8.0 FINDINGS AND CONCLUSIONS

The following section provides a summary of the key findings and study recommendations and includes a summary table that compares the results from the different scenarios.

Summary of Traffic Generation

Table 8-1 presents a comparison between the land uses alternatives included in this study. As shown in the table, the 2003 Base Year scenario is estimated to generate a total of 103,777 average daily trips. The build out of the Adopted Community Plan Land Uses could generate a total of 180,666 average daily trips, which would represent a 74 percent increase over the 2003 Base Year scenario.

The build out of the proposed Alternative 1 land use scenario would generate a total 137,267 average daily trips which would represent a 32 percent increase from the 2003 Base Year scenario. Compared to the Adopted Community Plan, Alternative 1 would represent a 24 percent decrease of the total trip generation.

The build out of the proposed Alternative 2 land use scenario would generate a total 152,430 average daily trips which would represent a 47 percent increase from the 2003 Base Year scenario. Compared to the Adopted Community Plan, Alternative 2 would represent a 16 percent decrease of the total trip generation. Alternative 2 would generate 11 percent more vehicle trips than Alternative 1.

It should be noted that both proposed land use alternatives would generate 16-24 percent less total traffic than the Adopted Community Plan, and this document identifies transportation-related improvements beyond what is included in the current facility finance plan.

Summary of Intersection Analyses

Table 8-2 shows the summary of the peak-hour intersection analysis for Alternative 1 Land Use scenario. As shown in the table, Alternative 1 would have significant impact at 14 of the 41 intersections analyzed.

Table 8-3 shows the summary of the peak-hour intersection analysis for Alternative 2 Land Use scenario. As shown in the table, Alternative 2 would have significant impact at 16 of the 41 intersections analyzed. In addition to the intersections identified for Alternative 1, Alternative 2 would also have a significant impact at the Main Street and Cesar Chavez Parkway and Boston Avenue and 28th Street intersections.

As shown in the table, the recommended improvements associated with Alternative 1 and Alternative 2 would mitigate all the peak-hour delay based significant impacts at intersections with the exception of the following locations:

- Harbor Drive and 28th Street (will continue to operate at LOS E during the afternoon peak-hour period);
- 32nd Street and Wabash Street (will continue to operate at LOS F and LOS E during the morning and afternoon peak-hour periods, respectively); and
- Harbor Drive and 32nd Street (will continue to operate at LOS F during both peak-hour periods).

The Harbor Drive/32nd Street and 32nd Street/Wabash Street intersections are being studied further in an on-going Caltrans study. The latest report includes the installation of a unidirectional connector ramp from eastbound Harbor Drive to northbound State Route 15. Another improvement under study is the

SUMMARY OF TRU	TABLE 8-1 SUMMARY OF TRIP GENERATIONS FOR EACH HORIZON YEAR ALTERNATIVE	E 8-1 r Each Horizon ye	AR ALTERNATIVE	
	2003 BASE YEAR SCENARIO	ADOPTED COMMUNITY PLAN	ALTERNATIVE 1	ALTERNATIVE 2
Total Daily Trip Generation	103,777	180,666	137,267	152,430
Commission to Desidence		76,889	33,490	48,653
		74%	32%	47%
Commission to Advanted Community Disc			-43,399	-28,236
			-24%	-16%
L crittonnel A crittonnel A				15,163
				11%

		sı	MMARY OF INTER	TABLE 8-2 RSECTION ANALY.	SIS FOR ALTERNATIVE 1			
	INTERSECTION	PEAK HOUR	BEFORE IMPROVEMENTS LOS (a)	DOES THE PROJECT CAUSE A SIGNIFICANT IMPACT?	RECOMMENDED IMPROVEMENT	AFTER IMPROVEMENTS LOS (a)	IS THI IMPAC MITIGAT ?	
1	Commercial St & 16th St	AM	В	NO	N/a	В	N/a	
•		PM	С	NO	1.0.4	С	104	
2	National Ave & 16th St	AM	F	YES	Install Traffic Signal.	В	YES	
		PM	F	YES	-	A		
3	National Ave & Sigsbee St	AM PM	A	NO	N/a	A	N/a	
		AM	A	NO		A		
4	Newton Ave & Sigsbee St	PM	A	NO	N/a	A	N/a	
_		AM	A	NO		A		
5	Main St & Sigsbee St	PM	A	NO	N/a	A	N/a	
_	Hashaa Da & Siasha Si	AM	F	YES	In stall Tax 0° 0' 1	В	VEO	
6	Harbor Dr & Sigsbee St	PM	F	YES	Install Traffic Signal.	А	YES	
7	Logan Ave & Beardsley St- I-5 SB ramp	AM	D	NO	Install Traffic Signal. (This improvement requires	С	YES	
/	Logan Ave & Beardsley St- 1-5 SB ramp	PM	F	YES	Caltrans approval)	D	1 E3	
8	National Ave & Beardsley St	AM	E	YES	Install Traffic Signal.	В	YES	
,	National Pive & Deardsley St	PM	F	YES	insuit france signal.	В	TES	
9	Newton Ave & Beardsley St	AM	Α	NO	N/a	Α	N/a	
		PM	А	NO		Α		
0	Main St & Beardsley St	AM	C	NO	N/a	С	N/a	
		PM	A F	NO	Modify raised median along Harbor Drive and	A C		
1	Harbor Dr & Beardsley St	AM		YES	restrict the eastbound left-turn movements and		YES	
	, , , , , , , , , , , , , , , , , , ,	PM	F	YES	southbound left-turn movements.	В		
2	Kearney St & Cesar E. Chavez Pkwy	AM	D	NO	N/a	D	N/a	
-		PM	С	NO		С	104	
2		AM	С	NO	Add exclusive eastbound right-turn lane. Add	С	VEO	
3	Logan Ave & Cesar E. Chavez Pkwy	PM	Е	YES	northbound overlap phase. (This improvement requires Caltrans approval)	D	YES	
		AM	С	NO	Add exclusive eastbound and westbound right-	В		
4	National Ave & Cesar E. Chavez Pkwy				turn lanes. This improvement is recommended to		YES	
		PM	D	NO	mitigate a potential queing impact.	С		
5	Newton Ave & Cesar E. Chavez Pkwy	AM	А	NO	N/a	Α	N/a	
		PM	В	NO		В		
		AM	D	NO	Add exclusive westbound right-turn lane. This	С		
16	Main St & Cesar E. Chavez Pkwy	PM	D	NO	improvement is recommended to mitigate a	В	YES	
		r IVI	D	NU	potential queing impact.	d		
17	Harbor Dr & Cesar E. Chavez Pkwy	AM	E	YES	Add second eastbound left-turn lane, a southbound right-turn overlap phase and a northbound exclusive right-turn lane. In addition,	D	YES	
		РМ	F	YES	extend the westbound left-turn pocket (to be done by Caltrans).	D		
8	Logan Ave & I-5 SB On-ramp	AM	Α	NO	N/a	А	N/a	
-		PM	С	NO	~	С		
9	National Ave & SR-75 Off-ramp	AM	В	NO	N/a	В	N/a	
		PM	В	NO		В		
20	National Ave & Evans St	AM PM	B C	NO	N/a	B C	N/a	

Bold values indicate intersections operating at LOS E or F (a) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0

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	INTERSECTION	PEAK IMPROVEMENTS A SIG HOUR LOS (a) IM			RECOMMENDED IMPROVEMENT	AFTER IMPROVEMENTS LOS (a)	IS THE IMPACT MITIGATE ?	
21	Newton Ave & Evans St	AM	В	NO	N/a	В	N/a	
		PM AM	B	NO		B		
22	Main St & Evans St	PM	B	NO	N/a	B	N/a	
		AM	F	YES		В		
23	Logan Ave & Sampson St	PM	F	YES	Install Traffic Signal. Add northbound and southbound left-turn lanes.	С	YES	
24	National Ave & Sampson St	AM	А	NO	N/a	А	N/a	
27	Tuttonal Ave & Sampson St	PM	А	NO	iva	А	1 N/ d	
25	Newton Ave & Sampson St	AM	А	NO	N/a	А	N/a	
25	Newton Ave & Sampson St	PM	Α	NO	i vit	Α	i va	
26	Main St & Sampson St	AM	В	NO	N/a	В	N/a	
-	······································	PM	В	NO		В		
27	Harbor Dr & Sampson St	AM	С	NO	N/a	С	N/a	
	-	PM	D	NO		D		
28	National Ave & Sicard St	AM	В	NO	N/a	В	N/a	
		PM	В	NO		В	───	
29	National Ave & 26th St	AM	A	NO	N/a	A	N/a	
		PM AM	B	NO		B		
30	National Ave & I-5 SB Off-ramp	PM	С	NO	N/a	С	N/a	
31	Main St & 26th St-Schley St	AM PM	A	NO	Eliminate northbound through movement. This improvement is not needed based on a delay impact. It is part of a truck route improvement.	A	YES	
		AM	E	YES		С		
32	Harbor Dr & Schley St	PM	C	NO	Eliminate southbound left/through movement. Add southbound right-turn overlap phase.	В	YES	
		AM	F	YES	rad soundound right turn overlap phase.	D		
33	National Ave & 28th St	PM	E	YES	Add exclusive southbound right-turn lane.	D	YES	
		AM	D	NO	Add southbound through lane and remove	C		
34	Boston Ave & 28th St (b)	PM	D	NO	exclusive northbound right-turn lane.	D	YES	
		AM	C	NO		C		
35	Main St & 28th St (b)	PM	D	NO	N/a	D	N/a	
2.6		AM	D	NO	Add second eastbound and southbound left-turn	D		
36	Harbor Dr & 28th St (c)	PM	F	YES	lanes.	Е	NO	
27	Destan Asia & LS CD On source 20th St	AM	С	NO	Install Traffic Signal. (This improvement requires	С	VEC	
37	Boston Ave & I-5 SB On-ramp-29th St	PM	F	YES	Caltrans approval)	С	YES	
38	Main St & 32nd St	AM	С	NO	N/a	С	N/a	
50		PM	С	NO	1N/2	С	in/a	
39	32nd St & Wabash St	AM	F	YES		F	NO	
~ ^		PM	F	YES	Construct a direct connector from Harbor Dr. to	Е	110	
40	Harbor Dr & 32nd St (c)	AM	F	YES	Wabash St. (under study by Caltrans)	F	NO	
		PM	F	YES		F		
41	Main St & I-15 Ramps	AM PM	B	NO NO	N/a	B	N/a	

TABLE 8-2

Notes:

Bold values indicate intersections operating at LOS E or F

(a) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0

(a) LOS calculations are based on the interdoodogy outlined in the 2000 Fightway Capacity wantual and performed using synchroles 0.0 (b) The intersection may not operate as well as indicated due to potential queuing. See text of the report for additional explanation. (c) As part of Sandag's Draft 2008 RTP, a grade separation for the trolley lines at this intersection is being proposed under the hybrid network which is the preferred revenue constrained network. With the grade separation, the intersection would operate at LOS D or better. See appendix L for synchro results. Shaded cells indicates that the intersection is not fully mitigated.

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		sı	MMARY OF INTER	TABLE 8-3 RSECTION ANALY.	SIS FOR ALTERNATIVE 2		
	INTERSECTION	PEAK	BEFORE IMPROVEMENTS	DOES THE PROJECT CAUSE A SIGNIFICANT	DECOMMENDED IMPROVEMENT	AFTER IMPROVEMENTS	IS THE IMPACT MITIGAT 2
		HOUR AM	LOS (a) B	IMPACT? NO	RECOMMENDED IMPROVEMENT	LOS (a) B	?
1	Commercial St & 16th St	PM	C	NO	N/a	C	N/a
2	National Ave & 16th St	AM	F	YES	Install Traffic Signal.	В	YES
2	National Ave & 16th St	PM	F	YES	instali Iranic Signal.	А	1ES
3	National Ave & Sigsbee St	AM	А	NO	N/a	Α	N/a
5	National Tive & Sigsbee St	PM	Α	NO	1774	Α	104
4	Newton Ave & Sigsbee St	AM	Α	NO	N/a	Α	N/a
		PM	A	NO		A	
5	Main St & Sigsbee St	AM	A	NO	N/a	A	N/a
		PM	A	NO		A	
6	Harbor Dr & Sigsbee St	AM	F	YES	Install Traffic Signal.	В	YES
	-	PM	F	YES		A	
7	Logan Ave & Beardsley St- I-5 SB ramp	AM	D	NO	Install Traffic Signal. (This improvement requires	С	YES
		PM	F	YES	Caltrans approval)	D	
8	National Ave & Beardsley St	AM	E	YES	Install Traffic Signal.	В	YES
		PM	F	YES		В	
9	Newton Ave & Beardsley St	AM	A	NO	N/a	A	N/a
		PM	A C	NO		A	
10	Main St & Beardsley St	AM		NO	N/a		N/a
		PM	A	NO	Modify raised median along Harbor Drive and	A	
11	Harbor Dr & Beardsley St	AM	F	YES	restrict the eastbound left-turn movements and	С	YES
		PM	F	YES	southbound left-turn movements.	В	
12	Kaamay St & Casar E. Chaver Player	AM	D	NO	N/a	D	N/a
12	Kearney St & Cesar E. Chavez Pkwy	PM	D	NO	19/4	D	IN/a
13	Logan Ave & Cesar E. Chavez Pkwy	AM	С	NO	Add exclusive eastbound right-turn lane. Add northbound right-turn overlap phase. (This	С	YES
	Elogan rive & Cesar E. Chavez r kwy	PM	Е	YES	improvement requires Caltrans approval)	D	
		AM	С	NO	Add exclusive eastbound and westbound right-	С	
14	National Ave & Cesar E. Chavez Pkwy	PM	D	NO	turn lanes. This improvement is recommended to mitigate a potential queing impact.	С	YES
15	Newton Ave & Cesar E. Chavez Pkwy	AM	A	NO	N/a	B	N/a
		PM	В	NO		В	
17		AM	D	NO	Add exclusive westbound right-turn lane. This	С	••••
16	Main St & Cesar E. Chavez Pkwy	РМ	D	NO	improvement is recommended to mitigate a potential queing impact.	В	YES
		AM	F	YES	Add second eastbound left-turn lane. Add a southbound right-turn overlap phase. Add	D	
17	Harbor Dr & Cesar E. Chavez Pkwy	РМ	F	YES	exclusive westbound right-turn lane. Add exclusive northbound right-turn lane. In addition, extend the westbound left-turn pocket (to be done by Caltrans).	D	YES
19	Logan Ava & LSSP On some	AM	А	NO	N/2	А	NI/c
18	Logan Ave & I-5 SB On-ramp	PM	В	NO	N/a	В	N/a
10	National Asia & CD 77 000	AM	В	NO	27/	В	3.7/
19	National Ave & SR-75 Off-ramp	PM	В	NO	N/a	В	N/a
20	National Ava & Evan- St	AM	В	NO	N ¹ -	В	NT/
20	National Ave & Evans St	PM	С	NO	N/a	С	N/a

(a) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0

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		SUM	ARY OF INTERSE	TABLE 8-3 CTION ANALYSIS	FOR ALTERNATIVE 2 (cont.)		
	INTERSECTION	PEAK HOUR	BEFORE IMPROVEMENTS LOS (a)	DOES THE PROJECT CAUSE A SIGNIFICANT IMPACT?	RECOMMENDED IMPROVEMENT	AFTER IMPROVEMENTS LOS (a)	IS THE IMPACT MITIGATED ?
21	Newton Ave & Evans St	AM	В	NO	N/a	В	N/a
		PM	В	NO		В	
22	Main St & Evans St	AM PM	C C	NO NO	N/a	C C	N/a
		AM	F	YES		В	
23	Logan Ave & Sampson St	PM	F	YES	Install Traffic Signal. Add northbound and southbound left-turn lanes.	С	YES
24	National Ava & Sampson St	AM	Α	NO	N/a	А	N/a
24	National Ave & Sampson St	PM	А	NO	11\/a	А	N/a
25	Newton Ave & Sampson St	AM	А	NO	N/a	А	N/a
20	Newton Tive & Sumpson St	PM	Α	NO	17/4	А	Iva
26	Main St & Sampson St	AM	В	NO	N/a	В	N/a
-	r at the rest of the	PM	В	NO		В	
27	Harbor Dr & Sampson St	AM	С	NO	N/a	С	N/a
-		PM	D	NO		D	
28	National Ave & Sicard St	AM PM	B	NO	N/a	B	N/a
		AM	A	NO		A	
29	National Ave & 26th St	PM	B	NO	N/a	B	N/a
		AM	B	NO		B	
30	National Ave & I-5 SB Off-ramp	PM	C	NO	N/a	C	N/a
31	Main St & 26th St-Schley St	AM	А	NO	Eliminate northbound through movement. This improvement is not needed based on a delay	А	YES
51		PM	А	NO	impact. It is part of a truck route improvement.	А	120
		AM	F	YES	Eliminate southbound left/through movement.	D	
32	Harbor Dr & Schley St	PM	С	NO	Add southbound right-turn overlap phase.	В	YES
33	National Ave & 28th St	AM	Е	YES	Add an abasing a subble sund sight term land	D	YES
22	National Ave & 28th St	PM	Е	YES	Add exclusive southbound right-turn lane.	D	YES
	(b)	AM	С	NO	Add southbound through lane and remove	С	
34	Boston Ave & 28th St	РМ	E	YES	exclusive northbound right-turn lane (part of 28th St improvements).Add exclusive eastbound right- turn lane.	D	YES
35	Main St & 28th St (b)	AM	D	NO	N/a	D	N/a
55		PM	D	NO	11/a	D	11/a
36	Harbor Dr & 28th St (c)	AM	D	NO	Add second eastbound and southbound left-turn	D	NO
50		PM	F	YES	lanes.	F	110
37	Boston Ave & I-5 SB On-ramp-29th St	AM	D	NO	Install Traffic Signal. (This improvement requires	С	YES
		PM	F	YES	Caltrans approval)	D	
38	Main St & 32nd St	AM	С	NO	N/a	С	N/a
		PM AM	C F	NO YES		C	
39	32nd St & Wabash St	AM PM	F	YES	Construct a direct connector from Harbor Dr. to	E F	NO
		AM	F	YES	Wabash St. (under study by Caltrans)	F	-
40	Harbor Dr & 32nd St (c)	PM	F	YES	(and study by cultures)	F	NO
		AM	В	NO		В	
41	Main St & I-15 Ramps	PM	B	NO	N/a	B	N/a
	1				1	-	

TABLE 8-3

Notes: Bold values indicate intersections operating at LOS E or F

(a) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0

(b) The intersection may not operate as well as indicated due to potential queuing. See text of the report for additional explanation.

(c) As part of Sandag's Draft 2050 RTP, a grade separation for the trolley lines at this intersection is being proposed under the hybrid network which is the preferred revenue constrained network . With the grade separation, the intersection would operate at LOS D or better. See appendix L for synchro results. Shaded cells indicates that the intersection is not fully mitigated.

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Vesta Street Overcrossing at Harbor Drive connecting the wet and dry sides of the Naval Base San Diego. On November 1, 2010 the Navy temporarily closed the eastern leg (Norman Scott Road) of the 32nd Street/Norman Street-Wabash Street intersection to improve safety. The Navy is monitoring traffic to determine if this closure should remain. A preliminary analysis indicates that the mentioned projects would improve the intersection to acceptable levels and decrease the potential queuing problems.

Harbor Drive/28th Street is projected to operate at LOS E, even with improvements. There is the potential that improvements to be made between Harbor Drive and State Route 15 (Caltrans study) could divert some traffic off of 28th Street, improving this intersection.

A review of Synchro's queuing reports indicated that the following four intersections would have a "queuing delay" that could affect the level of service and capacity of the intersections:

- Logan Avenue and Cesar Chavez Parkway (Northbound right-turn movement during the afternoon peak-hour period);
- Main Street and Cesar Chavez Parkway (Southbound through movement during both peak-hour periods);
- Boston Avenue and 28th Street (Northbound through movement during the afternoon peak-hour period); and
- Main Street and 28th Street (Eastbound left-turn movement during the afternoon peak-hour period)

When comparing the average intersection delay reported by both the HCM and Synchro 6.0 methodologies for the above listed intersections, it was found that the LOS results at the Boston Avenue/28th Street and Main Street/28th Street intersection would decrease from LOS D to LOS E due to potential queue interaction. These intersections are shown in bold. The level of service results for the other two intersections would not worsen by considering queue interaction.

To mitigate the potential capacity decrease at these intersections along 28th Street due to queue interaction, it is recommended that the signal timing along the 28th Street corridor between Harbor Drive and National Avenue be synchronized in a way to maximize vehicular progression through the closely spaced intersections, while providing queue clearance.

Along Cesar Chavez Parkway, an additional southbound lane could be provided between Logan Avenue and Main Street to increase the southbound storage capacity. The additional southbound lane could be added by the removal of on-street parking spaces along the west side of the roadway during peak-hour periods only.

SANDAGs 2050 Regional Transportation Plan (RTP) unconstrained network recommends the grade separation of the trolley lines at 28th Street and at 32nd Street. A peak-hour intersection analysis was conducted for the intersections of 28th Street and 32nd Street with Harbor Drive assuming these proposed grade separations. The results of the analysis indicated that the proposed grade separation would improve both intersections to LOS D or better during both peak-hour periods under the Horizon Year scenario with either alternative. The proposed grade separations are included in the "revenue constrained scenario". Due to the benefits to adjacent intersections, these grade separation projects are recommended.

Summary of Roadway Segment Analyses

Table 8-4 presents a summary of the roadway segment analysis results included in the study. As shown in the table, the increase of traffic volumes related to the Adopted Community Plan land use scenario would be considered to have a significant traffic related impact along 24 of the 42 roadway segments analyzed.

The traffic related to the Alternative 1 land use scenario for the Community Plan Update would have a traffic related impact along 22 of the 42 roadway segments analyzed. The two roadway segments significantly impacted by the Adopted Community Plan but not impacted by the Alternative 1 land use plan are:

- National Avenue between 16th Street and Sigsbee Street; and
- National Avenue between Sigsbee Street and Beardsley Street.

The Alternative 2 land use scenario was found to have the same traffic related roadway segment significant impacts as the Adopted Community Plan.

Table 8-4 also shows the comparison between the number of roadway segments operating at LOS E and F for each land use alternative. As shown in the table, Alternative 1 would have a total of eight (8) and fourteen (14) roadway segments operating at LOS E and LOS F, respectively. Alternative 2 in contrast would have six (6) and eighteen (18) roadway segments operating at LOS E and LOS F, respectively. The Adopted Community Plan would have four (4) segments operating at LOS E and twenty (20) segments operating at LOS F. Alternative 1 is shown to have the lowest number of failing roadway segments with 22 and the lowest number of segments operating at LOS F with fourteen (14).

Table 8-5 illustrates the proposed roadway classifications recommended to accommodate the future traffic growth anticipated based on the Alternative 1 and Alternative 2 land use scenarios. Figure 8-6 shows the recommended ultimate classification for the community of Barrio Logan.

The summary of the roadway segment level of service results after the incorporation of the roadway classification changes is included in Table 8-4. As shown in the table, the following roadway segment impacts would not be mitigated with the recommended roadway segment classification changes:

- Sampson Street between National Avenue and Harbor Drive (Both Alternatives);
- 26th Street between National Avenue and Main Street (Both Alternatives);
- 28th Street between National Avenue and I-5 Ramps (Alternative 2 only);
- 29th Street between Boston Avenue and Main Street (Alternative 2 only);
- 32nd Street between Main Street and Wabash Street (Both Alternatives);
- Vesta Street between Main Street and I-5 Ramps (Both Alternatives);
- Logan Avenue between Sigsbee Street and Cesar Chavez Parkway (Both Alternatives);
- National Avenue between 16th Street and Sigsbee Street (Alternative 2 only);
- National Avenue between Sigsbee Street and Beardsley Street (Alternative 2 only);
- National Avenue between Beardsley Street and Cesar Chavez Parkway (Both Alternatives):
- Boston Avenue between 28th Street and 29th Street (Both Alternatives); Boston Avenue between 29th Street and 32nd Street (Both Alternatives);
- Main Street between Cesar Chavez Parkway and Evans Street (Both Alternatives);
- Main Street between Evans Street and 26th Street (Alternative 2 only);
- Main Street between 26th Street and 28th Street (Both Alternatives); Main Street between 28th Street and 29th Street (Both Alternatives);
- •
- Main Street between 29th Street and 32nd Street (Both Alternatives);

- Main Street between 32nd Street and Rigel Street (Both Alternatives);
- Main Street between Rigel Street and Una Street (Both Alternatives); and
- Main Street between Una Street and I-5 SB Off-ramp (Both Alternatives).

After the incorporation of the proposed roadway segment improvements, both Alternatives 1 and 2 would have a total of six (6) segments operating at LOS E. In addition, Alternative 1 would have nine (9) segments operating at LOS F, while Alternative 2 would have thirteen (13).

Boston Avenue, National Avenue and 26th Street are desired by the community of Barrio Logan to be more pedestrian and bicycle friendly corridors. The widening of these roadways to improve vehicular circulation was not desired by the community. The vehicular operations along these three facilities could be congested during peak periods and vehicular speeds would be low. Additional widening is not recommended. Traffic calming measures should be evaluated along National Avenue to further enhance the pedestrian and bicycle circulation.

Additional improvements to the failing roadway segments of Sampson Street, 28th Street, 32nd Street, Vesta Street, Logan Avenue and Main Street are not recommended since the roadway segment analysis used in this study is based on theoretical capacities based on the number of travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment like grades, number of traffic signals, number of driveways, parking availability, etc. In addition, the analysis does not take into account the different traffic peak periods experienced on these roadways due to the surrounding land uses. As an example, the Barrio Logan traffic generators whose peak-hour of use do not correspond to typical peak-hour commuter traffic. To better represent the conditions of a roadway segment within the Barrio Logan community, the operations of the upstream and downstream intersections of each respective segment during the peak periods would indicate whether the roadway segment would have adequate capacity. As shown in the intersection analysis tables, all intersections along the failing roadway segments would operate at acceptable LOS.

In addition to the roadway segment improvements listed above, it is recommended that 28th Street between Harbor Drive and the I-5 Ramps be classified as a four-lane major arterial. For the segment between Harbor Drive and Main Street, a raised median should be installed with an entrance to the Navy Commissary. The proposed configuration would allow two lanes in each direction with an auxiliary lane for the heavy southbound right-turn movements at Harbor Drive. Parking would need to be removed along both sides of the roadway, with a total loss of approximately 20 parking spaces. The removed parking spaces are likely utilized by NASCO employees or Naval Base San Diego employees or visitors. Additional diagonal parking is recommended to be evaluated for installation along Boston Avenue between 28th Street and 29th Street to replace the loss of parking along 28th Street. The west side of the roadway could be widened by 4 feet to accommodate the proposed interim cross-sections. The east sidewalk will widen to 10 feet to enhance pedestrian circulation. This improvement is not part of mitigation for a roadway segment impact. The improvement is recommended to encourage heavy truck traffic to use 28th Street instead of Main Street and to provide for pedestrians. The ultimate recommended cross-section of 28th Street will include a designated bike lane along both sides of the roadway and a fourteen foot parkway. The ultimate configuration along 28th Street will require additional roadway widening and right-of-way acquisition. An alignment study is required to further define the extent of additional right-way needed and future widening

Conceptual roadway segment improvement figures, including the proposed cross-sections are included in **Appendix K**. **Figure 8-1** shows the Recommended Roadway Classification for the community. **Figure 8-2** shows a summary of all recommended improvements within the community.

	SUMMAI	RY OF R		ABLE 8-4 Y SEGME		LYSIS RI	ESULTS					
		WITH F	HORIZON YEAR I WITH EXISTING ST CAPACITY		HAVE	D THE PI A SIGNII IMPACT	FICANT		WITH CLASSIF	ON YEAR I NEW ICATION OS	SIGNII IMPA	D THE TICANT CT BE ATED?
ROADWAY SEGMENT	EXISTING FUNCTIONAL ROADWAY CLASSIFICATION	ACP (a)	ALT 1	ALT 2	АСР	ALT 1	ALT 2	RECOMMENDED ROADWAY CLASSIFICATION	ALT 1	ALT 2	ALT 1	ALT 2
Cesar Chavez Pkwy												
north of Logan Ave	3 Lane Collector (with TWLT)	D	С	D	NO	NO	NO	3 Lane Collector (with TWLT)	С	D	N/A	N/A
between Logan Ave and National Ave	4 Lane Collector (with TWLT)	E	Е	Е	YES	YES	YES	3 Lane Urban Major	D	D	YES	YES
between National Ave and Newton Ave	3 Lane Collector (with TWLT)	F	F	F	YES	YES	YES	3 Lane Urban Major	D	D	YES	YES
between Newton Ave and Main St	3 Lane Collector (with TWLT)	F	Е	Е	YES	YES	YES	3 Lane Urban Major	С	С	YES	YES
between Main St and Harbor Dr	4 Lane Collector (with TWLT)	В	В	В	NO	NO	NO	3 Lane Major	В	В	N/A	N/A
Sampson St		r	Т	1		1	T.	i				
between I-5 and National Ave	2 Lane Collector (No TWLT)	D	D	D	NO	NO	NO	2 Lane Collector (No TWLT)	D	D	N/A	N/A
between National Ave and Harbor Dr	2 Lane Collector (No TWLT)	F	E	F	YES	YES	YES	2 Lane Collector (No TWLT)	Е	F	NO	NO
26th St			-	-					-	-		
between National Ave and Main St	2 Lane Collector (No TWLT)	F	E	F	YES	YES	YES	2 Lane Collector (No TWLT)	Е	F	NO	NO
28th St between I-5 and Boston Ave	2 Lana Collector (with TWI T)	F	F	г	VEC	VEC	VEC	4 I ano Mojor Antoni-1	D	г	VEC	NO
	3 Lane Collector (with TWLT) 4 Lane Collector (with TWLT)	F D	F D	F	YES	YES	YES NO	4 Lane Major Arterial	D C	E C	YES N/A	NO N/A
between Boston Ave and Main St between Main St and Harbor Dr	4 Lane Collector (with TWLT) 4 Lane Major Arterial	B	C	C	NO NO	NO NO	NO	4 Lane Major Arterial 4 Lane Major Arterial	c	c	N/A N/A	N/A N/A
29th St	* Lanc Widj01 Afterial	В			no	10	110	+ Lane widj01 Atterial	Ľ		11//1	18/PA
between Boston Ave and Main St	2 Lane Collector (No TWLT)	D	D	D	NO	NO	NO	2 Lane Collector (No TWLT)	D	Е	N/A	NO
32nd St	2 Eane Conceror (100 1 WE1)	Ъ	D	D	110	110	no	2 Eane Conceror (No 1 WE1)	D	Ľ	14/11	110
between Main St and Wabash Blvd	2 Lane Collector (with TWLT)	F	Е	Е	YES	YES	YES	2 Lane Collector (with TWLT)	Е	Е	NO	NO
between Wabash Blvd and Harbor Drive	4 Lane Major Arterial	С	С	С	NO	NO	NO	4 Lane Major Arterial	С	C	N/A	N/A
Rigel St												
between Main St and I-5	2 Lane Collector (No TWLT)	А	Α	Α	NO	NO	NO	2 Lane Collector (No TWLT)	А	А	N/A	N/A
Vesta St								•				
between Main St and I-5	2 Lane Collector (No TWLT)	E	Е	Е	YES	YES	YES	2 Lane Collector (No TWLT)	Е	Е	NO	NO
Logan Ave												
between 17th St and Sigsbee St	2 Lane Collector (with TWLT)	D	D	D	NO	NO	NO	2 Lane Collector (with TWLT)	D	D	N/A	N/A
between Sigsbee St and Cesar Chavez Pkwy	2 Lane Collector (with TWLT)	F	F	F	YES	YES	YES	2 Lane Collector (with TWLT)	F	F	NO	NO
between Cesar Chavez Pkwy and 26th St	2 Lane Collector (with TWLT)	В	В	В	NO	NO	NO	2 Lane Collector (with TWLT)	В	В	N/A	N/A
National Ave		r —	-	-		<u> </u>	-			1		
between 16th St and Sigsbee St	2 Lane Collector (with TWLT)	E	D	E	YES	NO	YES	2 Lane Collector (with TWLT)	D	E	N/A	NO
between Sigsbee St and Beardsley St	2 Lane Collector (with TWLT)	E	D	E	YES	NO	YES	2 Lane Collector (with TWLT)	D	E	N/A	NO
between Beardsley St and Cesar Chavez Pkwy	2 Lane Collector (No TWLT)	F	F	F	YES	YES	YES	2 Lane Collector (with TWLT)	F	F	NO	NO
between Cesar Chavez Pkwy and Evans St	2 Lane Collector (No TWLT)	F	F C	F	YES	YES	YES	2 Lane Collector (with TWLT)	С	C	YES	YES
between Evans St and Sicard St between Sicard St and 27th St	2 Lane Collector (with TWLT)	C F	F	C F	NO YES	NO	NO YES	2 Lane Collector (with TWLT)	C D	C D	N/A YES	N/A YES
Boston Ave	2 Lane Collector (No TWLT)	г	г	r	TES	YES	YES	2 Lane Collector (with TWLT)	D	D	TES	TE5
between 28th and 29th St	2 Lane Collector (No TWLT)	F	F	F	YES	YES	YES	2 Lane Collector (No TWLT)	F	F	NO	NO
between 29th St and 32nd St	2 Lane Collector (No TWLT) 2 Lane Collector (No TWLT)	F	F	F	YES	YES	YES	2 Lane Collector (No TWLT) 2 Lane Collector (No TWLT)	F	F	NO	NO
Main St	2 Earle Contextor (110 T (121)			-	110	115	110	2 Eane Contextor (110 T (121)		-	110	
between Beardsley St and Cesar Chavez Pkwy	2 Lane Collector (No TWLT)	D	С	D	NO	NO	NO	2 Lane Collector (No TWLT)	С	D	N/A	N/A
between Cesar Chavez Pkwy and Evans St	2 Lane Collector (No TWLT)	F	E	F	YES	YES	YES	2 Lane Collector (No TWLT)	E	F	NO	NO
between Evans St and 26th St	2 Lane Collector (No TWLT)	F	Е	F	YES	YES	YES	2 Lane Collector (with TWLT)	D	F	YES	NO
between 26th St and 28th St	3 Lane Collector (No TWLT)	F	F	F	YES	YES	YES	3 Lane Collector (No TWLT)	F	F	NO	NO
between 28th and 29th St	4 Lane Collector (No TWLT)	F	F	F	YES	YES	YES	4 Lane Collector (No TWLT)	Е	Е	NO	NO
between 29th St and 32nd St	3 Lane Collector (No TWLT)	F	F	F	YES	YES	YES	3 Lane Collector (No TWLT)	F	F	NO	NO
between 32nd St and Rigel St	4 Lane Collector (No TWLT)	F	F	F	YES	YES	YES	4 Lane Collector (No TWLT)	F	F	NO	NO
between Rigel St and Una St	2 Lane Collector (with TWLT)	F	F	F	YES	YES	YES	2 Lane Collector (with TWLT)	F	F	NO	NO
between Una St and I-5 SB Off Ramp	2 Lane Collector (with TWLT)	F	F	F	YES	YES	YES	2 Lane Collector (with TWLT)	F	F	NO	NO
Harbor Dr		1				r						1
between Beardsley St and Cesar Chavez Pkwy	4 Lane Major Arterial	D	D	D	NO	NO	NO	4 Lane Major Arterial	D	D	N/A	N/A
between Cesar Chavez Pkwy and Sampson St	4 Lane Major Arterial	С	С	С	NO	NO	NO	4 Lane Major Arterial	С	С	N/A	N/A
between Sampson St and Schley St	4 Lane Major Arterial	С	С	С	NO	NO	NO	4 Lane Major Arterial	С	С	N/A	N/A
between Schley St and 28th St	4 Lane Major Arterial	В	В	В	NO	NO	NO	4 Lane Major Arterial	В	В	N/A	N/A
between 28th St and 32nd St	4 Lane Major Arterial	C	C	C	NO	NO	NO	4 Lane Major Arterial	C	C	N/A	N/A
between 32nd St and Vesta St	4 Lane Major Arterial	D	D	D	NO	NO	NO	4 Lane Major Arterial	D	D	N/A	N/A
Total Number of Roadway Segments with LOS F Total Number of Roadway Segments with LOS F		4 20	8 14	6 18					6 9	7 13		
Total Number of Roadway Segments with LOS F Total Number of Roadway Segments with Failing		20	22	24					15	20		
Notes: Bold values indicate roadway segments operating at LC	S E or F.											
Shaded cell indicates that the significant impact was no (a) ACP = Adopted Community Plan K:SND_TPT0/08707000Excel[707000RS01:xkm]Summary of Impacts	mitigated by the recommended improv	ements.										

(a) ACP = Adopted Community Plan K:SND_TPT0/095707000 Excel[707000RS01 xkm]Summary of Impacts

	RECO	MMENDE		TABLE 8-5 VAY CLASSIFICATION CHANGES			
	EXISTING CONDIT	IONS			HORIZO	N YEAR (AI	LT 1 AND ALT 2)
ROADWAY SEGMENT	FUNCTIONAL CLASSIFICATION	CURB TO CURB WIDTH	ROW	RECOMMENDED CLASSIFICATION	CURB TO CURB WIDTH	ROW	REMARKS
Cesar Chavez Pkwy		1					
north of Logan Ave	3 Lane Collector (with TWLT)	76 feet	96 feet	3 Lane Collector (with TWLT)	76 feet	96 feet	Changes are not recommended
between Logan Ave and National Ave	4 Lane Collector (with TWLT)	76 feet	96 feet	3 Lane Urban Major	76 feet	104 feet	2 NB lanes and 1 SB lane
between National Ave and Newton Ave	3 Lane Collector (with TWLT)	64 feet	84 feet	3 Lane Urban Major	72 feet	96 feet	2 NB lanes and 1 SB lane
between Newton Ave and Main St	3 Lane Collector (with TWLT)	64 feet	84 feet	3 Lane Urban Major	72 feet	96 feet	2 NB lanes and 1 SB lane
between Main St and Harbor Dr	4 Lane Collector (with TWLT)	64 feet	84 feet	3 Lane Major	64 feet	92 feet	2 NB lanes, 1 SB lane and 1 Aux SB lane
ampson St						-	
between I-5 and National Ave	2 Lane Collector (No TWLT)	40 feet	60 feet	2 Lane Collector (No TWLT)	40 feet	60 feet	Changes are not recommended
between National Ave and Harbor Dr	2 Lane Collector (No TWLT)	40 feet	60 feet	2 Lane Collector (No TWLT)	40 feet	60 feet	Changes are not recommended
6th St							
between National Ave and Main St	2 Lane Collector (No TWLT)	40 feet	60 feet	2 Lane Collector (No TWLT)	40 feet	60 feet	Part of the Green Street
8th St							
between I-5 and Boston Ave	3 Lane Collector (with TWLT)	68 feet	85 feet	4 Lane Major Arterial	74 feet	108 feet	3 SB lanes and 2 NB lanes
between Boston Ave and Main St	4 Lane Collector (with TWLT)	74 feet	100 feet	4 Lane Major Arterial	74 feet	114 feet	3 SB lanes and 2 NB lanes
between Main St and Harbor Dr	4 Lane Major Arterial	80 feet	100 feet	4 Lane Major Arterial	84 feet	124 feet	2 SB lanes (with 1 Aux lane) and 2 NB lanes
2nd St		1					
between Main St and Wabash Blvd	2 Lane Collector (with TWLT)	40 feet	60 feet	2 Lane Collector (with TWLT)			Changes are not recommended
between Wabash Blvd and Harbor Drive	4 Lane Major Arterial			4 Lane Major Arterial			Changes are not recommended
igel St	1		1		1		
between Main St and I-5	2 Lane Collector (No TWLT)	40 feet	60 feet	2 Lane Collector (No TWLT)	40 feet	60 feet	Changes are not recommended
esta St	1		1		1		
between Main St and I-5	2 Lane Collector (No TWLT)	40 feet	60 feet	2 Lane Collector (No TWLT)	40 feet	60 feet	Changes are not recommended
ogan Ave							
between 17th St and Sigsbee St	2 Lane Collector (with TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Changes are not recommended
between Sigsbee St and Cesar Chavez Pkwy	2 Lane Collector (with TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Changes are not recommended
between Cesar Chavez Pkwy and 26th St	2 Lane Collector (with TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Changes are not recommended
ational Ave							
between 16th St and Sigsbee St	2 Lane Collector (with TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Part of the Green Street
between Sigsbee St and Beardsley St	2 Lane Collector (with TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Part of the Green Street
between Beardsley St and Cesar Chavez Pkwy	2 Lane Collector (No TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Part of the Green Street
between Cesar Chavez Pkwy and Evans St	2 Lane Collector (No TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Part of the Green Street
between Evans St and Sicard St	2 Lane Collector (with TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Part of the Green Street
between Sicard St and 27th St	2 Lane Collector (No TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Part of the Green Street
oston Ave							
between 28th and 29th St	2 Lane Collector (No TWLT)	52 feet	80 feet	2 Lane Collector (No TWLT)	52 feet	80 feet	Part of the Green Street
between 29th St and 32nd St	2 Lane Collector (No TWLT)	52 feet	80 feet	2 Lane Collector (No TWLT)	52 feet	80 feet	Part of the Green Street
Iain St							
between Beardsley St and Cesar Chavez Pkwy	2 Lane Collector (No TWLT)	52 feet	80 feet	2 Lane Collector (No TWLT)	52 feet	80 feet	Changes are not recommended
between Cesar Chavez Pkwy and Evans St	2 Lane Collector (No TWLT)	52 feet	80 feet	2 Lane Collector (No TWLT)	52 feet	80 feet	Changes are not recommended
between Evans St and 26th St	2 Lane Collector (No TWLT)	52 feet	80 feet	2 Lane Collector (with TWLT)	52 feet	80 feet	Changes within the existing ROW
between 26th St and 28th St	3 Lane Collector (No TWLT)	52 feet	80 feet	3 Lane Collector (No TWLT)	52 feet	80 feet	2 EB lanes and 1 WB lane
between 28th and 29th St	4 Lane Collector (No TWLT)	52 feet	80 feet	4 Lane Collector (No TWLT)	52 feet	80 feet	Changes are not recommended
h-terrer 20th Et and 22nd Et	3 Lane Collector (No TWLT)	52 feet	80 feet	3 Lane Collector (No TWLT)	52 feet	80 feet	2 WB lanes and 1 EB lane
between 29th St and 52hd St		1	00.0		52 feet	80 feet	
between 29th St and 32nd St between 32nd St and Rigel St	4 Lane Collector (No TWLT)	52 feet	80 feet	4 Lane Collector (No TWLT)	521000	30 ICCI	Changes are not recommended
	4 Lane Collector (No TWLT) 2 Lane Collector (with TWLT)	52 feet 52 feet	80 feet 80 feet	4 Lane Collector (No TWLT) 2 Lane Collector (with TWLT)	52 feet	80 feet	Changes are not recommended Changes are not recommended

NB= Northbound; SB= Southbound; EB= Eastbound; WB=Westbound; Au= Auxiliary lan K:\SND_TPTO\095707000[Excel\[707000RS01.xlsm]Change





Summary of Freeway Segment Analysis

Table 8-6 shows the summary of the freeway analysis for each of the Horizon Year land use alternatives. As shown in the table, all Horizon Year land use alternatives would have a significant traffic related impact at all freeway segments analyzed with the exception of SR-75. The LOS results along the freeway segments would be the same for the two alternatives.

Based on the freeway segment capacity analysis included in this study, Barrio Logan Community Plan Update is considered to have a cumulative traffic related impact along the following freeway segments:

- I-5 from J Street to SR-75 Junction;
- I-5 from SR-75 Junction to 28th Street;
- I-5 from 28th Street to I-15 Interchange;
- I-5 from I-15 Interchange to Division Street; and
- I-15 from I-5 Interchange to Ocean View Boulevard

SANDAG's Draft 2050 Regional Transportation Plan (RTP) hybrid network includes the following freeway improvements:

- Operational freeway improvements along Interstate 5 between Interstate 15 and Interstate 8; and
- Addition of one (1) main lane and one (1) managed lane in each direction between Interstate 15 and State Route 54;

Both improvements listed above were included in the hybrid network's revenue constrained scenario, approved by SANDAG's board for further study on December 17th, 2010. The improvements included in the RTP are recommended to enhance the regional connectivity and accommodate the forecasted growth of the San Diego region. It should be noted that both land use alternatives presented on this plan would generate less traffic than the current adopted Community Plan land use alternative. Either proposed alternative would lessen, but not eliminate cumulative freeway traffic impacts.

In addition to the proposed freeway improvements listed in the SANDAG's Draft 2050 RTP, the following freeway access improvements are recommended within the Barrio Logan Community:

- Signalization of the intersection of Logan Avenue and Beardsley Street/ Interstate 5 SB off-ramp;
- Traffic signal modification at the intersection of Logan Avenue and Cesar Chavez Parkway (State Route 75 on-ramp);
- Signalization of the intersection of Boston Avenue and Interstate 5 SB on-ramp- 29th Street;
- Roadway improvements along 28th Street to accommodate an additional southbound lane, including the potential for widening the Interstate 5 overcrossing;
- Signalization of the intersection of 28th Street and Interstate 5 southbound off-ramp;
- Changes to the roadway striping along Main Street between 28th Street and 29th Street to facilitate freeway access to the Interstate 5 southbound on-ramp at Boston Avenue;
- Installation of a unidirectional connector ramp from eastbound Harbor Drive to northbound State Route 15 (under study by the Port of San Diego, and Caltrans);
- Construction of the Vesta Street Overcrossing at Harbor Drive (under study by the Navy);
- Coordination of City of San Diego and Navy related to the closure of the east leg of the 32nd Street and Norman Street-Wabash Street intersection (recently completed on a trial basis by the Navy); and

• Grade separation of the trolley tracks at the 28th Street and Harbor Drive and 32nd Street and Harbor Drive intersections (to be completed by SANDAG and part of the 2050 draft RTP).

The improvements listed above would decrease congestion along the major freeway access locations within the community.

		ADOPTI	ED COMMUNITY PLAN	ALT	ERNATIVE 1	ALTERNATIVE 2		
FREEWAY SEGMENT	DIRECTION	LOS	SIGNIFICANT?	LOS	SIGNIFICANT?	LOS	SIGNIFICANT?	
			AM PEAK					
-5							- i	
J Street to SR-75 Junction	NB	FO	YES	FO	YES	FO	YES	
	SB							
SR-75 Junction to 28th Street	NB	FO	YES	FO	YES	FO	YES	
	SB							
28th Street to I-15 Interchange	NB	E	YES	Е	YES	E	YES	
	SB							
I-15 Interchange to Division St	NB	FO	YES	FO	YES	FO	YES	
-	SB							
-15								
I-5 Interchange to Ocean View Blvd	NB		N/DG					
SR-75	SB	E	YES	D		D		
	WB							
I-5 Interchange to Glorietta Blvd	EB	D		D		D		
		2	PM PEAK			2		
-5								
	NB							
J Street to SR-75 Junction	SB	Е	YES	Е	YES	Е	YES	
	NB							
SR-75 Junction to 28th Street	SB	Е	YES	Е	YES	Е	YES	
	NB							
28th Street to I-15 Interchange	SB	D		D		D		
	NB							
I-15 Interchange to Division St	SB	FO	YES	FO	YES	FO	YES	
-15	_				• •			
I 5 Internet on the Opener Winner Direct	NB	FO	YES	FO	YES	FO	YES	
I-5 Interchange to Ocean View Blvd	SB							
SR-75			-				-	
I-5 Interchange to Glorietta Blvd	WB	D		D		D		
1-5 Interenange to Giorietta BIVU	EB							

 TABLE 8-6

 SUMMARY OF FREEWAY SEGMENT ANALYSIS

Bold values indicate freeway segments operating at LOS E or F. K:\SND_TPTO\095707000\Excel\[707000FR01.xls]Summary Impacts