.28
EBR	0	0	170		260	
WBL	2	3400	410	.12*	320	.09
WBT	3	5100	750	.16	1190	.29*
WBR	0	0	70		290	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.78**		**.96**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	220	.06	380	.11
NBT	4	6800	1520	.26*	2449	.40*
NBR	0	0	220		270	
SBL	2	3400	301	.09*	289	.09*
SBT	4	6800	1843	.27	2108	.31
SBR	1	1700	340	.20	520	.31
EBL	2	3400	330	.10	440	.13*
EBT	3	5100	1160	.26*	1150	.28
EBR	0	0	170		260	
WBL	2	3400	410	.12*	320	.09
WBT	3	5100	750	.16	1190	.29*
WBR	0	0	70		290	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.78**		**.96**

48. Newland St & Warner Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	120	.07	150	.09
NBT	2	3400	530	.16*	870	.26*
NBR	d	1700	220	.13	170	.10
SBL	1	1700	270	.16*	180	.11*
SBT	2	3400	820	.24	540	.16
SBR	d	1700	360	.21	150	.09
EBL	1	1700	60	.04	130	.08*
EBT	3	5100	2000	.39*	1460	.29
EBR	d	1700	120	.07	110	.06
WBL	1	1700	200	.12*	310	.18
WBT	2	3400	890	.26	1440	.42*
WBR	1	1700	230	.14	360	.21
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.88**		**.92**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	120	.07	150	.09
NBT	2	3400	530	.16*	870	.26*
NBR	d	1700	220	.13	170	.10
SBL	1	1700	270	.16*	180	.11*
SBT	2	3400	820	.24	540	.16
SBR	d	1700	360	.21	150	.09
EBL	1	1700	60	.04	130	.08*
EBT	3	5100	2000	.39*	1460	.29
EBR	d	1700	120	.07	110	.06
WBL	1	1700	200	.12*	310	.18
WBT	2	3400	890	.26	1440	.42*
WBR	1	1700	230	.14	360	.21
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.88**		**.92**

250. Beach Blvd & McFadden Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	200	.06*	280	.08
NBT	4	6800	2248	.36	2772	.46*
NBR	0	0	202		328	
SBL	2	3400	240	.07	270	.08*
SBT	4	6800	2824	.47*	2527	.42
SBR	0	0	400		300	
EBL	2	3400	281	.08	399	.12*
EBT	2	3400	501	.19*	479	.18
EBR	0	0	140		140	
WBL	2	3400	461	.14*	479	.14
WBT	2	3400	530	.21	630	.24*
WBR	0	0	180		190	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.91**		**.95**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	200	.06*	280	.08
NBT	4	6800	2245	.36	2775	.46*
NBR	0	0	201		329	
SBL	2	3400	240	.07	270	.08*
SBT	4	6800	2820	.47*	2527	.42
SBR	0	0	400		300	
EBL	2	3400	281	.08	399	.12*
EBT	2	3400	501	.19*	479	.18
EBR	0	0	140		140	
WBL	2	3400	460	.14*	479	.14
WBT	2	3400	530	.21	630	.24*
WBR	0	0	180		190	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.91**		**.95**

251. Beach Blvd & Bolsa Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	280	.08*	310	.09
NBT	4	6800	2266	.34	2984	.44*
NBR	0	0	12		38	
SBL	2	3400	160	.05	240	.07*
SBT	4	6800	2823	.46*	2598	.42
SBR	0	0	290		250	
EBL	1	1700	230	.14*	410	.24*
EBT	2	3400	620	.18	680	.20
EBR	1	1700	560	.33	460	.27
WBL	1	1700	141	.08	179	.11
WBT	2	3400	610	.18*	860	.25*
WBR	1	1700	190	.11	260	.15
Right Turn Adjustment			EBR	.05*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.96**		**1.05**

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	280	.08*	310	.09
NBT	4	6800	2264	.33	2986	.44*
NBR	0	0	11		39	
SBL	2	3400	160	.05	240	.07*
SBT	4	6800	2821	.46*	2598	.42
SBR	0	0	290		250	
EBL	1	1700	230	.14*	410	.24*
EBT	2	3400	620	.18	680	.20
EBR	1	1700	560	.33	460	.27
WBL	1	1700	140	.08	179	.11
WBT	2	3400	610	.18*	860	.25*
WBR	1	1700	190	.11	260	.15
Right Turn Adjustment			EBR	.05*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.96**		**1.05**

252. Beach Blvd & Hazard Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	130	.08*	130	.08
NBT	4	6800	2504	.37	3476	.52*
NBR	0	0	31		79	
SBL	1	1700	110	.06	140	.08*
SBT	4	6800	3612	.53*	2409	.35
SBR	d	1700	80	.05	60	.04
EBL	1	1700	50	.03	120	.07*
EBT	2	3400	290	.09*	450	.13
EBR	1	1700	130	.08	60	.04
WBL	1	1700	81	.05*	80	.05
WBT	2	3400	370	.11	360	.11*
WBR	d	1700	180	.11	200	.12
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .80 .83

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	130	.08*	130	.08
NBT	4	6800	2503	.37	3477	.52*
NBR	0	0	31		79	
SBL	1	1700	110	.06	140	.08*
SBT	4	6800	3610	.53*	2409	.35
SBR	d	1700	80	.05	60	.04
EBL	1	1700	50	.03	120	.07*
EBT	2	3400	290	.09*	450	.13
EBR	1	1700	130	.08	60	.04
WBL	1	1700	80	.05*	80	.05
WBT	2	3400	370	.11	360	.11*
WBR	d	1700	180	.11	200	.12
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .80 .83

253. Magnolia St & Edinger Ave

2030 Previous Report

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	220	.13*	210	.12
NBT	3	5100	790	.18	1360	.30*
NBR	0	0	130		150	
SBL	1	1700	240	.14	160	.09*
SBT	3	5100	1930	.38*	860	.17
SBR	d	1700	100	.06	120	.07
EBL	1	1700	70	.04	120	.07*
EBT	2	3400	862	.25*	668	.20
EBR	d	1700	310	.18	170	.10
WBL	1	1700	120	.07*	90	.05
WBT	2	3400	671	.20	929	.27*
WBR	d	1700	90	.05	190	.11
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .88 .78

2030 With-Alternative Project (Costco)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	220	.13*	210	.12
NBT	3	5100	790	.18	1360	.30*
NBR	0	0	130		150	
SBL	1	1700	240	.14	160	.09*
SBT	3	5100	1930	.38*	860	.17
SBR	d	1700	100	.06	120	.07
EBL	1	1700	70	.04	120	.07*
EBT	2	3400	861	.25*	669	.20
EBR	d	1700	310	.18	170	.10
WBL	1	1700	120	.07*	90	.05
WBT	2	3400	670	.20	929	.27*
WBR	d	1700	90	.05	190	.11
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .88 .78

Appendix D

TRIP DISTRIBUTION

Table D-3: The Village at Bella Terra Trip Distribution - Alternative GPA
- with Costco Increment Only (difference from Previous GPA)

INBOUND		Southbound			Westbound			Northbound			Eastbound			
Intersection		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
8. Goldenwest St & Bolsa Ave	%		4.5%		1.0%								1.0%	6.5%
	AM		-1		0								0	-2
	PM		0		0								0	0
15. Goldenwest St & Mcfadden Ave	%	5.5%	1.0%									3.3%	1.0%	10.8%
	AM	-2	0									-1	0	-3
	PM	0	0									0	0	0
16. Gothard St & McFadden Ave	%				2.2%								8.8%	11.0%
	AM				-1								-3	-3
	PM				0								0	0
17. Gothard St & Center Ave	%	10.0%	1.0%							16.0%				27.0%
	AM	-3	0							-5				-8
	PM	0	0							0				0
18. I-405 SB Ramps & Center Ave	%			13.2%		20.8%								34.0%
	AM			-4		-6								-10
	PM			0		0								0
19. Beach Blvd & Center Ave.	%		9.1%	20.8%										29.9%
	AM		-3	-6										-9
	PM		0	0										0
26. Goldenwest St. & Edinger Ave	%	2.0%								3.1%		7.1%		12.2%
	AM	-1								-1		-2		-4
	PM	0								0		0		0
27. Gothard St & Edinger Ave	%	1.0%							8.0%	3.1%	8.0%	4.2%		24.3%
	AM	0							-2	-1	-2	-1		-7
	PM	0							0	0	0	0		0
28. Beach Blvd & Edinger Ave	%			9.1%		8.0%		9.6%						26.7%
	AM			-3		-2		-3						-8
	PM			0		0		0						0
29. Newland St & Edinger Ave	%			3.3%		4.5%		.						7.8%
	AM			-1		-1								-2
	PM			0		0								0
36. Gothard St & Heil Ave	%								6.5%		3.5%			10.0%
	AM								-2		-1			-3
	PM								0		0			0
37. Beach Blvd & Heil Ave	%					.			7.5%					7.5%
	AM								-2					-2
	PM								0					0
38. Newland St & Heil Ave	%					.		0.9%						0.9%
	AM							0						0
	PM							0						0
46. Gothard St & Warner Ave	%						1.0%		4.1%		.			5.1%
	AM						0		-1					-2
	PM						0		0					0
47. Beach Blvd & Warner Ave	%						0.8%		5.7%		1.0%			7.5%
	AM						0		-2		0			-2
	PM						0		0		0			0
48. Newland St & Warner Ave	%						.	0.6%						0.6%
	AM							0						0
	PM							0						0
250. Beach Blvd & McFadden Ave	%		12.4%	1.2%	3.0%	1.0%								17.6%
	AM		-4	0	-1	0								-5
	PM		0	0	0	0								0
251. Beach Blvd & Bolsa Ave	%		8.3%		2.7%								.	11.0%
	AM		-2		-1									-3
	PM		0		0									0
252. Beach Blvd & Hazard Ave	%		5.2%		1.6%								.	6.8%
	AM		-2		0									-2
	PM		0		0									0
253. Magnolia St & Edinger Ave	%					3.0%							.	3.0%
	AM					-1								-1
	PM					0								0
AM Out Volume													TOTAL	-75
-23													TOTAL	0
PM Out Volume														
27														
AM In Volume														
-30														
PM In Volume														
0														

Table D-4: The Village at Bella Terra Trip Distribution - Alternative GPA
- with Costco Increment Only (difference from Previous GPA)

OUTBOUND		Southbound			Westbound			Northbound			Eastbound			
Intersection		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
8. Goldenwest St & Bolsa Ave	%							1.0%	4.5%	1.0%				6.5%
	AM							0	-1	0				-1
	PM							0	1	0				2
15. Goldenwest St & Mcfadden Ave	%					3.3%	5.5%	1.0%	1.0%					10.8%
	AM					-1	-1	0	0					-2
	PM					1	1	0	0					3
16. Gothard St & McFadden Ave	%							8.8%		2.2%				11.0%
	AM							-2		-1				-3
	PM							2		1				3
17. Gothard St & Center Ave	%				6.0%		10.0%		1.0%					17.0%
	AM				-1		-2		0					-4
	PM				2		3		0					5
18. I-405 SB Ramps & Center Ave	%										6.0%	38.0%		44.0%
	AM										-1	-9		-10
	PM										2	10		12
19. Beach Blvd & Center Ave.	%								7.1%		22.0%		16.0%	45.1%
	AM								-2		-5		-4	-10
	PM								2		6		4	12
26. Goldenwest St. & Edinger Ave	%				3.1%	7.1%	2.0%							12.2%
	AM				-1	-2	0							-3
	PM				1	2	1							3
27. Gothard St & Edinger Ave	%		3.0%	3.0%	8.1%	9.2%	1.0%							24.3%
	AM		-1	-1	-2	-2	0							-6
	PM		1	1	2	2	0							7
28. Beach Blvd & Edinger Ave	%	9.0%	7.0%								7.1%	8.0%	1.6%	32.7%
	AM	-2	-2								-2	-2	0	-8
	PM	2	2								2	2	0	9
29. Newland St & Edinger Ave	%										3.3%	4.5%		7.8%
	AM										-1	-1		-2
	PM										1	1		2
36. Gothard St & Heil Ave	%		6.5%	3.5%										10.0%
	AM		-1	-1										-2
	PM		2	1										3
37. Beach Blvd & Heil Ave	%	1.1%	7.5%											8.6%
	AM	0	-2											-2
	PM	0	2											2
38. Newland St & Heil Ave	%												0.9%	0.9%
	AM												0	0
	PM												0	0
46. Gothard St & Warner Ave	%		4.1%	1.0%										5.1%
	AM		-1	0										-1
	PM		1	0										1
47. Beach Blvd & Warner Ave	%	1.0%	5.7%											6.7%
	AM	0	-1											-2
	PM	0	2											2
48. Newland St & Warner Ave	%												0.6%	0.6%
	AM												0	0
	PM												0	0
250. Beach Blvd & McFadden Ave	%								12.4%	3.0%	1.2%	1.0%		17.6%
	AM								-3	-1	0	0		-4
	PM								3	1	0	0		5
251. Beach Blvd & Bolsa Ave	%							.	8.3%	2.7%				11.0%
	AM								-2	-1				-3
	PM								2	1				3
252. Beach Blvd & Hazard Ave	%							.	5.2%	1.6%				6.8%
	AM								-1	0				-2
	PM								1	0				2
253. Magnolia St & Edinger Ave	%							.				3.0%		3.0%
	AM											-1		-1
	PM											1		1
AM Out Volume														-62
-23														73
PM Out Volume														
27														
AM In Volume														
-30														
PM In Volume														
0														