DRAFT

TRAFFIC STUDY
FOR THE
AFFORDABLE HOUSING PROJECT
AT FAIRVIEW DEVELOPMENT CENTER

COSTA MESA, CALIFORNIA

APRIL 2008

PREPARED FOR

CALIFORNIA DEPARTMENT OF GENERAL SERVICES

PREPARED BY

FEHR & PEERS

KAKU ASSOCIATES

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FEHR & PEERS/KAKU ASSOCIATES
201 Santa Monica Boulevard, Suite 500
Santa Monica, California 90401
(310) 458-9916

Ref: LA08-2238

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I. INTRODUCTION

This report documents the assumptions, methodologies, and findings of a study conducted by Fehr & Peers/Kaku Associates to evaluate the potential traffic and circulation impacts of the proposed affordable housing project at the Fairview Development located in Costa Mesa.

PROJECT DESCRIPTION

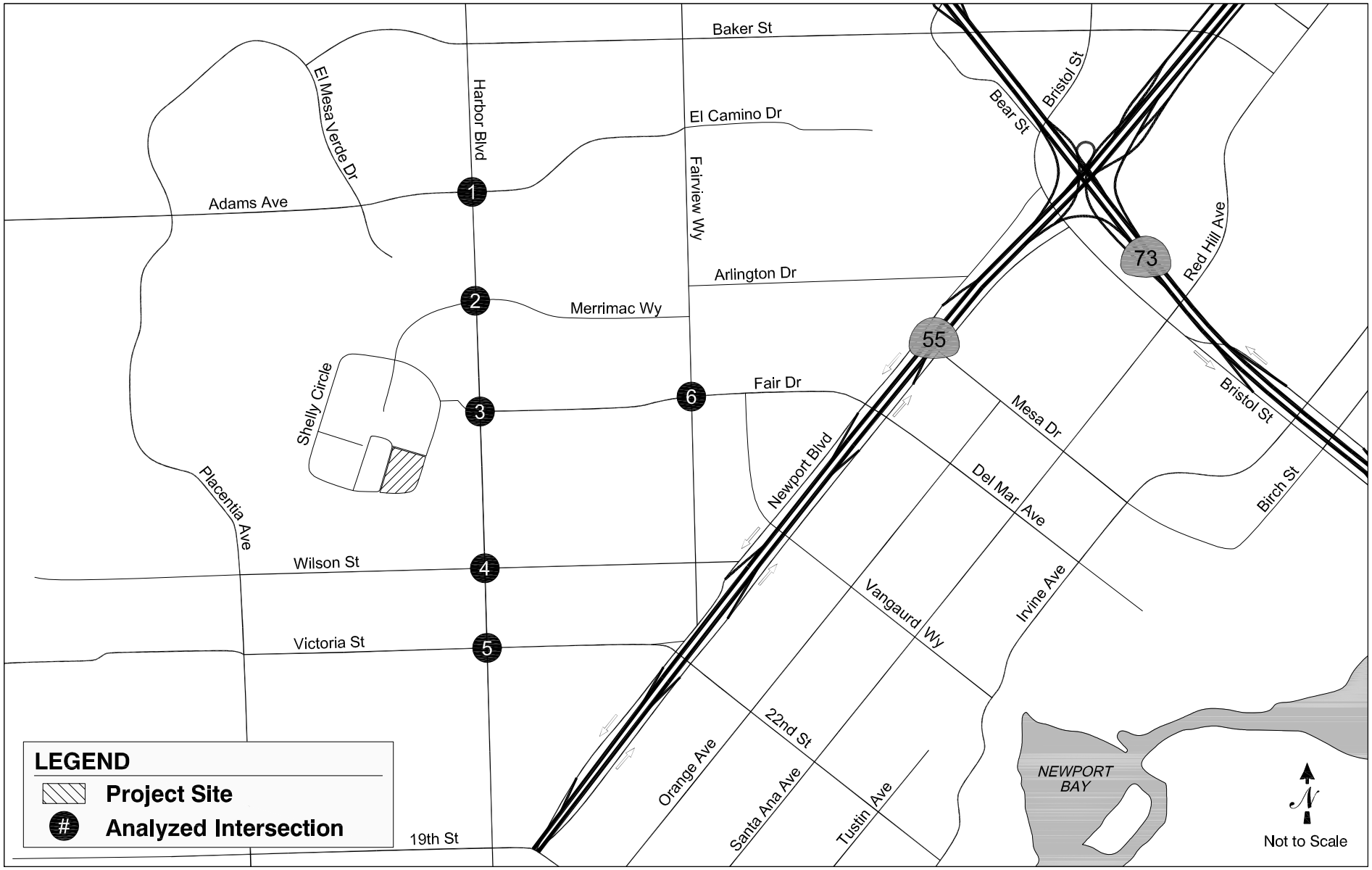
The proposed project would develop 320 units of affordable housing on 10 acres in the Fairview Development Center in Costa Mesa, California.

Figure 1 illustrates the location of the proposed project. The project site is bounded by Florence Way to the north, Eugenia Way to the west, and the Costa Mesa Country Club to the south and east.

STUDY SCOPE

The scope of work for this study was developed in conjunction with the City of Costa Mesa and the California Department of General Services. The base assumptions, technical methodologies, and geographic coverage of the study were all identified as part of the study approach. The study, which analyzes the potential project-generated traffic impacts on the street system, assumes completion of the project in 2011. The potential impacts of the proposed project are therefore determined for 2011 conditions and include an analysis of the following traffic scenarios:

- Existing Conditions – The analysis of existing traffic conditions provides a basis for the remainder of the study. The existing conditions analysis includes an assessment of streets, traffic volumes, and operating conditions.



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KAKU ASSOCIATES

STUDY AREA AND ANALYZED INTERSECTIONS

FIGURE 1

- Cumulative Base Conditions – Future traffic conditions are projected for 2011 without the proposed project. The objective of this phase of analysis is to project future traffic growth and operating conditions that could be expected to result from growth in the vicinity of the project site by 2011.

- Cumulative plus Project Conditions – This is an analysis of future traffic conditions with the traffic expected from the proposed project added to the cumulative base traffic forecasts. The impacts of the proposed project on future traffic operating conditions can then be identified.

The following six intersections, illustrated in Figure 1, are to be analyzed as part of the scope of work for this project:

1. Harbor Boulevard & Adams Boulevard
2. Harbor Boulevard & Merrimac Way
3. Harbor Boulevard & Fair Drive
4. Harbor Boulevard & Wilson Drive
5. Harbor Boulevard & Victoria Street
6. Fairview Road & Fair Drive

ORGANIZATION OF REPORT

This report is divided into five chapters, including this introduction. Chapter II describes the existing conditions in the study area including an inventory of the streets, highways and transit service in the study area, a summary of traffic volumes, and an assessment of the current operating conditions of these streets. The methodologies used to develop traffic forecasts for the cumulative base and cumulative plus project scenarios and the forecasts themselves are included in Chapter III. Chapter IV presents an assessment of potential project traffic impacts of the proposed project. Chapter V summarizes the analysis findings and study conclusions. Details of the technical analysis are included in the appendices.

II. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions within the study area. The assessment of conditions relevant to this study includes an inventory of the street system, traffic volumes on these facilities, and operating conditions at study intersections.

EXISTING STREET SYSTEM

The proposed project site is bounded by Florence Way to the north, Eugenia Way to the west, and the Costa Mesa Country Club to the south and east. The study area street system is illustrated in Figure 1. Primary regional access to the area is provided by SR-55 freeway approximately 1.5 miles to the east, the SR-73 freeway approximately 2 miles to the northeast, and the I-405 freeway approximately 2 miles to the north. Primary access from the study area to these regional facilities is provided by Harbor Boulevard to the east and Fair Drive to the north.

SURFACE ARTERIAL AND LOCAL STREETS

Table 1 summarizes the physical characteristics of all key arterial and local street facilities serving the project site. Diagrams of the existing lane configurations at the six analyzed intersections are provided in Appendix A.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

This section presents the existing peak hour turning movement traffic volumes for each of the intersections analyzed in the study, describes the methodology used to assess the traffic

TABLE 1
EXISTING SURFACE STREET CHARACTERISTICS

SEGMENT	FROM	TO	LANE		MEDIAN	PARKING RESTRICTIONS		SPEED
			NB/EB	SB/WB	TYPE	NB/EB	SB/WB	LIMIT
Baker St.	Bristol St.	SR-73	2	2	2LT	RZ	RZ	40
	SR-73	Fairview Rd.	2	2	2LT	RZ	RZ	40/25*
	Fairview Rd.	Harbor Blvd.	2	2	2LT	PA	NP	40
	Harbor Blvd.	Andros St.	1	1	2LT	RZ	RZ	40
	Andros St.	Mesa Verde Dr.	1	1	2LT	PA	PA	30
Mesa Verde Dr.	Harbor Blvd.	Adams Ave.	2	2	RM/2LT	RZ	RZ	35
	Adams Ave.	Baker St.	2	2	RM	RZ	RZ	35
	Baker St.	Adams Ave.	2	2	RM	RZ	RZ	35
	Adams Ave.	Wilson St.	2	2	DY/2LT	RZ	RZ	40
Placentia Ave.	Wilson St.	Victoria St.	2	2	2LT	RZ	RZ	40/25*
	Victoria St.	W 19th St.	2	2	2LT	RZ	RZ	40
W 19th St.		Placentia Ave.	2	2	2LT	RZ	RZ	40
	Placentia Ave.	Anaheim Ave	2	2	2LT	RZ	RZ	35
	Anaheim Ave.	Harbor Blvd.	2	3	2LT	RZ	RZ	35
	Harbor Blvd.	SR-55	3	3	RM	RZ	RZ	35
	SR-55	Fullerton Ave.	3	3	RM	RZ	RZ	24
	Fullerton Ave.	Orange Ave.	1	1	DY	PA	PA	25
Harbor Blvd.		19th St.	2	2	RM	PA	RZ	40
	19th St.	Victoria St.	3	3	2LT	RZ[1]	RZ[1]	40
	Victoria St.	Wilson St.	3	3	2LT	RZ[1]	RZ[1]	40
	Wilson St.	Fair Dr.	3	3	RM	RZ[1]	RZ[1]	40
	Fair Dr.	Merrimac Ave.	3	3	RM	RZ[1]	RZ[1]	40
	Merrimac Ave.	Mesa Verde Dr.	3	3	RM	RZ[1]	RZ[1]	40
	Mesa Verde Dr.	Adams Ave.	3	3	RM	RZ[1]	RZ[1]	40
	Adams Ave.	Baker St.	3	4	RM	RZ[1]	RZ[1]	40
	Baker St.		4	4	RM	RZ[1]	RZ[1]	40
Victoria St.	SR-55	Harbor Blvd.	2	2	2LT	RZ	RZ	40
	Harbor Blvd.	Placentia Ave.	2	2	2LT	NSAT	NSAT	40
	Placentia Ave.		2	2	RM	NSAT	NSAT	40
Wilson St.		Placentia Ave.	1	1	DY	PA/RZ at school	PA	25*
	Placentia Ave.	Harbor Blvd.	1	1	2LT	RZ	RZ	35
	Harbor Blvd.	College Ave.	2	2	DY	RZ	RZ	25
	College Ave.	Fairview Rd.	1	1	2LT	PA	RZ	35
	Fairview Rd.	SR-55	1	1	DY	RZ	RZ	35
Fair Dr.	Harbor Blvd.	Fairview Rd.	2	2	2LT	RZ	RZ	35
	Fairview Rd.	SR-55	2	2	2LT	RZ	RZ	40
University Dr.	SR-55	Orange Ave.	1	1	DY	PA	PA	30
	Orange Ave.	Santa Ana Ave.	1	1	UD	PA	PA	30
	Santa Ana Ave.	Irvine Ave.	1	1	DY	PA	PA	30
Merrimac Way	Fairview Rd.	Harbor Blvd.	2	2	RM	RZ[1]	RZ[1]	35
	Harbor Blvd.	Shelley Cir	1	1	UD	RZ	RZ	25
Adams Ave.	Fairview Rd.	Pinecreek Dr.	3	3	RM	RZ	RZ	40
	Pinecreek Dr.	Harbor Blvd.	3	2	RM	RZ	RZ	40
	Harbor Blvd.	Mesa Verde Rd.	3	3	2LT	RZ	RZ	40
	Mesa Verde Rd.	Mesa Verde Rd.	3	3	DY	RZ	RZ	45
	Mesa Verde Rd.		3	3	DY	RZ	RZ	45
Fairview Rd.		Baker St.	3	3	RM	RZ	RZ	40
	Baker St.	Adams Ave.	3	3	RM	RZ	RZ	40
	Adams Ave.	Merrimac Way	3	3	RM	RZ	RZ	40
	Merrimac Way	Fair Dr.	3	3	RM	RZ	RZ	40
	Fair Dr.	Wilson St.	3	3	RM	RZ	RZ	40
	Wilson St.	SR-55	2	2	RM	RZ	RZ	40

[1] Some on-street parking allowed.
* 25 mph in school zones.

Notes:

MEDIAN TYPE: DY = Double Yellow Centerline
SDY = Single Dashed Yellow Centerline
2LT = Dual Left Turn Centerline
RM = Raised Median
UD = Undivided Lane

PARKING: PA = Parking Allowed
NSAT = No Stopping Anytime
GZ = Green zone - Passenger loading and unloading
RZ = Red zone - No parking allowed

LANES: # = Number of lanes

conditions at each intersection, and analyzes the resulting operating conditions at each, indicating volume-to-capacity ratios (V/C) and levels of service (LOS).

Existing Traffic Volumes

Weekday morning and evening peak period traffic counts (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.) were conducted at each of the analyzed intersections on Thursday, January 31, 2007. Appendix B contains the detailed traffic count data. The peak hour traffic volumes illustrated in Figure 2 represent existing (2008) conditions.

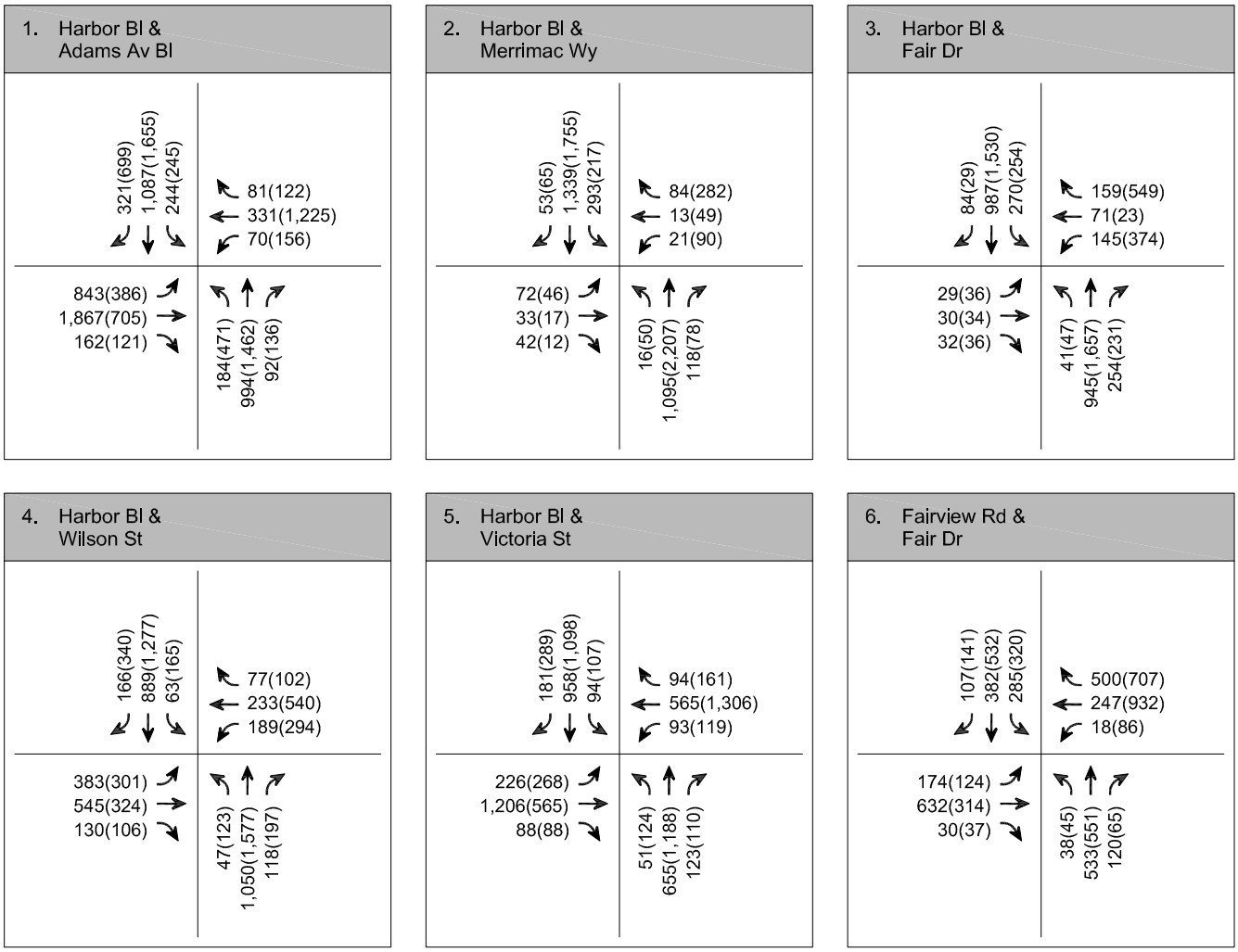
Level of Service Methodology

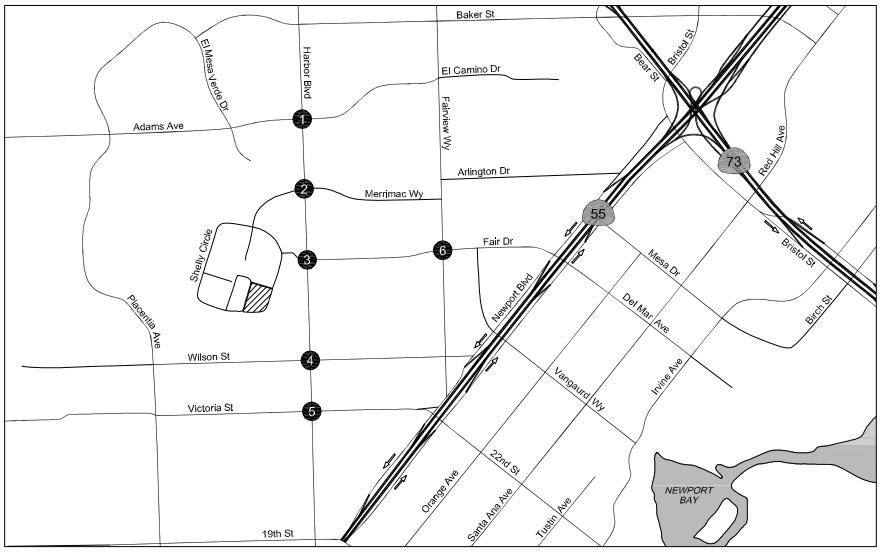
LOS is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically considered to be the minimum acceptable LOS in urban areas such as Costa Mesa.

The City of Costa Mesa requires that the "Intersection Capacity Utilization" (ICU) method (Transportation Research Board, 1980) of intersection capacity analysis be used to determine the intersection V/C ratio and corresponding LOS for the given turning movements and intersection characteristics at signalized intersections. Table 2 defines the ranges of V/C ratios and their corresponding LOS using the ICU method.

Existing Levels of Service

Table 3 summarizes the existing weekday morning peak hour (between 7:00 and 9:00 a.m.) and evening peak hour (between 4:00 and 6:00 p.m.) V/C ratio and the corresponding LOS at the study intersections. The results of this analysis indicate that in the a.m. peak hour all the study intersections currently operate at acceptable (LOS D or better) levels of service. In the p.m. peak hour, the intersections of Harbor Boulevard & Adams Avenue and Harbor Boulevard & Victoria Street operate at LOS E, while the remaining intersections operate at LOS D or better. Appendix C provides detailed LOS calculations.





LEGEND

- Project Site
- # Analyzed Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes

N

Not to Scale

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EXISTING PEAK HOUR TRAFFIC VOLUMES

FIGURE 2

TABLE 2
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/Capacity (V/C)	Definition
A	0.000-0.600	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.
B	0.601-0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701-0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801-0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901-1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity,* Transportation Research Board, 1980.

TABLE 3
YEAR 2008 EXISTING CONDITIONS
INTERSECTION LEVELS OF SERVICE

Intersection	Peak Hour	Year 2008 Existing	
		V/C or Delay	LOS
1. Harbor Boulevard & Adams Avenue	AM	0.837	D
	PM	0.976	E
2. Harbor Boulevard & Merrimac Way	AM	0.542	A
	PM	0.793	C
3. Harbor Boulevard & Fair Drive	AM	0.493	A
	PM	0.746	C
4. Harbor Boulevard & Wilson Street	AM	0.605	B
	PM	0.851	D
5. Harbor Boulevard & Victoria Street	AM	0.772	C
	PM	0.928	E
6. Fairview Road & Fair Drive	AM	0.585	A
	PM	0.759	C

EXISTING TRANSIT SERVICE

One bus line, operated by Orange County Transportation Authority (OCTA), operates near the project site:

- OCTA Line 43: This local bus service route travels between La Habra and Costa Mesa. In the study area this route travels north/south along Harbor Boulevard. This bus line has headways of approximately 15 minutes during the a.m. peak period and 20 minutes during the p.m. peak period.

III. FUTURE TRAFFIC PROJECTIONS

Estimates of future traffic conditions both with and without the proposed project were necessary to evaluate the potential impact of the proposed project on the local street system. The cumulative base traffic scenario represents future traffic conditions without the addition of the proposed project, while the cumulative plus project scenario represents future traffic conditions with the development of the proposed project. The development of these future traffic scenarios is further described in this chapter.

CUMULATIVE BASE TRAFFIC PROJECTIONS

The cumulative base scenario projections reflect growth in traffic over existing conditions from two sources. The first source is the ambient growth in traffic. Ambient growth reflects increases in traffic due to regional growth and development. The second source is growth due to traffic generated by specific projects located within, or in the vicinity of, the study area. The methods and assumptions used to develop cumulative base traffic projections are described in more detail below.

Regional Growth and Development

Existing traffic is expected to increase between 2008 and 2011 as a result of general areawide and regional growth and development. In consultation with the City of Costa Mesa staff, an ambient growth factor of 1% per year was determined to adjust the existing year 2008 traffic volumes to reflect the effects of regional growth and development by the 2011. The total adjustment applied over the three-year period was 3%.

Related Projects Traffic Generation and Assignment

Cumulative base traffic forecasts include the effects of specific projects (related projects) expected to be implemented in the vicinity of the proposed project site prior to the completion of the proposed project. The list of related projects was obtained from City of Costa Mesa. A total of three related projects are listed in Table 4 and their locations illustrated in Figure 3.

Trip Generation. Trip generation estimates for the related projects were calculated using the trip generation rates contained in *Trip Generation, 7th Edition* (Institute of Transportation Engineers [ITE], 2003). As shown in Table 4, the three related projects were projected to generate a combined total of approximately 87 vehicle trips during the weekday morning peak hour and approximately 198 vehicle trips during the weekday evening peak hour. These projections are conservative in that they do not account for the likely use of non-motorized travel modes (transit, walk, etc.)

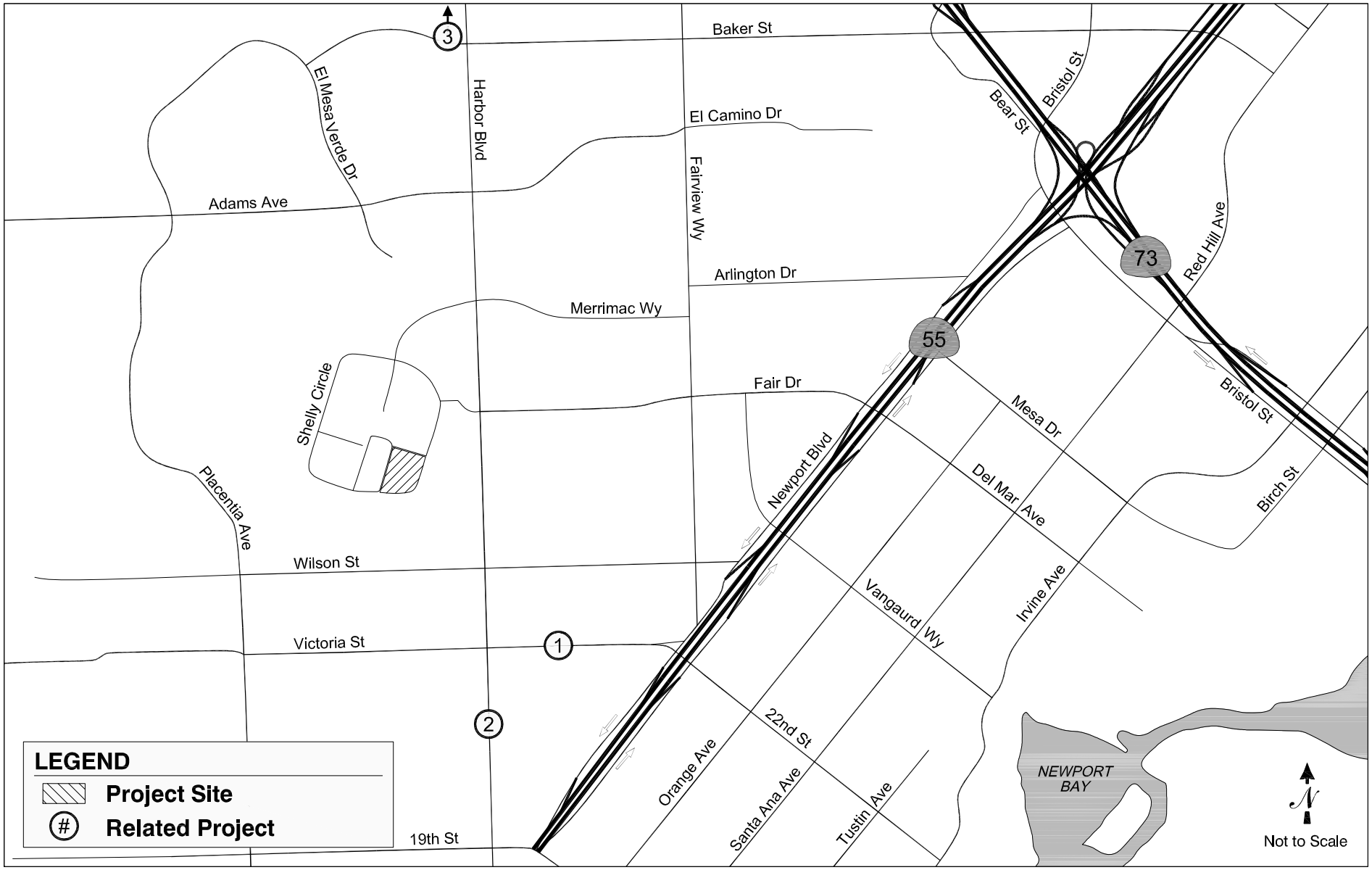
Traffic Distribution. The geographic distribution of the traffic generated by the various projects depends on several factors. These factors include the type and density of the proposed land use, the geographic distribution of population from which the patrons and residents of the proposed development are drawn, and the location of the proposed project in relation to the surrounding street system. Related project trip distribution was estimated using the Southern California Association of Governments (SCAG) travel demand forecasting model.

Traffic Assignment. Using the estimated trip generation and trip distribution patterns described above, traffic generated by the list of the related projects was assigned to the street network. These volumes were then added to the existing traffic volumes with ambient growth. The resulting traffic volumes are illustrated in Figure 4, representing cumulative base traffic conditions for the weekday morning and evening peak hours in 2011. The cumulative base traffic conditions represent projected future conditions without the proposed project.

TABLE 4
TRIP GENERATION ESTIMATES
RELATED PROJECTS

	Land Use	Description	Size	ITE Code	Trip Generation Rates: Daily Rate	A.M. Peak Hour Rate	A.M. Peak Hour % In	A.M. Peak Hour % Out	P.M. Peak Hour Rate	P.M. Peak Hour % In	P.M. Peak Hour % Out	Estimated Trips: Daily Total	A.M. Peak Hour Trips In	A.M. Peak Hour Trips Out	A.M. Peak Hour Trips Total	P.M. Peak Hour Trips In	P.M. Peak Hour Trips Out	P.M. Peak Hour Trips Total
1	Planned Development Residential - High Density [a]	30-unit detached	30 DU	210	9.57	0.75	25%	75%	1.01	63%	37%	287	6	17	23	19	11	30
2	Mixed-Use [a]	Retail	5.266 KSF	820	42.94	1.03	61%	39%	3.75	48%	52%	226	3	2	5	10	10	20
		Residential units	14 DU	230	5.86	0.44	17%	83%	0.52	67%	33%	82	1	5	6	5	2	7
		less existing retail	9.615 KSF	820	42.94	1.03	61%	39%	3.75	48%	52%	(413)	6	16	(10)	17	53	(36)
3	CARMAX [b]	Auto Dealership	40.363 KSF									n/a	37	26	63	111	66	177
Total:												n/a	53	66	87	162	142	198

Notes:
[a] Source: *Trip Generation* , *7th Edition* , Institute of Transportation Engineers, 2003
[b] Source: *Traffic Impact Analysis for Carmax Superstore, City of Costa Mesa,* DKS Associates, May 17, 2007



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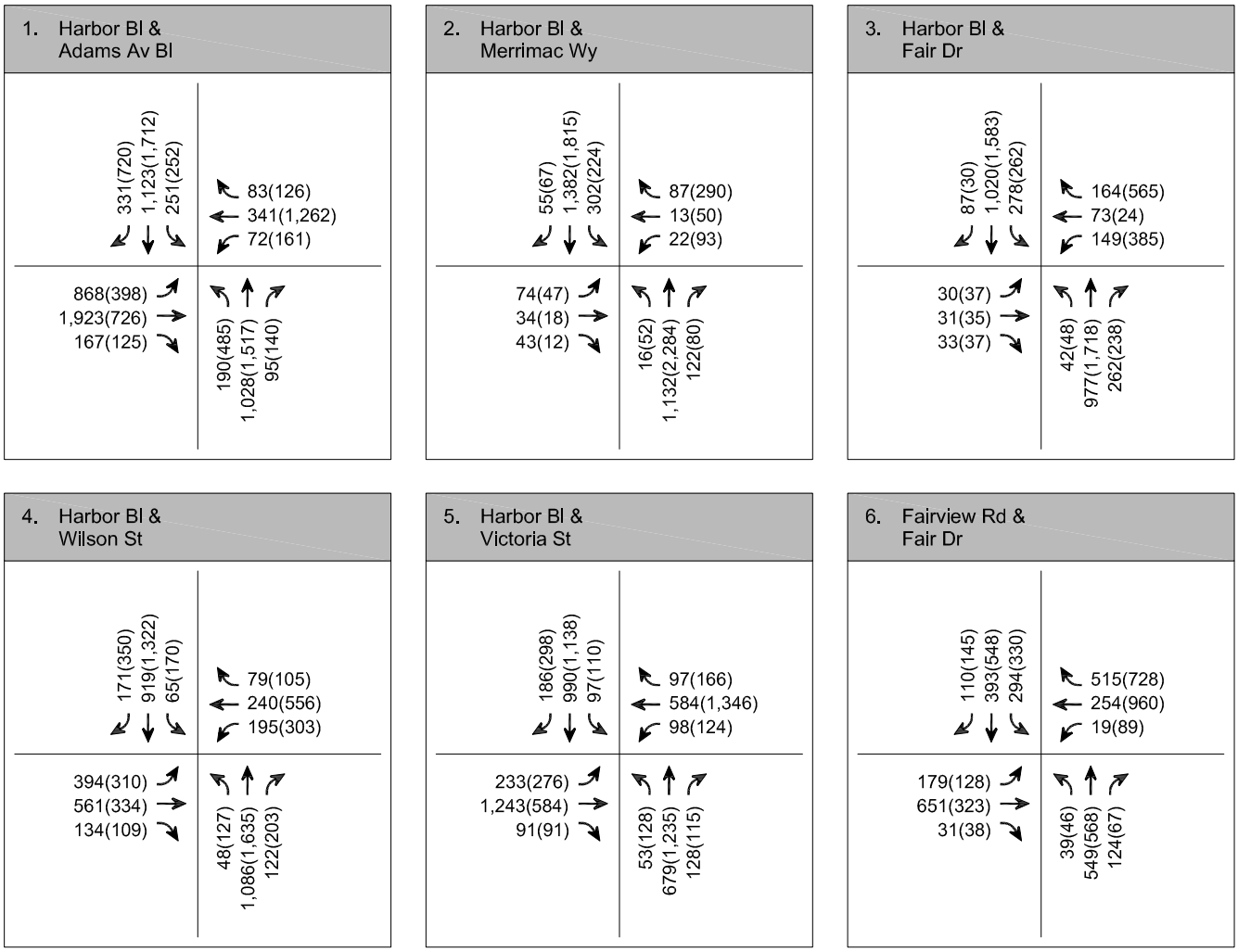
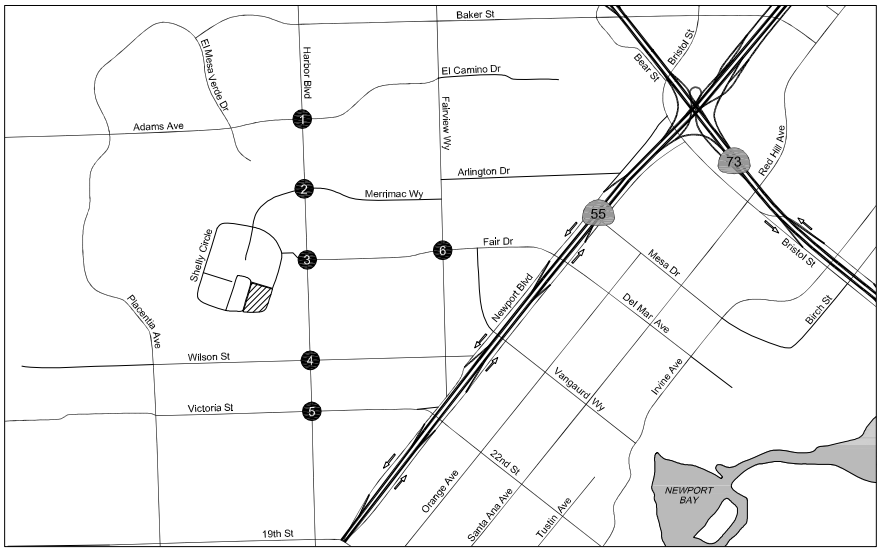
LOCATION OF RELATED PROJECTS

FIGURE 3





LEGEND

- Project Site
- # Analyzed Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes

Not to Scale

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CUMULATIVE BASE PEAK HOUR TRAFFIC VOLUMES

FIGURE 4

PROJECT TRAFFIC VOLUMES

Future traffic estimates for the proposed project involves the use of a three-step process similar to the estimates for the related projects. The three steps are traffic generation, trip distribution, and traffic assignment.

Project Traffic Generation

Trip generation rates for residential apartments found in *Trip Generation, 7th Edition* were used to develop trip generation estimates for the new trips that would be generated by the proposed project. These rates, along with the results of the trip estimation for the proposed project and existing land uses are summarized in Table 5.

As shown in Table 5, the project is expected to generate 2,150 net new daily trips, including approximately 163 during the a.m. peak hour and approximately 198 during the p.m. peak hour.

Project Traffic Distribution

The geographic distribution of trips generated by the proposed project, illustrated in Figure 5, was estimated using the SCAG travel demand forecasting model, and takes into account the location of the study intersections. It is estimated that 35% of the project trips will travel to and from the north, 20% will travel to and from the south, 30% will travel to and from the east, and 15% will travel to and from the west.

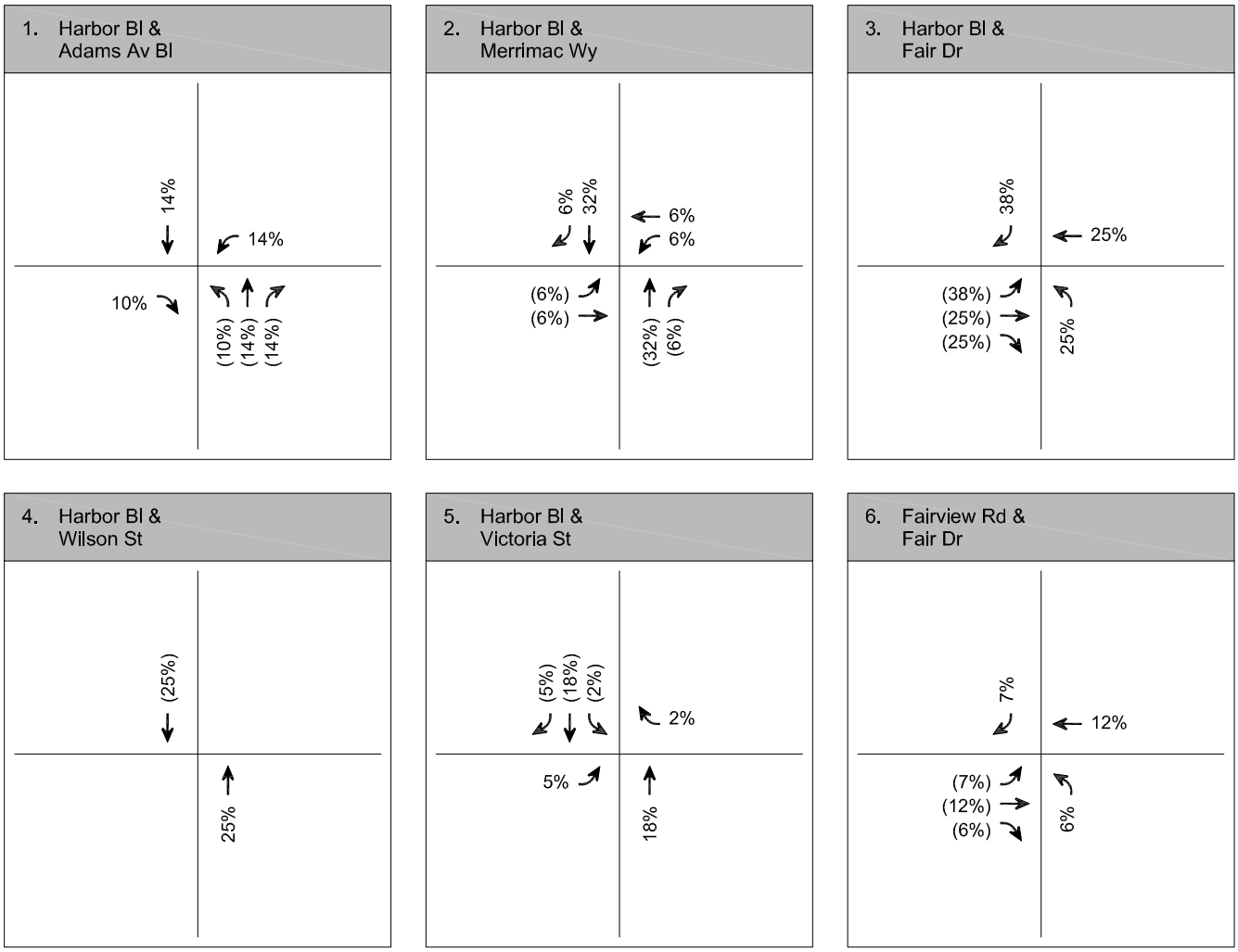
Project Traffic Assignment

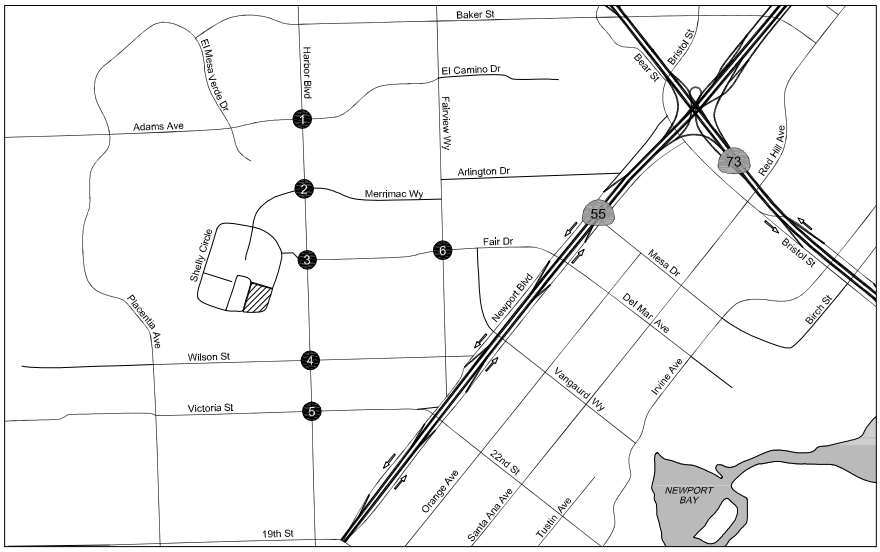
The distribution pattern was used to assign the project-generated traffic to the local street system. Figure 5 illustrates the percent distribution of the project traffic, and Figure 6 illustrates the assignment of the proposed project-generated peak hour traffic volumes at each of the six analyzed intersections during the weekday morning and evening peak hours.

TABLE 5
TRIP GENERATION ESTIMATES
FAIRVIEW DEVELOPMENT CENTER

Land Use	Size	Trip Generation Rates [a]								Estimated Trips						
		ITE	Daily	A.M. Peak Hour			P.M. Peak Hour			Daily	A.M. Peak Hour Trips			P.M. Peak Hour Trips		
		Code	Rate	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total
Proposed Project																
Affordable Housing Apartment Complex	320 DU	220	6.72	0.51	20%	80%	0.62	65%	35%	2,150	33	130	163	129	69	198

Notes:
[a] Source: *Trip Generation, 7th Edition* , Institute of Transportation Engineers, 2003





LEGEND

- Project Site
- # Analyzed Intersection
- X% Inbound Trip Distribution
- (X%) Outbound Trip Distribution

Not to Scale

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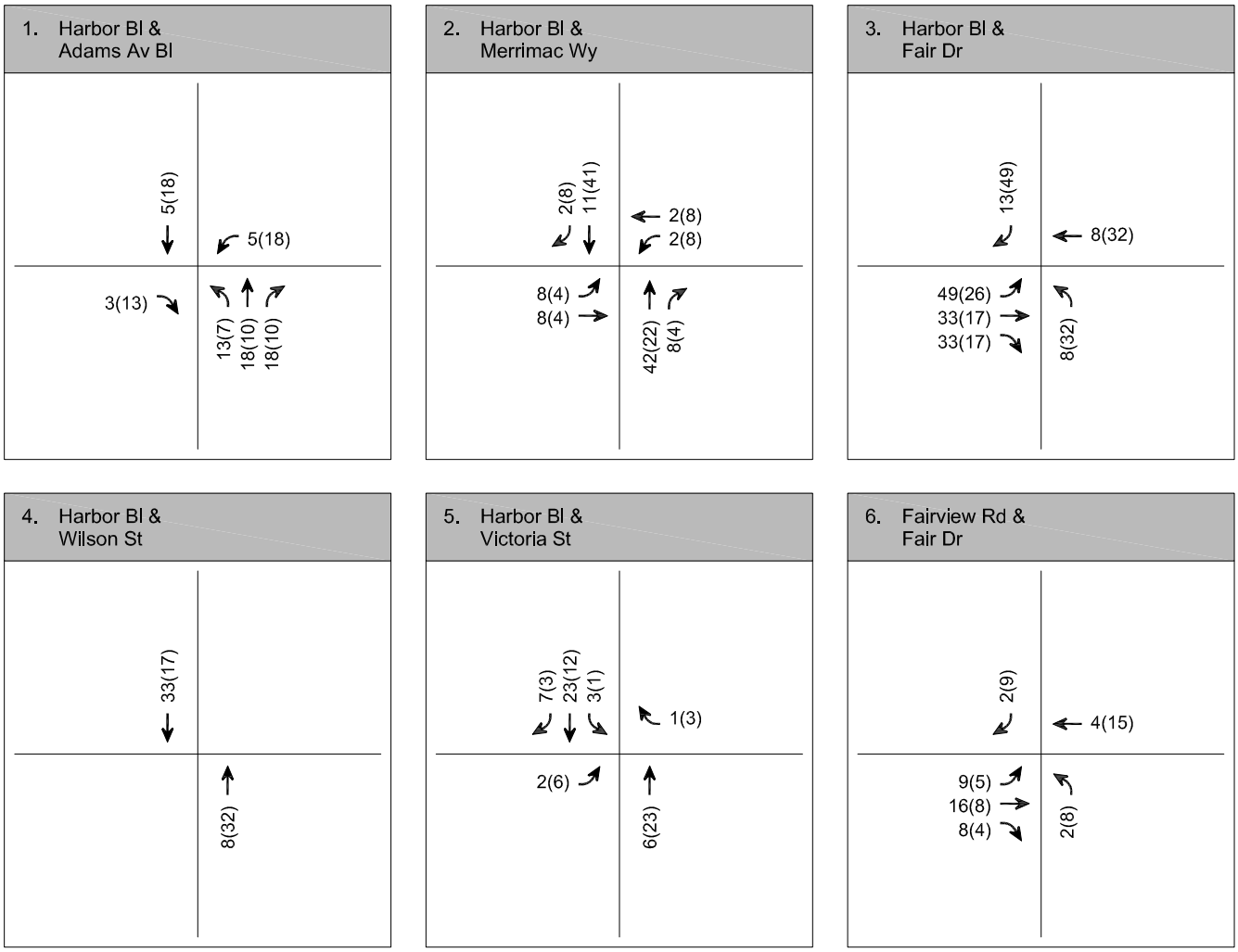
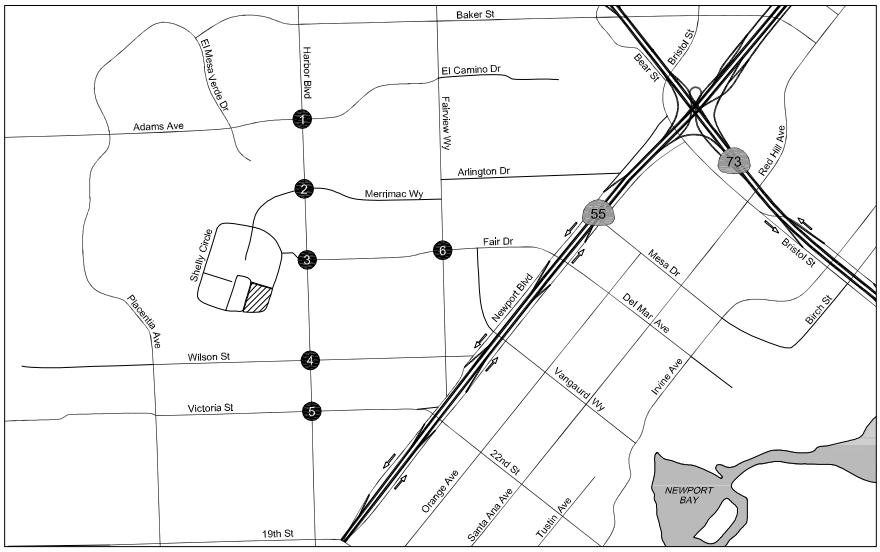
TRIP DISTRIBUTION

FIGURE 5





LEGEND

- Project Site
- # Analyzed Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes

Not to Scale

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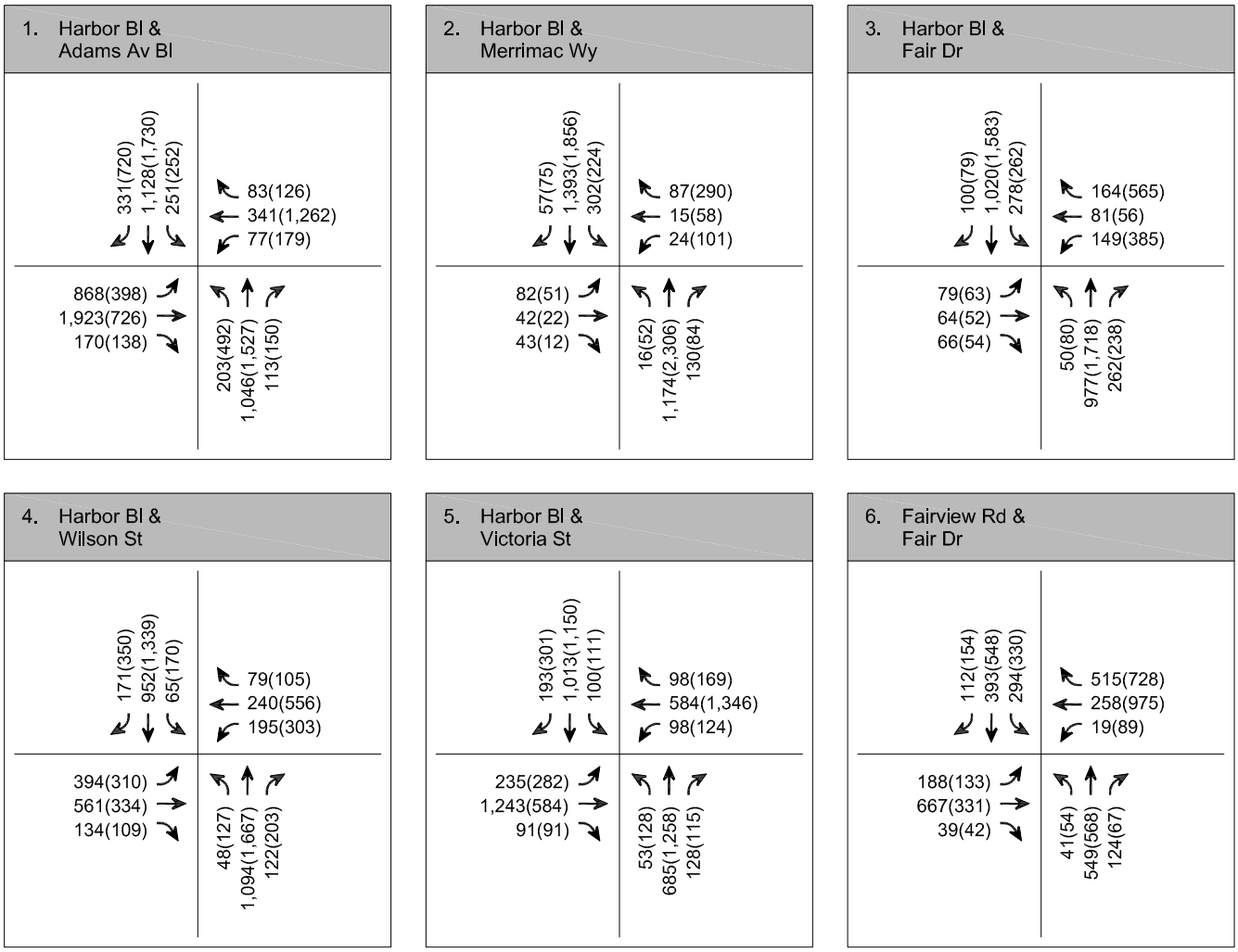
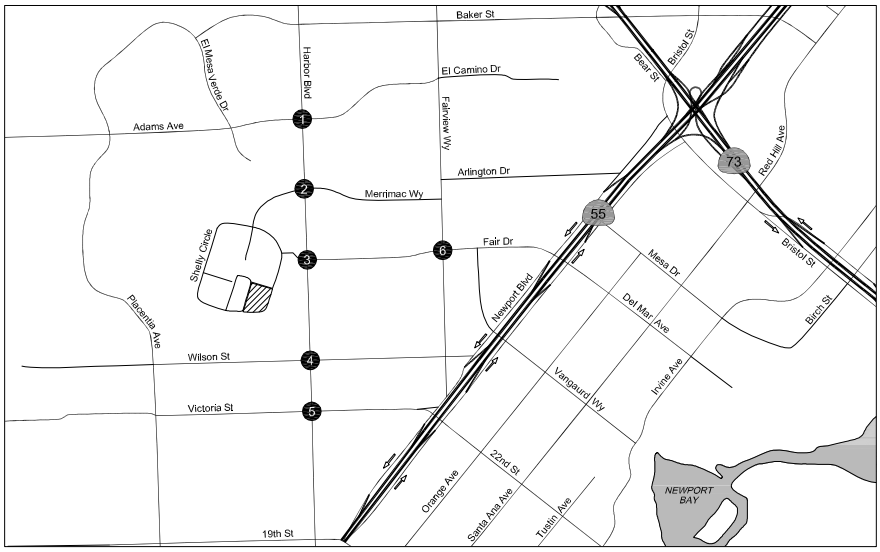
PROJECT ONLY PEAK HOUR TRAFFIC VOLUMES

FIGURE 6

CUMULATIVE PLUS PROJECT TRAFFIC PROJECTIONS

The proposed project traffic volumes were added to the cumulative base traffic projections, resulting in cumulative plus project weekday morning and evening peak hour traffic volumes. Illustrated in Figure 7, the cumulative plus project scenario presents future traffic conditions with the completion of the proposed project.





LEGEND

- Project Site
- # Analyzed Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes

Not to Scale

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CUMULATIVE PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES

FIGURE 7

IV. TRAFFIC IMPACT ANALYSIS AND MITIGATION MEASURES

This section presents an analysis of the projected cumulative base and cumulative plus project traffic volumes to determine the potential impacts of the proposed project on the surrounding street system.

SIGNIFICANT TRAFFIC IMPACT CRITERIA

The City of Costa Mesa has established threshold criteria used to determine significant traffic impact of a proposed project within its jurisdiction. Under the City of Costa Mesa guidelines, an intersection would be significantly impacted with an increase in V/C ratio relative to the cumulative base conditions of equal to or greater than 0.01 for intersections operating at LOS E or F after the addition of project traffic. Intersections operating at LOS D or better after the addition of the project traffic are not considered significantly impacted regardless of the increase in V/C ratio. The following summarizes the impact criteria:

LOS	Final V/C Ratio	Project-related Increase in V/C
E or F	> 0.900	equal to or greater than 0.01

CUMULATIVE BASE TRAFFIC CONDITIONS

The results of the analysis for the cumulative base traffic conditions are summarized in Table 6. Analysis indicates that in the future (2011) all six study intersections are projected to operate at acceptable levels of service (LOS D or above) during the a.m. peak period. During the p.m. peak period, the intersection of Harbor Boulevard & Adams Avenue is estimated to operate at LOS F, the intersection of Harbor Boulevard & Victoria Street is estimated to operate at LOS E, and the four remaining study intersections are estimated to operate at LOS D or better.

TABLE 6
YEAR 2011 FUTURE CONDITIONS
INTERSECTION LEVELS OF SERVICE

Intersection	Peak Hour	Year 2011 Future		Year 2011 Future plus Project			
		V/C or Delay	LOS	V/C or Delay	LOS	Change in V/C	Significant Impact?
1. Harbor Boulevard & Adams Avenue	AM	0.861	D	0.870	D	0.009	NO
	PM	1.002	F	1.005	F	0.003	NO
2. Harbor Boulevard & Merrimac Way	AM	0.556	A	0.573	A	0.017	NO
	PM	0.816	D	0.827	D	0.011	NO
3. Harbor Boulevard & Fair Drive	AM	0.506	A	0.539	A	0.033	NO
	PM	0.767	C	0.793	C	0.026	NO
4. Harbor Boulevard & Wilson Street	AM	0.621	B	0.623	B	0.002	NO
	PM	0.875	D	0.881	D	0.006	NO
5. Harbor Boulevard & Victoria Street	AM	0.794	C	0.799	C	0.005	NO
	PM	0.955	E	0.962	E	0.007	NO
6. Fairview Road & Fair Drive	AM	0.600	A	0.608	B	0.008	NO
	PM	0.779	C	0.785	C	0.006	NO

CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

The cumulative plus project peak hour traffic volumes, illustrated in Figure 7, were analyzed to determine the projected year 2011 future operating conditions following completion and full occupancy of the proposed project. As summarized in Table 6, all six study intersections are projected to operate at acceptable LOS (LOS D or above) during the a.m. peak period. During the p.m. peak period, the intersection of Harbor Boulevard & Adams Avenue is estimated to operate at LOS F, the intersection of Harbor Boulevard & Victoria Street is estimated to operate at LOS E, and the four remaining study intersections are estimated to operate at LOS D or better.

PROJECT IMPACTS AND MITIGATION

Using the City's criteria for determination of significant impacts, the proposed project would not significantly impact any of the analyzed intersections during either peak hour. As no project related impacts have been identified, no mitigation measures would be necessary. Table 6 summarizes the results of this analysis.

V. SUMMARY

This study was undertaken to analyze the potential traffic impacts on the local street system that could result from the Fairview Development Center Affordable Housing Project. The following summarizes the results of this analysis:

- The project would construct 320 affordable housing units on 10 acres of land. The proposed project would be completed in 2011.

- Six intersections were analyzed to evaluate potential traffic impacts. All six study intersections are currently operating at LOS D or better during the morning weekday peak hour.

- The six study intersections are projected to continue to operate acceptably (LOS D or better) under cumulative base (2011) conditions during the a.m. peak hour. During the p.m. peak hour, the intersections of Harbor Boulevard & Adams and intersection of Harbor Boulevard & Victoria Street are projected to operate at LOS F and E respectively. The four remaining study intersections are estimated to operate at LOS D or better.

- The project is projected to generate approximately 2,150 daily trips, including 163 weekday morning peak hour trips and 198 weekday evening peak hour trips.

- The six study intersections are projected to operate at acceptable LOS (LOS D or better) during the a.m. peak period under cumulative plus project (2011) conditions. During the p.m. peak period, the intersection of Harbor Boulevard & Adams Avenue is estimated to operate at LOS F and the intersection of Harbor Boulevard & Victoria Street is estimated to operate at LOS E. The four remaining study intersections are estimated to operate at LOS D or better.

- According to City of Costa Mesa thresholds of significance, the development of the proposed project would not significantly impact any of the six study intersections.

REFERENCES

Transportation Research Circular No. 212, Interim Materials on Highway Capacity, Transportation Research Board, 1980.

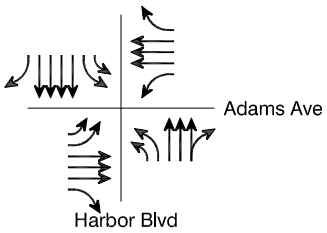
Trip Generation, 7th Edition, Institute of Transportation Engineers, 2003.

APPENDIX A

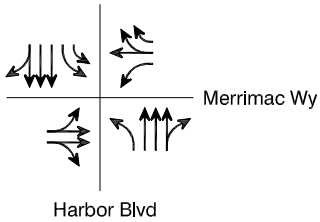
INTERSECTION LANE CONFIGURATIONS

EXISTING CONDITIONS

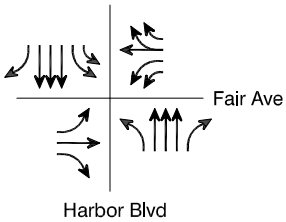
1. Harbor Blvd & Adams Ave



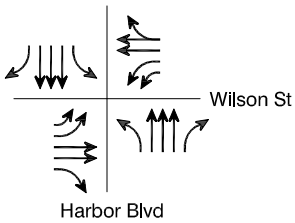
2. Harbor Blvd & Merrimac Wy



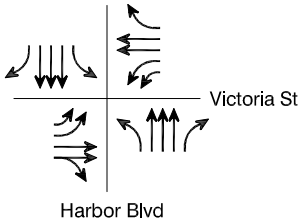
3. Harbor Blvd & Fair Ave



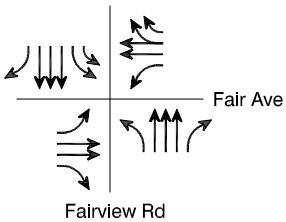
4. Harbor Blvd & Wilson St



5. Harbor Blvd & Victoria St



6. Fairview Rd & Fair Ave



N

Not to Scale

FEHR & PEERS
KAKU ASSOCIATES

INTERSECTION LANE CONFIGURATIONS

APPENDIX A

APPENDIX B

TRAFFIC COUNTS

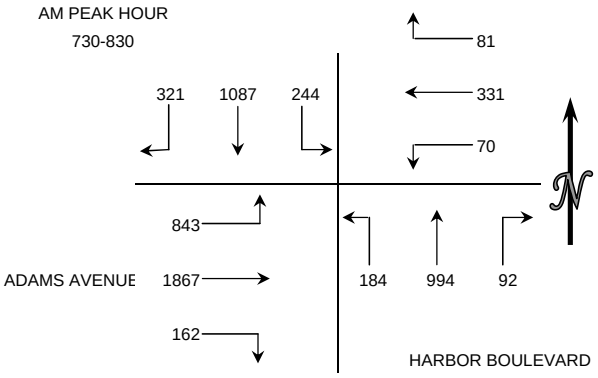
WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

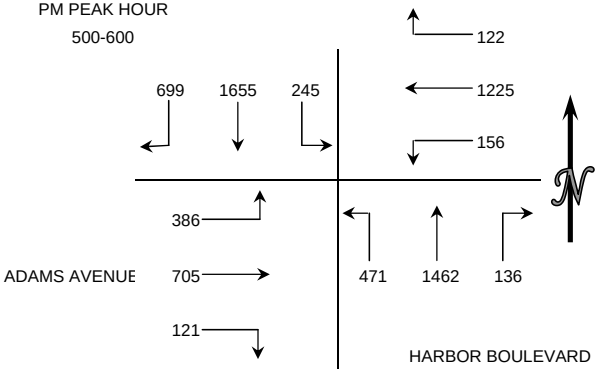
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: COSTA MESA TRAFFIC COUNTS
DATE: THURSDAY, JANUARY 31ST, 2008
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S HARBOR BOULEVARD
E/W ADAMS AVENUE
CITY: COSTA MESA

15 MIN COUNTS					7:00 AM TO 9:00 AM								
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	44	201	30	21	35	10	10	159	26	20	304	123	983
715-730	48	229	35	13	50	19	16	192	22	26	353	149	1152
730-745	87	267	63	10	77	19	20	225	45	32	427	181	1453
745-800	103	277	80	18	72	20	35	253	52	41	524	231	1706
800-815	71	258	72	24	86	17	18	251	41	42	463	212	1555
815-830	60	285	29	29	96	14	19	265	46	47	453	219	1562
830-845	50	250	33	21	60	22	17	241	32	52	358	149	1285
845-900	65	254	39	13	69	23	17	243	44	52	294	138	1251
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	282	974	208	62	234	68	81	829	145	119	1608	684	5294
715-815	309	1031	250	65	285	75	89	921	160	141	1767	773	5866
730-830	321	1087	244	81	331	70	92	994	184	162	1867	843	6276
745-845	284	1070	214	92	314	73	89	1010	171	182	1798	811	6108
800-900	246	1047	173	87	311	76	71	1000	163	193	1568	718	5653



15 MIN COUNTS					4:00 PM TO 6:00 PM								
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	120	274	31	51	262	37	20	211	75	21	99	74	1275
415-430	157	335	43	42	291	35	37	302	119	29	129	98	1617
430-445	162	339	37	37	264	34	30	336	114	25	169	94	1641
445-500	171	366	46	44	284	30	35	387	117	22	140	83	1725
500-515	161	385	49	35	285	44	24	359	108	26	159	96	1731
515-530	182	434	62	27	318	40	40	413	126	22	162	95	1921
530-545	188	391	69	32	321	42	38	350	121	43	207	96	1898
545-600	168	445	65	28	301	30	34	340	116	30	177	99	1833
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	610	1314	157	174	1101	136	122	1236	425	97	537	349	6258
415-515	651	1425	175	158	1124	143	126	1384	458	102	597	371	6714
430-530	676	1524	194	143	1151	148	129	1495	465	95	630	368	7018
445-545	702	1576	226	138	1208	156	137	1509	472	113	668	370	7275
500-600	699	1655	245	122	1225	156	136	1462	471	121	705	386	7383



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

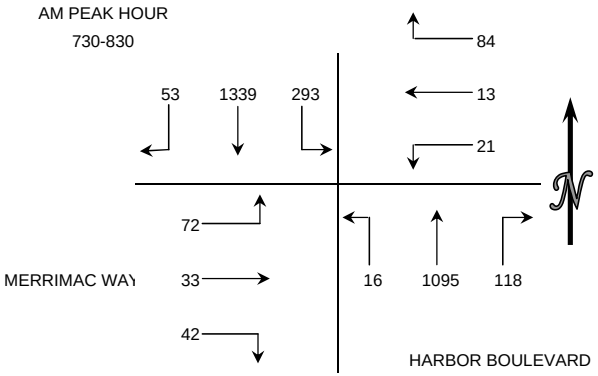
CLIENT: FEHR AND PEERS
PROJECT: COSTA MESA TRAFFIC COUNTS
DATE: THURSDAY, JANUARY 31ST, 2008
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S HARBOR BOULEVARD
E/W MERRIMAC WAY
CITY: COSTA MESA

15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	8	241	33	6	1	2	18	201	2	6	11	12	541
715-730	16	288	58	17	1	3	34	201	2	6	9	6	641
730-745	18	330	68	24	4	9	25	253	7	13	6	13	770
745-800	13	339	109	20	5	3	46	310	5	12	10	22	894
800-815	15	345	59	16	3	2	27	258	1	4	5	20	755
815-830	7	325	57	24	1	7	20	274	3	13	12	17	760
830-845	5	289	57	16	3	3	22	270	8	6	2	14	695
845-900	10	337	78	19	0	8	28	249	7	2	3	15	756

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	55	1198	268	67	11	17	123	965	16	37	36	53	2846
715-815	62	1302	294	77	13	17	132	1022	15	35	30	61	3060
730-830	53	1339	293	84	13	21	118	1095	16	42	33	72	3179
745-845	40	1298	282	76	12	15	115	1112	17	35	29	73	3104
800-900	37	1296	251	75	7	20	97	1051	19	25	22	66	2966

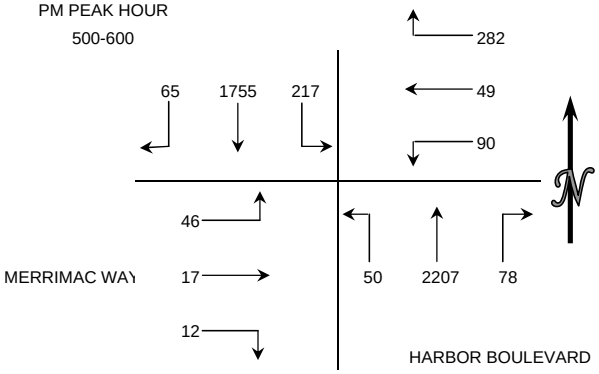


15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	9	372	29	88	10	21	10	453	5	2	9	18	1026
415-430	15	360	41	66	9	19	19	512	11	5	2	12	1071
430-445	8	403	37	70	4	22	14	477	11	0	3	14	1063
445-500	12	393	26	71	10	20	13	504	12	5	2	15	1083
500-515	24	446	36	71	12	33	20	555	20	1	6	20	1244
515-530	16	402	45	89	19	16	17	577	10	4	2	10	1207
530-545	18	482	66	75	6	24	19	543	10	6	6	6	1261
545-600	7	425	70	47	12	17	22	532	10	1	3	10	1156

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	44	1528	133	295	33	82	56	1946	39	12	16	59	4243
415-515	59	1602	140	278	35	94	66	2048	54	11	13	61	4461
430-530	60	1644	144	301	45	91	64	2113	53	10	13	59	4597
445-545	70	1723	173	306	47	93	69	2179	52	16	16	51	4795
500-600	65	1755	217	282	49	90	78	2207	50	12	17	46	4868



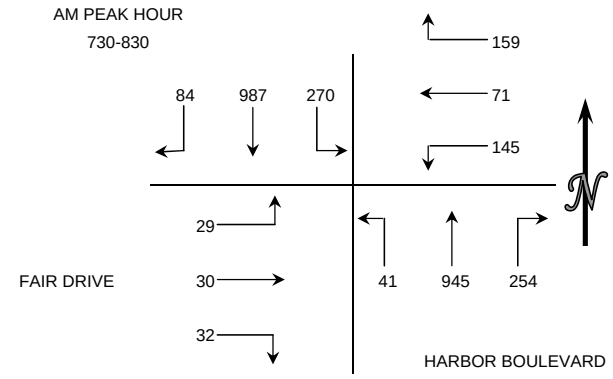
WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

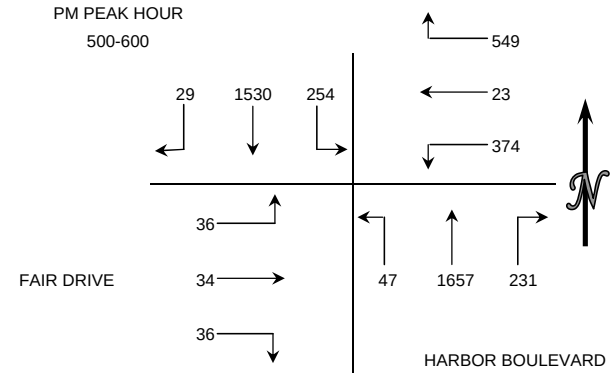
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: COSTA MESA TRAFFIC COUNTS
DATE: THURSDAY JANUARY 31ST, 2008
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S HARBOR BOULEVARD
E/W FAIR DRIVE
CITY: COSTA MESA

15 MIN COUNTS						7:00 AM TO 9:00 AM							
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	24	178	42	35	15	21	31	140	6	4	8	9	513
715-730	21	199	47	41	26	28	48	181	14	4	5	14	628
730-745	25	207	84	41	15	44	72	224	7	10	6	6	741
745-800	24	244	60	44	22	29	87	263	17	12	9	7	818
800-815	24	260	47	39	19	30	45	223	12	4	10	9	722
815-830	11	276	79	35	15	42	50	235	5	6	5	7	766
830-845	11	257	33	43	7	31	42	264	9	7	4	11	719
845-900	3	269	46	45	10	33	37	225	7	9	8	4	696
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	94	828	233	161	78	122	238	808	44	30	28	36	2700
715-815	94	910	238	165	82	131	252	891	50	30	30	36	2909
730-830	84	987	270	159	71	145	254	945	41	32	30	29	3047
745-845	70	1037	219	161	63	132	224	985	43	29	28	34	3025
800-900	49	1062	205	162	51	136	174	947	33	26	27	31	2903



15 MIN COUNTS						4:00 PM TO 6:00 PM							
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	4	340	42	74	12	60	55	369	13	17	19	16	1021
415-430	6	333	43	80	3	56	42	398	8	8	16	14	1007
430-445	8	359	44	105	5	86	37	384	7	19	25	26	1105
445-500	6	353	56	125	5	59	61	399	5	13	10	20	1112
500-515	11	388	79	128	8	90	63	429	13	9	10	10	1238
515-530	7	415	60	172	8	110	56	451	13	15	12	12	1331
530-545	4	373	59	131	5	90	56	370	11	10	5	3	1117
545-600	7	354	56	118	2	84	56	407	10	2	7	11	1114
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	24	1385	185	384	25	261	195	1550	33	57	70	76	4245
415-515	31	1433	222	438	21	291	203	1610	33	49	61	70	4462
430-530	32	1515	239	530	26	345	217	1663	38	56	57	68	4786
445-545	28	1529	254	556	26	349	236	1649	42	47	37	45	4798
500-600	29	1530	254	549	23	374	231	1657	47	36	34	36	4800



WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

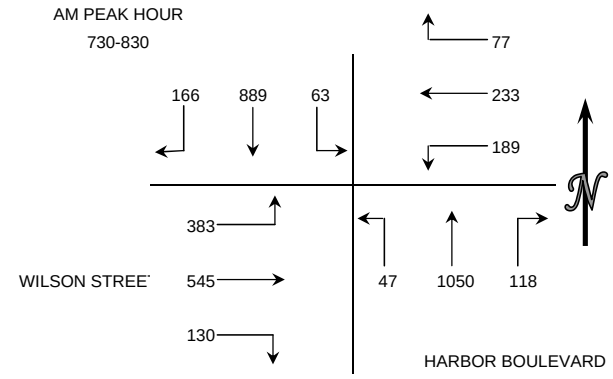
CLIENT: FEHR AND PEERS
PROJECT: COSTA MESA TRAFFIC COUNTS
DATE: THURSDAY, JANUARY 31ST, 2008
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S HARBOR BOULEVARD
E/W WILSON STREET
CITY: COSTA MESA

15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	34	158	8	12	55	34	13	138	4	23	112	83	674
715-730	32	171	5	14	48	35	19	204	13	27	137	80	785
730-745	52	218	16	18	73	49	26	249	11	32	121	94	959
745-800	47	219	14	24	64	54	30	289	10	37	154	108	1050
800-815	33	229	14	13	54	43	28	243	14	31	149	98	949
815-830	34	223	19	22	42	43	34	269	12	30	121	83	932
830-845	41	249	22	19	48	37	29	252	11	26	90	80	904
845-900	26	218	26	17	42	42	33	278	6	23	82	64	857

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	165	766	43	68	240	172	88	880	38	119	524	365	3468
715-815	164	837	49	69	239	181	103	985	48	127	561	380	3743
730-830	166	889	63	77	233	189	118	1050	47	130	545	383	3890
745-845	155	920	69	78	208	177	121	1053	47	124	514	369	3835
800-900	134	919	81	71	186	165	124	1042	43	110	442	325	3642

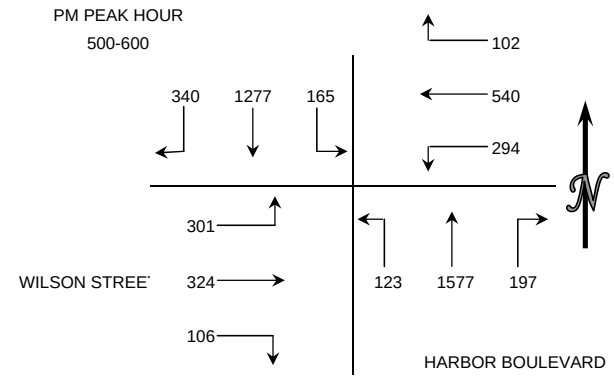


15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	82	265	31	26	116	65	58	395	23	28	83	56	1228
415-430	54	284	26	22	115	99	45	408	23	16	70	65	1227
430-445	81	306	41	26	122	80	57	397	29	31	84	73	1327
445-500	75	279	33	25	113	69	55	366	26	21	74	85	1221
500-515	70	309	36	24	138	76	51	395	22	23	70	72	1286
515-530	106	335	47	28	134	65	47	396	38	31	87	67	1381
530-545	91	311	31	25	140	71	37	393	36	22	76	74	1307
545-600	73	322	51	25	128	82	62	393	27	30	91	88	1372

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	292	1134	131	99	466	313	215	1566	101	96	311	279	5003
415-515	280	1178	136	97	488	324	208	1566	100	91	298	295	5061
430-530	332	1229	157	103	507	290	210	1554	115	106	315	297	5215
445-545	342	1234	147	102	525	281	190	1550	122	97	307	298	5195
500-600	340	1277	165	102	540	294	197	1577	123	106	324	301	5346



WILTEC

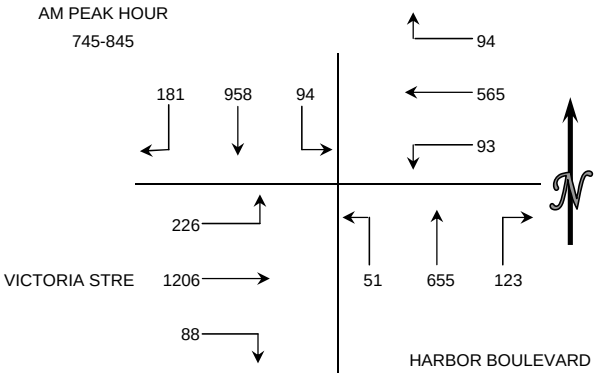
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: COSTA MESA TRAFFIC COUNTS
DATE: THURSDAY. JANUARY 31ST, 2008
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S HARBOR BOULEVARD
E/W VICTORIA STREET
CITY: COSTA MESA

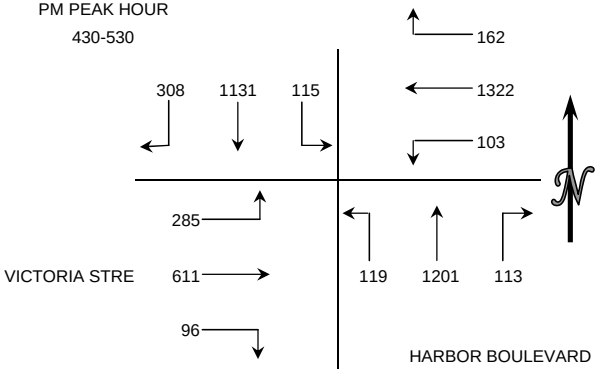
15 MIN COUNTS — 7:00 AM TO 9:00 AM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	28	150	19	24	106	16	15	101	12	15	304	44	834
715-730	29	181	32	20	120	23	25	137	10	9	321	47	954
730-745	32	209	26	15	133	25	20	151	10	12	318	49	1000
745-800	68	267	29	21	167	36	36	214	17	13	320	72	1260
800-815	43	224	20	24	141	20	24	144	16	18	274	52	1000
815-830	36	242	28	24	130	18	30	142	12	26	306	43	1037
830-845	34	225	17	25	127	19	33	155	6	31	306	59	1037
845-900	32	191	22	23	88	17	22	144	7	12	287	56	901
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	157	807	106	80	526	100	96	603	49	49	1263	212	4048
715-815	172	881	107	80	561	104	105	646	53	52	1233	220	4214
730-830	179	942	103	84	571	99	110	651	55	69	1218	216	4297
745-845	181	958	94	94	565	93	123	655	51	88	1206	226	4334
800-900	145	882	87	96	486	74	109	585	41	87	1173	210	3975



15 MIN COUNTS — 4:00 PM TO 6:00 PM

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	52	213	27	40	265	31	26	242	16	30	139	56	1137
415-430	62	276	27	36	377	35	17	263	29	22	132	62	1338
430-445	81	277	30	45	300	29	31	315	27	18	143	68	1364
445-500	65	264	24	42	297	26	28	282	34	26	138	70	1296
500-515	81	281	26	38	332	29	34	328	34	22	152	68	1425
515-530	81	309	35	37	393	19	20	276	24	30	178	79	1481
530-545	67	233	26	22	288	17	29	264	26	21	149	61	1203
545-600	80	272	24	43	309	18	36	292	26	21	115	69	1305
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	260	1030	108	163	1239	121	102	1102	106	96	552	256	5135
415-515	289	1098	107	161	1306	119	110	1188	124	88	565	268	5423
430-530	308	1131	115	162	1322	103	113	1201	119	96	611	285	5566
445-545	294	1087	111	139	1310	91	111	1150	118	99	617	278	5405
500-600	309	1095	111	140	1322	83	119	1160	110	94	594	277	5414



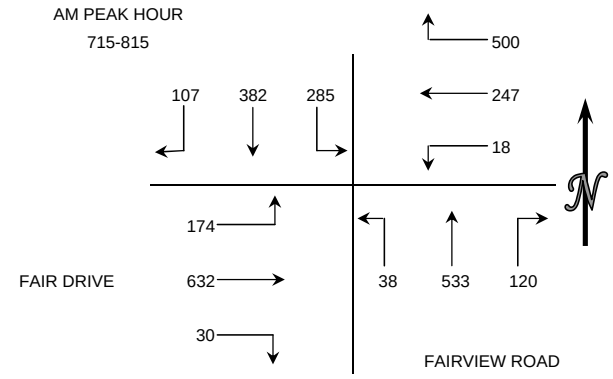
WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

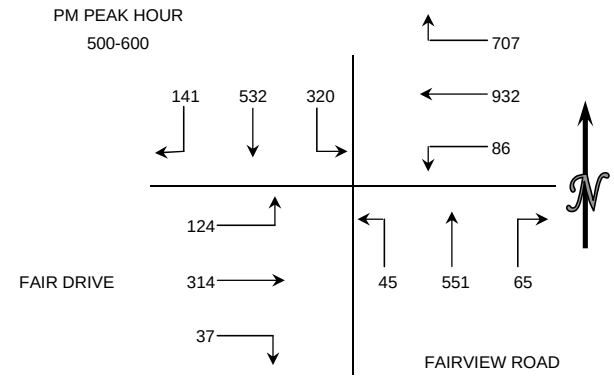
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: COSTA MESA TRAFFIC COUNTS
DATE: THURSDAY, JANUARY 31ST, 2008
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S FAIRVIEW ROAD
E/W FAIR DRIVE
CITY: COSTA MESA

15 MIN COUNTS						7:00 AM TO 9:00 AM							
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	12	72	41	72	43	8	24	55	10	3	117	15	472
715-730	27	88	55	95	55	5	21	123	11	7	119	41	647
730-745	36	106	69	155	69	6	35	162	12	14	182	57	903
745-800	25	89	76	151	60	4	39	142	7	4	196	54	847
800-815	19	99	85	99	63	3	25	106	8	5	135	22	669
815-830	11	74	72	82	65	6	25	71	14	11	149	20	600
830-845	15	79	55	78	50	4	30	89	11	5	112	16	544
845-900	12	51	58	98	55	8	31	73	5	8	86	20	505
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	100	355	241	473	227	23	119	482	40	28	614	167	2869
715-815	107	382	285	500	247	18	120	533	38	30	632	174	3066
730-830	91	368	302	487	257	19	124	481	41	34	662	153	3019
745-845	70	341	288	410	238	17	119	408	40	25	592	112	2660
800-900	57	303	270	357	233	21	111	339	38	29	482	78	2318



15 MIN COUNTS						4:00 PM TO 6:00 PM							
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	29	108	82	127	124	11	20	139	11	14	70	28	763
415-430	30	107	52	133	141	15	15	123	17	8	68	21	730
430-445	25	114	62	136	164	14	15	118	10	8	67	20	753
445-500	26	104	69	132	185	22	10	121	10	6	82	34	801
500-515	32	147	84	168	236	21	17	121	9	7	84	33	959
515-530	37	123	76	187	262	26	17	147	11	16	87	34	1023
530-545	40	139	79	167	225	24	16	146	12	7	69	23	947
545-600	32	123	81	185	209	15	15	137	13	7	74	34	925
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	110	433	265	528	614	62	60	501	48	36	287	103	3047
415-515	113	472	267	569	726	72	57	483	46	29	301	108	3243
430-530	120	488	291	623	847	83	59	507	40	37	320	121	3536
445-545	135	513	308	654	908	93	60	535	42	36	322	124	3730
500-600	141	532	320	707	932	86	65	551	45	37	314	124	3854



APPENDIX C

INTERSECTION LEVEL OF SERVICE WORKSHEETS

EXISTING CONDITIONS

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & ADAMS AV**
Description: **EXISTING CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	SBR		
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	321	1,600	0.000	N-S(1):	0.321 *
	TH	4.00	1,087	6,400	0.170	N-S(2):	0.242
	LT	2.00	244	2,560	0.095 *	E-W(1):	0.416 *
Westbound	RT	1.00	81	1,600	0.003	E-W(2):	0.398
	TH	3.00	331	4,800	0.069		
	LT	2.00	70	2,560	0.027 *	V/C:	0.737
Northbound	RT	0.00	92	0	0.000	Lost Time:	0.100
	TH	3.00	994	4,800	0.226 *	ITS:	0.000
	LT	2.00	184	2,560	0.072		
Eastbound	RT	1.00	162	1,600	0.065	ICU:	0.837
	TH	3.00	1,867	4,800	0.389 *		
	LT	2.00	843	2,560	0.329	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	699	1,600	0.286 *	N-S(1):	0.429
	TH	4.00	1,655	6,400	0.259	N-S(2):	0.470 *
	LT	2.00	245	2,560	0.096	E-W(1):	0.208
Westbound	RT	1.00	122	1,600	0.028	E-W(2):	0.406 *
	TH	3.00	1,225	4,800	0.255 *		
	LT	2.00	156	2,560	0.061	V/C:	0.876
Northbound	RT	0.00	136	0	0.000	Lost Time:	0.100
	TH	3.00	1,462	4,800	0.333	ITS:	0.000
	LT	2.00	471	2,560	0.184 *		
Eastbound	RT	1.00	121	1,600	0.000	ICU:	0.976
	TH	3.00	705	4,800	0.147		
	LT	2.00	386	2,560	0.151 *	LOS:	E

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & MERRIMAC WAY**
Description: **EXISTING CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	53	0	0.000	N-S(1):	0.367 *
	TH	3.00	1,339	4,800	0.290	N-S(2):	0.300
	LT	2.00	293	2,560	0.114 *	E-W(1):	0.059
Westbound	RT	1.73	84	2,771	0.000	E-W(2):	0.075 *
	TH	0.27	13	429	0.030 *		
	LT	1.00	21	1,600	0.013	V/C:	0.442
Northbound	RT	0.00	118	0	0.000	Lost Time:	0.100
	TH	3.00	1,095	4,800	0.253 *	ITS:	0.000
	LT	1.00	16	1,600	0.010		
Eastbound	RT	0.00	42	0	0.000	ICU:	0.542
	TH	2.00	33	3,200	0.046		
	LT	0.00	72	1,600	0.045 *	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	65	0	0.000	N-S(1):	0.561 *
	TH	3.00	1,755	4,800	0.379	N-S(2):	0.410
	LT	2.00	217	2,560	0.085 *	E-W(1):	0.103
Westbound	RT	1.70	282	2,726	0.061	E-W(2):	0.132 *
	TH	0.30	49	474	0.103 *		
	LT	1.00	90	1,600	0.056	V/C:	0.693
Northbound	RT	0.00	78	0	0.000	Lost Time:	0.100
	TH	3.00	2,207	4,800	0.476 *	ITS:	0.000
	LT	1.00	50	1,600	0.031		
Eastbound	RT	0.00	12	0	0.000	ICU:	0.793
	TH	2.00	17	1,600	0.047		
	LT	0.00	46	1,600	0.029 *	LOS:	C

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & FAIR DR**
Description: **EXISTING CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	84	1,600	0.043	N-S(1):	0.302 *
	TH	3.00	987	4,800	0.206	N-S(2):	0.232
	LT	2.00	270	2,560	0.105 *	E-W(1):	0.091 *
Westbound	RT	1.38	159	2,212	0.019	E-W(2):	0.000
	TH	0.62	71	988	0.072 *		
	LT	2.00	145	2,560	0.057	V/C:	0.393
Northbound	RT	1.00	254	1,600	0.130	Lost Time:	0.100
	TH	3.00	945	4,800	0.197 *	ITS:	0.000
	LT	1.00	41	1,600	0.026		
Eastbound	RT	1.00	32	1,600	0.007	ICU:	0.493
	TH	1.00	30	1,600	0.019 *		
	LT	1.00	29	1,600	0.018	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	29	1,600	0.007	N-S(1):	0.444 *
	TH	3.00	1,530	4,800	0.319	N-S(2):	0.348
	LT	2.00	254	2,560	0.099 *	E-W(1):	0.202 *
Westbound	RT	1.92	549	3,071	0.129	E-W(2):	0.000
	TH	0.08	23	129	0.179 *		
	LT	2.00	374	2,560	0.146	V/C:	0.646
Northbound	RT	1.00	231	1,600	0.071	Lost Time:	0.100
	TH	3.00	1,657	4,800	0.345 *	ITS:	0.000
	LT	1.00	47	1,600	0.029		
Eastbound	RT	1.00	36	1,600	0.008	ICU:	0.746
	TH	1.00	34	1,600	0.021		
	LT	1.00	36	1,600	0.023 *	LOS:	C

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & WILSON ST**
Description: **EXISTING CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	SBR		
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	166	1,600	0.000	N-S(1):	0.258 *
	TH	3.00	889	4,800	0.185	N-S(2):	0.214
	LT	1.00	63	1,600	0.039 *	E-W(1):	0.244
Westbound	RT	0.00	77	0	0.000	E-W(2):	0.247 *
	TH	2.00	233	3,200	0.097 *		
	LT	2.00	189	2,560	0.074	V/C:	0.505
Northbound	RT	1.00	118	1,600	0.037	Lost Time:	0.100
	TH	3.00	1,050	4,800	0.219 *	ITS:	0.000
	LT	1.00	47	1,600	0.029		
Eastbound	RT	1.00	130	1,600	0.067	ICU:	0.605
	TH	2.00	545	3,200	0.170		
	LT	2.00	383	2,560	0.150 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	340	1,600	0.095	N-S(1):	0.432 *
	TH	3.00	1,277	4,800	0.266	N-S(2):	0.343
	LT	1.00	165	1,600	0.103 *	E-W(1):	0.216
Westbound	RT	0.00	102	0	0.000	E-W(2):	0.319 *
	TH	2.00	540	3,200	0.201 *		
	LT	2.00	294	2,560	0.115	V/C:	0.751
Northbound	RT	1.00	197	1,600	0.066	Lost Time:	0.100
	TH	3.00	1,577	4,800	0.329 *	ITS:	0.000
	LT	1.00	123	1,600	0.077		
Eastbound	RT	1.00	106	1,600	0.028	ICU:	0.851
	TH	2.00	324	3,200	0.101		
	LT	2.00	301	2,560	0.118 *	LOS:	D

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & VICTORIA ST**
Description: **EXISTING CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	181	1,600	0.069	N-S(1):	0.195
	TH	3.00	958	4,800	0.200 *	N-S(2):	0.232 *
	LT	1.00	94	1,600	0.059	E-W(1):	0.440 *
Westbound	RT	1.00	94	1,600	0.029	E-W(2):	0.265
	TH	2.00	565	3,200	0.177		
	LT	2.00	93	2,560	0.036 *	V/C:	0.672
Northbound	RT	1.00	123	1,600	0.059	Lost Time:	0.100
	TH	3.00	655	4,800	0.136	ITS:	0.000
	LT	1.00	51	1,600	0.032 *		
Eastbound	RT	0.00	88	0	0.000	ICU:	0.772
	TH	2.00	1,206	3,200	0.404 *		
	LT	2.00	226	2,560	0.088	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	289	1,600	0.128	N-S(1):	0.315 *
	TH	3.00	1,098	4,800	0.229	N-S(2):	0.307
	LT	1.00	107	1,600	0.067 *	E-W(1):	0.250
Westbound	RT	1.00	161	1,600	0.067	E-W(2):	0.513 *
	TH	2.00	1,306	3,200	0.408 *		
	LT	2.00	119	2,560	0.046	V/C:	0.828
Northbound	RT	1.00	110	1,600	0.046	Lost Time:	0.100
	TH	3.00	1,188	4,800	0.248 *	ITS:	0.000
	LT	1.00	124	1,600	0.078		
Eastbound	RT	0.00	88	0	0.000	ICU:	0.928
	TH	2.00	565	3,200	0.204		
	LT	2.00	268	2,560	0.105 *	LOS:	E

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **FAIRVIEW RD & FAIR RD**
Description: **EXISTING CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	107	1,600	0.013	N-S(1):	0.222 *
	TH	3.00	382	4,800	0.080	N-S(2):	0.104
	LT	2.00	285	2,560	0.111 *	E-W(1):	0.209
Westbound	RT	2.00	500	3,200	0.101	E-W(2):	0.263 *
	TH	1.00	247	1,600	0.154 *		
	LT	1.00	18	1,600	0.011	V/C:	0.485
Northbound	RT	1.00	120	1,600	0.069	Lost Time:	0.100
	TH	3.00	533	4,800	0.111 *	ITS:	0.000
	LT	1.00	38	1,600	0.024		
Eastbound	RT	1.00	30	1,600	0.007	ICU:	0.585
	TH	2.00	632	3,200	0.198		
	LT	1.00	174	1,600	0.109 *	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	141	1,600	0.049	N-S(1):	0.240 *
	TH	3.00	532	4,800	0.111	N-S(2):	0.139
	LT	2.00	320	2,560	0.125 *	E-W(1):	0.152
Westbound	RT	1.29	707	2,071	0.279	E-W(2):	0.419 *
	TH	1.71	932	2,729	0.341 *		
	LT	1.00	86	1,600	0.054	V/C:	0.659
Northbound	RT	1.00	65	1,600	0.014	Lost Time:	0.100
	TH	3.00	551	4,800	0.115 *	ITS:	0.000
	LT	1.00	45	1,600	0.028		
Eastbound	RT	1.00	37	1,600	0.009	ICU:	0.759
	TH	2.00	314	3,200	0.098		
	LT	1.00	124	1,600	0.078 *	LOS:	C

* - Denotes critical movement

CUMULATIVE BASE CONDITIONS

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & ADAMS AV**
Description: **CUMULATIVE BASE CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	SBR		
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	331	1,600	0.000	N-S(1):	0.332 *
	TH	4.00	1,123	6,400	0.175	N-S(2):	0.249
	LT	2.00	251	2,560	0.098 *	E-W(1):	0.429 *
Westbound	RT	1.00	83	1,600	0.003	E-W(2):	0.410
	TH	3.00	341	4,800	0.071		
	LT	2.00	72	2,560	0.028 *	V/C:	0.761
Northbound	RT	0.00	95	0	0.000	Lost Time:	0.100
	TH	3.00	1,028	4,800	0.234 *	ITS:	0.000
	LT	2.00	190	2,560	0.074		
Eastbound	RT	1.00	167	1,600	0.067	ICU:	0.861
	TH	3.00	1,923	4,800	0.401 *		
	LT	2.00	868	2,560	0.339	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	720	1,600	0.295 *	N-S(1):	0.443
	TH	4.00	1,712	6,400	0.268	N-S(2):	0.484 *
	LT	2.00	252	2,560	0.098	E-W(1):	0.214
Westbound	RT	1.00	126	1,600	0.030	E-W(2):	0.418 *
	TH	3.00	1,262	4,800	0.263 *		
	LT	2.00	161	2,560	0.063	V/C:	0.902
Northbound	RT	0.00	140	0	0.000	Lost Time:	0.100
	TH	3.00	1,517	4,800	0.345	ITS:	0.000
	LT	2.00	485	2,560	0.189 *		
Eastbound	RT	1.00	125	1,600	0.000	ICU:	1.002
	TH	3.00	726	4,800	0.151		
	LT	2.00	398	2,560	0.155 *	LOS:	F

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & MERRIMAC WAY**
Description: **CUMULATIVE BASE CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	55	0	0.000	N-S(1):	0.379 *
	TH	3.00	1,382	4,800	0.299	N-S(2):	0.309
	LT	2.00	302	2,560	0.118 *	E-W(1):	0.061
Westbound	RT	1.74	87	2,784	0.000	E-W(2):	0.077 *
	TH	0.26	13	416	0.031 *		
	LT	1.00	22	1,600	0.014	V/C:	0.456
Northbound	RT	0.00	122	0	0.000	Lost Time:	0.100
	TH	3.00	1,132	4,800	0.261 *	ITS:	0.000
	LT	1.00	16	1,600	0.010		
Eastbound	RT	0.00	43	0	0.000	ICU:	0.556
	TH	2.00	34	3,200	0.047		
	LT	0.00	74	1,600	0.046 *	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	67	0	0.000	N-S(1):	0.581 *
	TH	3.00	1,815	4,800	0.392	N-S(2):	0.425
	LT	2.00	224	2,560	0.088 *	E-W(1):	0.106
Westbound	RT	1.71	290	2,729	0.063	E-W(2):	0.135 *
	TH	0.29	50	471	0.106 *		
	LT	1.00	93	1,600	0.058	V/C:	0.716
Northbound	RT	0.00	80	0	0.000	Lost Time:	0.100
	TH	3.00	2,284	4,800	0.493 *	ITS:	0.000
	LT	1.00	52	1,600	0.033		
Eastbound	RT	0.00	12	0	0.000	ICU:	0.816
	TH	2.00	18	1,600	0.048		
	LT	0.00	47	1,600	0.029 *	LOS:	D

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & FAIR DR**
Description: **CUMULATIVE BASE CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	87	1,600	0.045	N-S(1):	0.313 *
	TH	3.00	1,020	4,800	0.213	N-S(2):	0.239
	LT	2.00	278	2,560	0.109 *	E-W(1):	0.093 *
Westbound	RT	1.38	164	2,214	0.020	E-W(2):	0.000
	TH	0.62	73	986	0.074 *		
	LT	2.00	149	2,560	0.058	V/C:	0.406
Northbound	RT	1.00	262	1,600	0.135	Lost Time:	0.100
	TH	3.00	977	4,800	0.204 *	ITS:	0.000
	LT	1.00	42	1,600	0.026		
Eastbound	RT	1.00	33	1,600	0.008	ICU:	0.506
	TH	1.00	31	1,600	0.019		
	LT	1.00	30	1,600	0.019 *	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	30	1,600	0.007	N-S(1):	0.460 *
	TH	3.00	1,583	4,800	0.330	N-S(2):	0.360
	LT	2.00	262	2,560	0.102 *	E-W(1):	0.207 *
Westbound	RT	1.92	565	3,070	0.133	E-W(2):	0.000
	TH	0.08	24	130	0.184 *		
	LT	2.00	385	2,560	0.150	V/C:	0.667
Northbound	RT	1.00	238	1,600	0.074	Lost Time:	0.100
	TH	3.00	1,718	4,800	0.358 *	ITS:	0.000
	LT	1.00	48	1,600	0.030		
Eastbound	RT	1.00	37	1,600	0.008	ICU:	0.767
	TH	1.00	35	1,600	0.022		
	LT	1.00	37	1,600	0.023 *	LOS:	C

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & WILSON ST**
Description: **CUMULATIVE BASE CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	SBR		
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	171	1,600	0.000	N-S(1):	0.267 *
	TH	3.00	919	4,800	0.191	N-S(2):	0.221
	LT	1.00	65	1,600	0.041 *	E-W(1):	0.251
Westbound	RT	0.00	79	0	0.000	E-W(2):	0.254 *
	TH	2.00	240	3,200	0.100 *		
	LT	2.00	195	2,560	0.076	V/C:	0.521
Northbound	RT	1.00	122	1,600	0.038	Lost Time:	0.100
	TH	3.00	1,086	4,800	0.226 *	ITS:	0.000
	LT	1.00	48	1,600	0.030		
Eastbound	RT	1.00	134	1,600	0.069	ICU:	0.621
	TH	2.00	561	3,200	0.175		
	LT	2.00	394	2,560	0.154 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	350	1,600	0.098	N-S(1):	0.447 *
	TH	3.00	1,322	4,800	0.275	N-S(2):	0.354
	LT	1.00	170	1,600	0.106 *	E-W(1):	0.222
Westbound	RT	0.00	105	0	0.000	E-W(2):	0.328 *
	TH	2.00	556	3,200	0.207 *		
	LT	2.00	303	2,560	0.118	V/C:	0.775
Northbound	RT	1.00	203	1,600	0.068	Lost Time:	0.100
	TH	3.00	1,635	4,800	0.341 *	ITS:	0.000
	LT	1.00	127	1,600	0.079		
Eastbound	RT	1.00	109	1,600	0.028	ICU:	0.875
	TH	2.00	334	3,200	0.104		
	LT	2.00	310	2,560	0.121 *	LOS:	D

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & VICTORIA ST**
Description: **CUMULATIVE BASE CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	186	1,600	0.071	N-S(1):	0.202
	TH	3.00	990	4,800	0.206 *	N-S(2):	0.239 *
	LT	1.00	97	1,600	0.061	E-W(1):	0.455 *
Westbound	RT	1.00	97	1,600	0.030	E-W(2):	0.274
	TH	2.00	584	3,200	0.183		
	LT	2.00	98	2,560	0.038 *	V/C:	0.694
Northbound	RT	1.00	128	1,600	0.061	Lost Time:	0.100
	TH	3.00	679	4,800	0.141	ITS:	0.000
	LT	1.00	53	1,600	0.033 *		
Eastbound	RT	0.00	91	0	0.000	ICU:	0.794
	TH	2.00	1,243	3,200	0.417 *		
	LT	2.00	233	2,560	0.091	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	298	1,600	0.132	N-S(1):	0.326 *
	TH	3.00	1,138	4,800	0.237	N-S(2):	0.317
	LT	1.00	110	1,600	0.069 *	E-W(1):	0.259
Westbound	RT	1.00	166	1,600	0.069	E-W(2):	0.529 *
	TH	2.00	1,346	3,200	0.421 *		
	LT	2.00	124	2,560	0.048	V/C:	0.855
Northbound	RT	1.00	115	1,600	0.048	Lost Time:	0.100
	TH	3.00	1,235	4,800	0.257 *	ITS:	0.000
	LT	1.00	128	1,600	0.080		
Eastbound	RT	0.00	91	0	0.000	ICU:	0.955
	TH	2.00	584	3,200	0.211		
	LT	2.00	276	2,560	0.108 *	LOS:	E

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **FAIRVIEW RD & FAIR RD**
Description: **CUMULATIVE BASE CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	110	1,600	0.013	N-S(1):	0.229 *
	TH	3.00	393	4,800	0.082	N-S(2):	0.106
	LT	2.00	294	2,560	0.115 *	E-W(1):	0.215
Westbound	RT	2.00	515	3,200	0.104	E-W(2):	0.271 *
	TH	1.00	254	1,600	0.159 *		
	LT	1.00	19	1,600	0.012	V/C:	0.500
Northbound	RT	1.00	124	1,600	0.072	Lost Time:	0.100
	TH	3.00	549	4,800	0.114 *	ITS:	0.000
	LT	1.00	39	1,600	0.024		
Eastbound	RT	1.00	31	1,600	0.007	ICU:	0.600
	TH	2.00	651	3,200	0.203		
	LT	1.00	179	1,600	0.112 *	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	145	1,600	0.051	N-S(1):	0.247 *
	TH	3.00	548	4,800	0.114	N-S(2):	0.143
	LT	2.00	330	2,560	0.129 *	E-W(1):	0.157
Westbound	RT	1.29	728	2,070	0.287	E-W(2):	0.432 *
	TH	1.71	960	2,730	0.352 *		
	LT	1.00	89	1,600	0.056	V/C:	0.679
Northbound	RT	1.00	67	1,600	0.014	Lost Time:	0.100
	TH	3.00	568	4,800	0.118 *	ITS:	0.000
	LT	1.00	46	1,600	0.029		
Eastbound	RT	1.00	38	1,600	0.009	ICU:	0.779
	TH	2.00	323	3,200	0.101		
	LT	1.00	128	1,600	0.080 *	LOS:	C

* - Denotes critical movement

CUMULATIVE PLUS PROJECT CONDITIONS

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & ADAMS AV**
Description: **CUMULATIVE + PROJECT CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	SBR		
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	331	1,600	0.000	N-S(1):	0.339 *
	TH	4.00	1,128	6,400	0.176	N-S(2):	0.255
	LT	2.00	251	2,560	0.098 *	E-W(1):	0.431 *
Westbound	RT	1.00	83	1,600	0.003	E-W(2):	0.410
	TH	3.00	341	4,800	0.071		
	LT	2.00	77	2,560	0.030 *	V/C:	0.770
Northbound	RT	0.00	113	0	0.000	Lost Time:	0.100
	TH	3.00	1,046	4,800	0.241 *	ITS:	0.000
	LT	2.00	203	2,560	0.079		
Eastbound	RT	1.00	170	1,600	0.067	ICU:	0.870
	TH	3.00	1,923	4,800	0.401 *		
	LT	2.00	868	2,560	0.339	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	720	1,600	0.295 *	N-S(1):	0.447
	TH	4.00	1,730	6,400	0.270	N-S(2):	0.487 *
	LT	2.00	252	2,560	0.098	E-W(1):	0.221
Westbound	RT	1.00	126	1,600	0.030	E-W(2):	0.418 *
	TH	3.00	1,262	4,800	0.263 *		
	LT	2.00	179	2,560	0.070	V/C:	0.905
Northbound	RT	0.00	150	0	0.000	Lost Time:	0.100
	TH	3.00	1,527	4,800	0.349	ITS:	0.000
	LT	2.00	492	2,560	0.192 *		
Eastbound	RT	1.00	138	1,600	0.000	ICU:	1.005
	TH	3.00	726	4,800	0.151		
	LT	2.00	398	2,560	0.155 *	LOS:	F

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & MERRIMAC WAY**
Description: **CUMULATIVE + PROJECT CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	57	0	0.000	N-S(1):	0.390 *
	TH	3.00	1,393	4,800	0.302	N-S(2):	0.312
	LT	2.00	302	2,560	0.118 *	E-W(1):	0.067
Westbound	RT	1.71	87	2,729	0.000	E-W(2):	0.083 *
	TH	0.29	15	471	0.032 *		
	LT	1.00	24	1,600	0.015	V/C:	0.473
Northbound	RT	0.00	130	0	0.000	Lost Time:	0.100
	TH	3.00	1,174	4,800	0.272 *	ITS:	0.000
	LT	1.00	16	1,600	0.010		
Eastbound	RT	0.00	43	0	0.000	ICU:	0.573
	TH	2.00	42	3,200	0.052		
	LT	0.00	82	1,600	0.051 *	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	75	0	0.000	N-S(1):	0.586 *
	TH	3.00	1,856	4,800	0.402	N-S(2):	0.435
	LT	2.00	224	2,560	0.088 *	E-W(1):	0.116
Westbound	RT	1.67	290	2,667	0.065	E-W(2):	0.141 *
	TH	0.33	58	533	0.109 *		
	LT	1.00	101	1,600	0.063	V/C:	0.727
Northbound	RT	0.00	84	0	0.000	Lost Time:	0.100
	TH	3.00	2,306	4,800	0.498 *	ITS:	0.000
	LT	1.00	52	1,600	0.033		
Eastbound	RT	0.00	12	0	0.000	ICU:	0.827
	TH	2.00	22	1,600	0.053		
	LT	0.00	51	1,600	0.032 *	LOS:	D

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & FAIR DR**
Description: **CUMULATIVE + PROJECT CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	100	1,600	0.038	N-S(1):	0.313 *
	TH	3.00	1,020	4,800	0.213	N-S(2):	0.244
	LT	2.00	278	2,560	0.109 *	E-W(1):	0.126 *
Westbound	RT	1.34	164	2,142	0.022	E-W(2):	0.000
	TH	0.66	81	1,058	0.077 *		
	LT	2.00	149	2,560	0.058	V/C:	0.439
Northbound	RT	1.00	262	1,600	0.135	Lost Time:	0.100
	TH	3.00	977	4,800	0.204 *	ITS:	0.000
	LT	1.00	50	1,600	0.031		
Eastbound	RT	1.00	66	1,600	0.026	ICU:	0.539
	TH	1.00	64	1,600	0.040		
	LT	1.00	79	1,600	0.049 *	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	79	1,600	0.030	N-S(1):	0.460 *
	TH	3.00	1,583	4,800	0.330	N-S(2):	0.380
	LT	2.00	262	2,560	0.102 *	E-W(1):	0.233 *
Westbound	RT	1.82	565	2,911	0.143	E-W(2):	0.000
	TH	0.18	56	289	0.194 *		
	LT	2.00	385	2,560	0.150	V/C:	0.693
Northbound	RT	1.00	238	1,600	0.074	Lost Time:	0.100
	TH	3.00	1,718	4,800	0.358 *	ITS:	0.000
	LT	1.00	80	1,600	0.050		
Eastbound	RT	1.00	54	1,600	0.009	ICU:	0.793
	TH	1.00	52	1,600	0.033		
	LT	1.00	63	1,600	0.039 *	LOS:	C

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & WILSON ST**
Description: **CUMULATIVE + PROJECT CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	SBR		
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	171	1,600	0.000	N-S(1):	0.269 *
	TH	3.00	952	4,800	0.198	N-S(2):	0.228
	LT	1.00	65	1,600	0.041 *	E-W(1):	0.251
Westbound	RT	0.00	79	0	0.000	E-W(2):	0.254 *
	TH	2.00	240	3,200	0.100 *		
	LT	2.00	195	2,560	0.076	V/C:	0.523
Northbound	RT	1.00	122	1,600	0.038	Lost Time:	0.100
	TH	3.00	1,094	4,800	0.228 *	ITS:	0.000
	LT	1.00	48	1,600	0.030		
Eastbound	RT	1.00	134	1,600	0.069	ICU:	0.623
	TH	2.00	561	3,200	0.175		
	LT	2.00	394	2,560	0.154 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	350	1,600	0.098	N-S(1):	0.453 *
	TH	3.00	1,339	4,800	0.279	N-S(2):	0.358
	LT	1.00	170	1,600	0.106 *	E-W(1):	0.222
Westbound	RT	0.00	105	0	0.000	E-W(2):	0.328 *
	TH	2.00	556	3,200	0.207 *		
	LT	2.00	303	2,560	0.118	V/C:	0.781
Northbound	RT	1.00	203	1,600	0.068	Lost Time:	0.100
	TH	3.00	1,667	4,800	0.347 *	ITS:	0.000
	LT	1.00	127	1,600	0.079		
Eastbound	RT	1.00	109	1,600	0.028	ICU:	0.881
	TH	2.00	334	3,200	0.104		
	LT	2.00	310	2,560	0.121 *	LOS:	D

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **HARBOR BL & VICTORIA ST**
Description: **CUMULATIVE + PROJECT CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	193	1,600	0.075	N-S(1):	0.206
	TH	3.00	1,013	4,800	0.211 *	N-S(2):	0.244 *
	LT	1.00	100	1,600	0.063	E-W(1):	0.455 *
Westbound	RT	1.00	98	1,600	0.030	E-W(2):	0.275
	TH	2.00	584	3,200	0.183		
	LT	2.00	98	2,560	0.038 *	V/C:	0.699
Northbound	RT	1.00	128	1,600	0.061	Lost Time:	0.100
	TH	3.00	685	4,800	0.143	ITS:	0.000
	LT	1.00	53	1,600	0.033 *		
Eastbound	RT	0.00	91	0	0.000	ICU:	0.799
	TH	2.00	1,243	3,200	0.417 *		
	LT	2.00	235	2,560	0.092	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	301	1,600	0.133	N-S(1):	0.331 *
	TH	3.00	1,150	4,800	0.240	N-S(2):	0.320
	LT	1.00	111	1,600	0.069 *	E-W(1):	0.259
Westbound	RT	1.00	169	1,600	0.071	E-W(2):	0.531 *
	TH	2.00	1,346	3,200	0.421 *		
	LT	2.00	124	2,560	0.048	V/C:	0.862
Northbound	RT	1.00	115	1,600	0.048	Lost Time:	0.100
	TH	3.00	1,258	4,800	0.262 *	ITS:	0.000
	LT	1.00	128	1,600	0.080		
Eastbound	RT	0.00	91	0	0.000	ICU:	0.962
	TH	2.00	584	3,200	0.211		
	LT	2.00	282	2,560	0.110 *	LOS:	E

* - Denotes critical movement

Project Title: **FAIRVIEW DEVELOPMENT CENTER**
Intersection: **FAIRVIEW RD & FAIR RD**
Description: **CUMULATIVE + PROJECT CONDITIONS**

Date/Time: **AM PEAK HOUR**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
RTOR :	50 %		
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	112	1,600	0.011	N-S(1):	0.229 *
	TH	3.00	393	4,800	0.082	N-S(2):	0.108
	LT	2.00	294	2,560	0.115 *	E-W(1):	0.220
Westbound	RT	2.00	515	3,198	0.104	E-W(2):	0.279 *
	TH	1.00	258	1,602	0.161 *		
	LT	1.00	19	1,600	0.012	V/C:	0.508
Northbound	RT	1.00	124	1,600	0.072	Lost Time:	0.100
	TH	3.00	549	4,800	0.114 *	ITS:	0.000
	LT	1.00	41	1,600	0.026		
Eastbound	RT	1.00	39	1,600	0.012	ICU:	0.608
	TH	2.00	667	3,200	0.208		
	LT	1.00	188	1,600	0.118 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	154	1,600	0.055	N-S(1):	0.247 *
	TH	3.00	548	4,800	0.114	N-S(2):	0.148
	LT	2.00	330	2,560	0.129 *	E-W(1):	0.159
Westbound	RT	1.28	728	2,052	0.290	E-W(2):	0.438 *
	TH	1.72	975	2,748	0.355 *		
	LT	1.00	89	1,600	0.056	V/C:	0.685
Northbound	RT	1.00	67	1,600	0.014	Lost Time:	0.100
	TH	3.00	568	4,800	0.118 *	ITS:	0.000
	LT	1.00	54	1,600	0.034		
Eastbound	RT	1.00	42	1,600	0.009	ICU:	0.785
	TH	2.00	331	3,200	0.103		
	LT	1.00	133	1,600	0.083 *	LOS:	C

* - Denotes critical movement